

# <u>Appendix I</u>

<u>Draft Resource Management Plan</u> <u>for the JVR Energy Park Project</u>

# CONCEPTUAL RESOURCE MANAGEMENT PLAN for the JVR Energy Park Project Major Use Permit PDS2018-MUP-18-022 Environmental Review Project Number PDS2018-ER-18-022-001 Jacumba, San Diego County, California

Prepared for:

## **County of San Diego**

Department of Planning and Development Services
5510 Overland Avenue
San Diego, California 92123

Project Proponent:

## JVR Energy Park LLC

17901 Von Karman Avenue, Suite 1050 Irvine, California 92614 Contact: Patrick Brown

Prepared by:

**DUDEK** 

605 Third Street Encinitas, California 92024 Contact: Callie Amoaku 760.479.4279

JUNE 2021



# Table of Contents

SEC	TION			PAGE NO
ACRO	NYMS A	ND ABBRE	EVIATIONS	\
1			l	
_	1.1		e of Biological Resources Management Plan	
	1.2		nentation	
		1.2.1	Resource Manager Qualifications and Responsible Parties	
		1.2.2	Financial Responsibility and Mechanism	
		1.2.3	Conceptual Cost Estimate	
		1.2.4	Reporting Requirements	
		1.2.5	RMP Agreement	
	1.3	Limitati	ions and Constraints	
2	PROP	ERTY DES	SCRIPTION	11
	2.1	Locatio	on	11
		2.1.1	Habitat Management Plans	11
	2.2	Environ	nmental Setting	11
		2.2.1	Geographical Setting	11
		2.2.2	Geology, Soils, Climate and Hydrology	12
	2.3	Land U	se	12
		2.3.1	Trails	12
		2.3.2	Adjacent Land Uses	12
		2.3.3	Easements or Rights	13
		2.3.4	Fire History	13
3	BIOLO	OGICAL RE	SOURCES DESCRIPTION	23
	3.1	Habitat	t Types	23
		3.1.1	Desert Saltbush Scrub (36110)	23
		3.1.2	Desert Sink Scrub (36120)	23
		3.1.3	Disturbed Freshwater Marsh (52400)	23
		3.1.4	Mesquite Bosque (61820)	23
		3.1.5	Sonoran Mixed Woody Scrub (33210)	24
		3.1.6	Sonoran Mixed Woody and Succulent Scrub (33220)	24
		3.1.7	Unvegetated Streambed	24
		3.1.8	Disturbed Habitat (11300)	24
		3.1.9	Fallow Agriculture (No Code)	27
		3.1.10	Urban/Developed (12000)	27
	3.2	Jurisdic	ctional Wetlands and Waters	27
	3.3	Flora		28
		3.3.1	Non-Native and/or Invasive Plant Species	28

	3.4	Fauna	28	
		3.4.1 Non-Native and/or Invasive Wildlife Species	29	
	3.5	Rare, Threatened, or Endangered Plant Species Present, Including MSCP		
		Coverage Status	29	
	3.6	Rare, Threatened, or Endangered Wildlife Species Present or Likely to Occur,		
		Including MSCP Coverage Status	29	
	3.7	Overall Biological Value	33	
	3.8	Enhancement and Restoration Opportunities	33	
	3.9	Cultural Resources Description	33	
	3.10	Historical Resources Description	35	
4	BIOLO	GICAL RESOURCE MANAGEMENT	37	
	4.1	Management Goals	37	
	4.2	Biological Management Tasks	37	
		4.2.1 Baseline Biological Inventory	37	
		4.2.2 Update Biological Mapping	37	
		4.2.3 Rare Plant Mitigation	37	
		4.2.4 Sensitive Species Monitoring	38	
		4.2.5 Exotic Plant Control	39	
		4.2.6 Predator/Pest Control	41	
		4.2.7 Off-Highway Vehicle Control	41	
	4.3	Cultural Resources Management	41	
	4.4	Fire and Flood Management	42	
	4.5	Adaptive Management	42	
	4.6	Operations, Maintenance, and Administrative Tasks	42	
		4.6.1 Goals	42	
		4.6.2 Tasks	43	
	4.7	Management Constraints	46	
	4.8	Public Use Tasks	46	
	4.9	Fire Management Element	47	
5	REFE	RENCES	49	
FIG	URES			
1	Proied	t Location	15	
2	•	Project Components		
- 3	•	Jse		
4	Easements			
<del>-</del>	On Sita Pialaginal Open Space			

## **TABLES**

1	Proposed On-Site Mitigation for Impacts to Vegetation Communities and Land Covers (Acres)	2
2	Biological Resource Management Tasks	5
3	Cultural Resources Located within the Open Space Preserve	.34
4	Summary of Management Responsibilities	.43

## **APPENDIX**

A (Confidential) Cultural Resources within Project Area





# Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ACOE	U.S. Army Corps of Engineers
ADI	Area of direct impact
amsl	above mean sea level
BLM	Bureau of Land Management
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
DPR	County of San Diego Department of Parks and Recreation
ECO	East County (Substation)
I-8	Interstate 8
OHV	off-highway vehicle
RMP	Final Resource Management Plan
USFWS	U.S. Fish and Wildlife Service



# 1 Introduction

This Conceptual Resource Management Plan (RMP) has been prepared to meet the mitigation requirement for the proposed JVR Energy Park Project (Proposed Project). The RMP includes a description of management tasks for 435 acres of desert saltbush scrub, desert sink scrub, disturbed freshwater marsh, mesquite bosque, Sonoran mixed woody scrub, Sonoran mixed woody and succulent scrub, fallow agriculture, disturbed habitat, developed lands and non-vegetated channels that will be designated as the on-site Open Space Preserve and protected under a conservation easement. General information for some biological resources and land use is described for the entire 1,356-acre project boundary, or "study area."

The project site is located south of Interstate (I) 8 within private lands adjacent to the U.S./Mexico border in eastern San Diego County, California. The project site is immediately north of the U.S./Mexico border. The site lies within the Jacumba U.S. Geological Survey (USGS) 7.5-minute quadrangle, Townships 17 South and 18 South, Range 8 East, Sections 4, 5, 8, 9, 32, and 33. The project site includes right-of-way easements for Old Highway 80, San Diego Gas & Electric Company (SDG&E) easements, and an easement for the San Diego and Arizona Eastern Railway.

The proposed solar facility would cover approximately 623 acres. The Proposed Project would install approximately 300,000 photovoltaic (PV) modules fitted on single-axis solar trackers to produce a rated capacity of up to 90 megawatts (MW) of alternating current (AC) generating capacity. The Proposed Project also includes a battery energy storage system.

# 1.1 Purpose of Biological Resources Management Plan

The purpose of this RMP is to provide guidance to ensure preservation and long-term management of the Open Space Preserve. The objectives of this RMP are to:

- 1. Guide management of vegetation communities/habitats, plant and animal species, cultural resources, and programs described herein to protect and, where appropriate, enhance biological and cultural values
- 2. Serve as a descriptive inventory of vegetation communities, habitats, and plant and animal species that occur on or use this property
- 3. Serve as a descriptive inventory of archaeological and/or historic resources that occur on this property
- 4. Establish the baseline conditions from which adaptive management will be determined and success will be measured
- 5. Provide an overview of the operation, maintenance, administrative, and personnel requirements to implement management goals and serve as a budget planning aid

The details of this Conceptual RMP may be modified when the Final RMP is prepared and submitted to the County for approval. The County will review the Final RMP to ensure that it meets the specified purpose and objectives. A resource analysis is provided in the Biological Resources Report for the Proposed Project (Dudek 2021) and Cultural Resources Report for the Proposed Project (Dudek 2019a). These reports include (1) a description of the existing biological resources on the Project boundary, including vegetation communities and land covers, jurisdictional resources, plants, wildlife, and wildlife corridors; (2) a description of the existing cultural resources; (3) a discussion of the potential impacts to biological and cultural resources that would result from development of the property and the biological significance of these impacts in the context of federal, state, and local laws and policies; and (4) recommended mitigation measures for reducing identified significant impacts to biological

and cultural resources to less than significant. Mitigation recommendations follow federal, state, and local rules and regulations, including the California Environmental Quality Act (CEQA), the County's Guidelines for Determining Significance and Report Format and Content Requirements (County 2010), and the County's Resource Protection Ordinance (County 2012).

## Conditions and/or Mitigation Measures That Require an RMP

The Proposed Project as analyzed in the Draft Environmental Impact Report (EIR) would result in permanent direct impacts on 126.99 acres of sensitive vegetation communities and land covers and 516.14 acres of disturbed habitat, fallow agriculture, and urban/developed area. Although fallow agriculture is not defined as a vegetation community or land cover in Holland (1986) or Oberbauer (2008), these areas provide foraging habitat for wildlife. Therefore, mitigation is being provided for impacts to this vegetation community.

Subsequent to public review of the Draft EIR, the Proposed Project was revised in the Final EIR to included increased setbacks and realignment of an existing water main. These revisions resulted in a decreased development footprint from 643 acres to 626 acres (623-acre solar facility and 3 acres of land disturbance for the water main realignment). Although the development footprint was reduced, in accordance with mitigation measure **M-BI-3**, the applicant shall provide a total of 435 acres of biological open space easement as described in the Draft and Final EIR.

Table 1 summarizes the vegetation communities and land covers within the proposed Open Space Preserve. The Project proposes to meet the mitigation obligation through the preservation under a conservation easement of 435 acres located within proposed on-site Open Space Preserve.

Table 1. Proposed On-Site Mitigation for Impacts to Vegetation Communities and Land Covers (Acres)

Habitat Types/Vegetation Communities (Code)	Conservation Easement	
Sensitive Vegetation Communities/Land Covers		
Desert saltbush scrub (36110)	4.69	
Desert sink scrub (36120)	12.43	
Disturbed freshwater marsh (52400)	0.08	
Mesquite bosque (61820)	126.12	
Sonoran mixed woody scrub (33210)	139.33	
Sonoran mixed woody and succulent scrub (33220)	132.05	
Unvegetated streambed (non-wetland water of the U.S./state) (No code)	0.78	
Subtotal <sup>a</sup>	415.49	
Non-Sensitive Vegetation Communities/Land Covers		
Fallow agriculture (N/A)	9.35	
Disturbed habitat (11300)	10.17	
Urban/developed (12000)	<0.01	
Subtotal <sup>a</sup>	19.52	
Total a	435.00	

a May not total due to rounding.



# 1.2 Implementation

## 1.2.1 Resource Manager Qualifications and Responsible Parties

#### **Proposed Resource Manager:**

The resource manager shall be one of the following:

- Conservancy group
- Natural resources land manager
- Natural resources consultant
- · County Department of Parks and Recreation
- County Department of Public Works
- Federal or State Wildlife Agency (U.S. Fish and Wildlife Service, California Department of Fish and Wildlife)
- Federal Land Manager such as Bureau of Land Management

If the developer desires DPR to manage the land, the following criteria must be met:

- a. The land must be located inside a Pre-Approved Mitigation Area (PAMA) or proposed PAMA, or otherwise deemed acceptable by DPR.
- b. The land must allow for public access.
- c. The land must allow for passive recreational opportunities such as a trails system.

The resource manager shall be approved in writing by the Director of Planning and Development Services, the Director of Public Works (DPW), or the Director of Parks and Recreation (DPR). Any change in the designated resource manager shall also be approved in writing by the director of the County department that originally approved the resource manager. Appropriate qualifications for resource managers include, but are not limited to:

- Ability to carry out habitat monitoring or mitigation activities.
- Fiscal stability including preparation of an operational budget (using an appropriate analysis technique) for the management of this RMP.
- Have at least one staff member with a biology, ecology, or wildlife management degree from an
  accredited college or university or have a Memorandum of Understanding (MOU) with a qualified
  person with such a degree.
- If cultural sites are present, have a cultural resource professional on staff or an MOU with cultural consultant.
- Experience with habitat and cultural resource management in southern California.

Per County requirements, a resource manager must be designated to be responsible for the long-term management and maintenance of the Open Space Preserve. The designated resource manager is still being determined. Appropriate qualifications for the resource manager include but are not limited to:

Able to carry out habitat monitoring or mitigation activities



- Able to be fiscally stable, which includes being able to prepare an operational budget (using an appropriate analysis technique) for the management of this RMP
- Has at least one staff member with a biology, ecology, or wildlife management degree from an accredited college or university or have a Memorandum of Understanding with a qualified person with such a degree
- Have a cultural resource professional on staff or a Memorandum of Understanding with a cultural resources consultant
- Has experience with habitat management in Southern California

## **Proposed Land Owner**

Fee title of separate open space lots may be held by the land/resource manager or another appropriate landowner (e.g., land trust, conservancy, or public agency), depending on the particular circumstance. A third-party non-profit organization will hold the endowment funds and be responsible for allocating those funds to the resource manager and, if applicable, contractors to complete portions of the restoration and maintenance.

The land will be owned by JVR Energy Park LLC and the conservation easement will be dedicated to an approved land manager (to be selected upon finalization).

#### **Proposed Easement Holder**

If the land is transferred in fee title to a non-governmental entity, a Biological Open Space Preserve or Conservation Easement must be recorded. This easement will be dedicated to the County, but it may also include other appropriate agencies as a grantee or third-party beneficiary. As described above, the current plan is for land title to be held by JVR Energy Park LLC with a conservation easement dedicated to an approved land manager (to be selected upon finalization).

#### **Restoration Entity**

If revegetation/restoration activities are required, management responsibility for the revegetation/restoration area shall remain with the restoration entity until restoration/revegetation has been completed. The work of the restoration entity shall be accomplished by a qualified restoration specialist. Upon County/agency acceptance of the revegetated/restored area, management responsibility for the revegetation/restoration area will be transferred to the resource manager.

## 1.2.2 Financial Responsibility and Mechanism

Acceptable financial mechanisms include the following:

- Special District. Formation of a Lighting and Landscape District or Zone or Community Facility District as
  determined appropriate by the Director of the Department of Planning and Development Services or
  Director of Public Works.
- Endowment. A one-time, non-wasting endowment, which is tied to the property and intended to be used by the resource manager to implement the RMP.
- Alternatives. Other acceptable types of mechanisms including annual fees to be approved by the Director
  of Planning and Development Services or Director of Public Works.
- Transfer. Transfer of ownership to existing entity for management.



The Project Applicant is responsible for all RMP funding requirements, including direct funds to support the RMP start-up tasks as well as an ongoing funding source for annual tasks, which is tied to the property to fund long-term RMP implementation. Start-up tasks include sign installation around the on-site Open Space Preserve (where appropriate), barriers at select locations along the Open Space Preserve, and database compilation. There are 10 signs proposed along the boundary of the Open Space Preserve, as well as three barriers at strategic locations to prevent off-highway vehicle (OHV) use (see Section 4.6, Operations, Maintenance, and Administrative Tasks, for details on types and locations of signs and barriers). Long-term tasks involve the management and maintenance of the Open Space Preserve in perpetuity, including habitat monitoring and mapping, exotic species control (if needed), and general monitoring and reporting. These habitat management tasks commence immediately upon initiation of long-term management by the resource manager.

## 1.2.3 Conceptual Cost Estimate

Table 2 includes the biological resource management tasks that are planned for the Open Space Preserve.

Table 2. Biological Resource Management Tasks

Check if Applies	Tasks	Frequency (times per year)
Biological	Tasks	
<b>✓</b>	Providing baseline inventory of resources (if original inventory is over 5 years old)	One time
<b>✓</b>	Updating biological mapping (including special-status species)	Once every 5 years
<b>✓</b>	Updating aerial photography	Once every 5 years
<b>✓</b>	Removing invasive species	As needed, based on quarterly monitoring visits
<b>✓</b>	Providing predator/pest control	As needed, based on quarterly monitoring visits
<b>✓</b>	Implementing habitat restoration/installation	Plant salvage/restoration plan will be prepared
<b>✓</b>	Implementing habitat restoration/monitoring and management	Plant salvage/restoration plan will be prepared
	Providing poaching control	
	Providing noise management, if required	
	For lands within the MSCP and outside PAMA, consulting Table 3-5 of the MSCP Plan for required biological resource monitoring	
<b>✓</b>	Providing monitoring visits	Quarterly
<b>✓</b>	Providing tricolored blackbird monitoring	Four times (2 per year during nesting season for 2 years)
<b>✓</b>	Providing wildlife movement camera study	One time
<b>✓</b>	Maintenance and monitoring of bat houses (if required)	As needed

Table 2. Biological Resource Management Tasks

Check if Applies	Tasks	Frequency (times per year)
Operations	s, Maintenance, and Administration Tasks	
<b>√</b>	Establishing and maintaining database and analysis of data	Annually
<b>√</b>	Writing and submittal of annual report to County and wildlife agencies	Annually
<b>√</b>	Providing review fees for County review of annual report	Annually
<b>√</b>	Reviewing and, if necessary, updating RMP	Every 5 years
<b>√</b>	Constructing permanent signs (15 total)	One time
<b>√</b>	Replacing signs	As needed
<b>✓</b>	Constructing permanent barriers as part of public access control (four total)	One time
<b>√</b>	Maintaining permanent barriers as part of public access control	As needed
<b>✓</b>	Removing trash and debris	Quarterly
<b>√</b>	Coordinating with U.S. Customs and Border Protection and Sheriff	As needed
•	Maintaining access road	
	Installing stormwater BMPs	
	Maintaining stormwater BMPs	
	Restoring built structure	
	Maintaining built structure	
	Maintaining regular office hours	
	Inspecting and servicing heavy equipment and vehicles	
	Inspecting and repairing buildings, residences, and structures	
	Inspecting and maintaining fuel tanks	
	Coordinating with utility providers and easement holders	
	Managing hydrology (as required)	
✓	Coordinating with law enforcement and emergency services (e.g., fire)	As needed (At least annually)
✓	Coordinating with adjacent land managers	As needed (At least annually)
<b>√</b>	Removing graffiti and repairing vandalism	Quarterly
Public Use	Tasks	
	Constructing trail(s)	
	Monitoring, maintaining/repairing trails (unless a trail easement has been granted to the County)	
<b>√</b>	Controlling public access	Quarterly
<b>√</b>	Providing ranger patrol	Quarterly
<b>V</b>	Managing fishing and/or hunting program (if one is allowed)	
	Providing Neighbor Education – Community Partnership	
	If HOA is funding management, providing annual presentation to HOA	
	Coordinating volunteer services	
	Providing emergency services access/response planning	

Table 2. Biological Resource Management Tasks

Check if Applies	Tasks	Frequency (times per year)		
Fire Manag	gement Tasks			
<b>✓</b>	Coordinating with applicable fire agencies and access (gate keys, etc.) for these agencies	As needed (At least annually)		
	Providing fire evacuation planning for public use areas			
	Protecting areas with high biological importance			
	Hand-clearing vegetation			
	Mowing vegetation			
Post-Fire T	Post-Fire Tasks			
<b>√</b>	Controlling post-fire erosion	As needed		
·	Removing post-fire sediment			
<b>✓</b>	Reseeding after fire	As needed		
	Replanting after fire			
Cultural Resources Tasks				
<b>✓</b>	Avoid known cultural resources	As needed		
<b>✓</b>	Monitor ground disturbing activities	As needed		
<b>√</b>	Update status of known cultural resources	Annually		

MSCP = Multiple Species Conservation Program; PAMA = Pre-Approved Mitigation Area; DEH = Department of Environmental Health; BMP = best management practice; HOA = Homeowners' Association.

## 1.2.4 Reporting Requirements

An RMP Annual Report will be submitted to the County along with the submittal fee to cover County staff review time. The annual report shall discuss the previous year's management and monitoring activities as well as management/monitoring activities anticipated in the upcoming year.

The annual report shall provide a concise but complete summary of management and monitoring methods, identify any new management issues, and address the success or failure of management approaches (based on monitoring). The report shall include a summary of changes from baseline or previous year conditions for species and habitats and address any monitoring and management limitations, including weather (e.g., drought). The report shall include a description of any trespassing or unauthorized use of the site. The report shall also address any management (changes) resulting from previous monitoring results and provide methods for measuring the success of adaptive management. The annual report will also provide the status of the plant mitigation discussed in Section 4.2.4.1

For new sensitive species observations or significant changes to previously reported species, the annual report shall include copies of completed California Natural Diversity Database forms with evidence that they have been submitted to the state. The report shall also include copies of invasive plant species forms submitted to the state or County. The database of management issues (invasive weeds, sensitive species, etc.) will be made available to the County and resource agencies, if requested.

A fee will be collected by Planning and Development Services upon submittal of the annual report for staff's review time. The RMP may also be subject to an ongoing deposit account for staff to address management challenges as they arise. Deposit accounts, if applicable, are replenished to a defined level as necessary.

## 1.2.5 RMP Agreement

The County requires an agreement with the Applicant when an RMP is required. The RMP Open Space Maintenance Agreement will be executed when the County accepts the Final RMP. The agreement will obligate the Applicant and the resource manager to implement the RMP and provide a source of funding to pay the cost to implement the RMP in perpetuity. The agreement shall also provide a mechanism for the funds to be transferred to the County if the resource manager fails to meet the goals of the RMP.

The RMP agreement will specify that RMP funding or funding mechanism be established prior to construction or use of the property in reliance on the permit.

## 1.3 Limitations and Constraints

Management constraints that may affect meeting the RMP goals could include environmental, legal, political, social, or financial factors.

#### **Increased Human Activity**

The Project would be an unmanned facility that would be monitored remotely. Employees will be on site approximately 4 times per year for solar panel washing. In addition, the on-site meteorological stations would be cleaned and adjusted on a regular basis. In the event that remote monitoring indicates a problem, such as low performance in a section of the solar field, a crew would investigate and correct the problem on an as-needed basis. During operation, operation and maintenance staff would visit the Project substation periodically for switching and other operation activities. Fuel modification area vegetation management around the solar panels shall be completed annually by May 15 of each year or as often as needed for fire safety, as determined by the San Diego County Fire Authority. Human presence can result in littering and introduction/expansion of non-native plants (e.g., bromes (*Bromus* spp.)). It can also disturb wildlife species, particularly during the breeding/nesting season.

#### Alteration of the Natural Fire Regime

The Proposed Project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction. Shorter-than-natural fire return intervals can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and in some cases, result in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads, so when fires do occur, they are catastrophic. A Fire Protection Plan (Dudek 2019a) has been prepared pursuant to Section 4903 of the County Consolidated Fire Code to address the adverse environmental effects that the proposed JVR Energy Park Project may have from wildland fire. Mitigation measures and design features have been prepared to minimize fire risk and provide adequate emergency response services. Additionally, the Project's participation in a Fire Services Agreement with San Diego County Fire Authority (SDCFA) provides funding to support fire agency capabilities and prevents any negligible cumulative impacts from the Project.

The estimated water demand is 141.4 acre-feet during construction (approximately 1 year), 11 acre-feet per year during operations, and 50 acre-feet for decommissioning and dismantling. Water used during operation would be from on-site groundwater wells. Based on the analysis provided in the *Groundwater Resources Investigation Report for the JVR Energy Park* (Dudek 2019b), water drawdown as a result of project use is anticipated to be less than significant.

At this time, no legal, political, or financial constraints are known.



# 2 Property Description

## 2.1 Location

The proposed JVR Energy Park Project (proposed project) is located south of Interstate (I) 8 within private lands adjacent to the U.S./Mexico border in eastern San Diego County, California (Figure 1, Project Location). The project site is south and west of Carrizo Gorge Road and immediately north of the U.S./Mexico border. The site lies within the Jacumba U.S. Geological Survey (USGS) 7.5-minute quadrangle, Townships 17 South and 18 South, Range 8 East, Sections 4, 5, 8, 9, 32, and 33.

The project site includes right-of-way easements for Old Highway 80, San Diego Gas & Electric Company (SDG&E) easements, and an easement for the San Diego and Arizona Eastern Railway. The proposed solar facility would cover approximately 642 acres within the 1,355-acre project boundary (shown on Figure 2, Project Components). Primary access to the project site would be provided via an improved access road from Old Highway 80, with additional access off Carrizo Gorge Road.

# 2.1.1 Habitat Management Plans

Several regional habitat management programs are planned for the eastern San Diego County, including a future Multiple Species Conservation Program (MSCP) East County Plan. Conservation initiatives, including the Las Californias Binational Conservation Initiative and the Parque to Park Binational Corridor, include lands within the Project boundary (see Figure 10 of Conservation Biology Institute 2004).

Projects within the East County MSCP planning area were subject to a Planning Agreement (2014) between the County, the CDFW, and USFWS for the East County MSCP; however, the Planning Agreement has expired. The County is proposing to enter into a Restated and Amended Planning Agreement for the North and East County Multiple Species Conservation Plans (MSCP) under the Natural Community Conservation Planning Act (NCCPA) with the CDFW and the USFWS. The North and East County Multiple Species Conservation Program Plans: Natural Community Conservation Program Plans and Habitat Conservation Plans was released in December 2020 for public review. The Planning Agreement was signed in April 2021. The proposed project has been evaluated in regard to a future East County MSCP Plan. This evaluation is provided in the Biological Resources Report for the Proposed Project (Dudek 2021).

# 2.2 Environmental Setting

# 2.2.1 Geographical Setting

The general topography of the site is gently rolling with some steeper hillslopes along the western and eastern sides. The site has been previously disturbed for agricultural purposes. The elevation range within the study area is from 2,720 feet to 3,360 feet above mean sea level (amsl).

## 2.2.2 Geology, Soils, Climate and Hydrology

Soils mapped within the Open Space Preserve include acid igneous rock land; Carrizo very gravelly sand, 0% to 9% slopes; Indio silt loam, 2% to 5% slopes, and saline; Ramona sandy loam, 5% to 9% slopes; Rositas loamy coarse sand, 2% to 9% slopes; and stony land (USDA 2018).

Seven vegetation communities and/or land covers occur within the Open Space Preserve, including six sensitive communities (County 2010): desert saltbush scrub, desert sink scrub, mesquite bosque, Sonoran mixed woody and succulent scrub, Sonoran mixed woody scrub, non-vegetated channel, and disturbed habitat are within the Open Space Preserve.

The Open Space Preserve falls within the Jacumba Valley hydrologic subarea of the Jacumba hydrologic area located within the Anza Borrego hydrologic unit. The Open Space Preserve is less than 1% of the area encompassed by the Jacumba Valley hydrologic subarea. The region can be characterized as relatively arid and dominated by ephemeral drainages that convey runoff during and/or shortly after rain events—there are no permanent bodies of water in or near the project site. Surface and subsurface water generally flows north via shallow drainages to a floodplain (named Carrizo Gorge Creek (SANGIS 2019)) that eventually flows into the northerly draining Carrizo Creek, which eventually flows into the Carrizo Wash. The Carrizo Wash drains into the San Felipe Creek. The endpoint of the watershed is the Salton Sea.

Generally, the Project site has a warm, arid climate.

# 2.3 Land Use

The Open Space Preserve is located on privately owned land consisting of 16 parcels (assessor parcel numbers 614-100-04, 614-100-19, 614-100-20, 614-100-21, 614-100-22, 614-110-04, 660-020-02, 660-020-05, 660-020-06, 660-150-17, 660-150-18, 660-150-20, 661-010-15, 661-010-26, 661-010-27, and 661-010-30) located to the south of I-8, north of the U.S./Mexico international border, and to the east of California State Park and federal Bureau of Land Management lands.

## 2.3.1 Trails

The Open Space Preserve includes a few existing dirt roads/paths. There are currently no designated trails for public use. These roads are occasionally used for unpermitted OHV activities. The Open Space Preserve is adjacent to California State Park lands. Any future trail proposals would require further environmental review under CEQA.

# 2.3.2 Adjacent Land Uses

The surrounding Jacumba area, which includes the community of Jacumba Hot Springs, can be characterized as a predominantly rural landscape featuring large-lot ranches and single-family homes with a mixture of small-scale agriculture, recreational opportunities, and vast areas of undeveloped lands. Old Highway 80 functions as the community's main street and runs through the southern portion of the project site. Single-family residences, limited commercial businesses, the Jacumba branch of the San Diego County Library, and an adjacent community park line Old Highway 80 throughout Jacumba.

Recent developments have resulted in a variable physical setting that includes both rural and major infrastructure elements, including the ECO Substation, Jacumba Solar Project, and Sunrise Powerlink.

Jacumba Airport is approximately 1 mile east of Jacumba and adjacent to the project site to the southeast. The airport is unattended and unlighted and is used mainly on the weekends as an operations area for gliders (County ALUC 2011). The rust-colored U.S./Mexico International Border Fence is located immediately south of the Proposed Project site.

Public land in the surrounding area includes Anza Borrego Desert State Park and federal Bureau of Land Management lands.

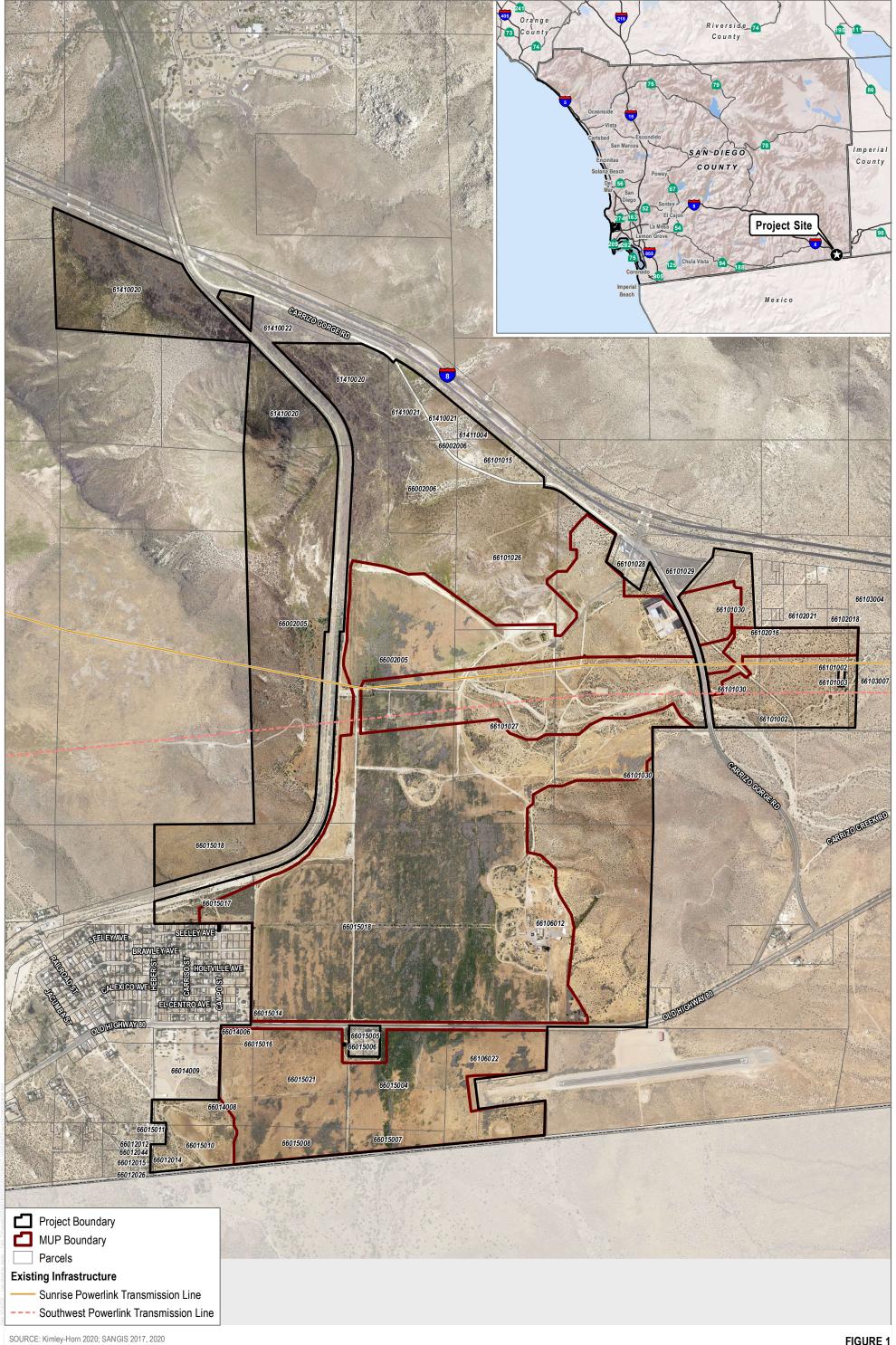
# 2.3.3 Easements or Rights

The Project site's existing easements for the Sunrise Powerlink and Southwest Powerlink bisect the Project site and are shown on Figure 4. The contiguous easements are approximately 700' wide for the utility and access easement to SDG&E. This area is located outside of the proposed open space easement.

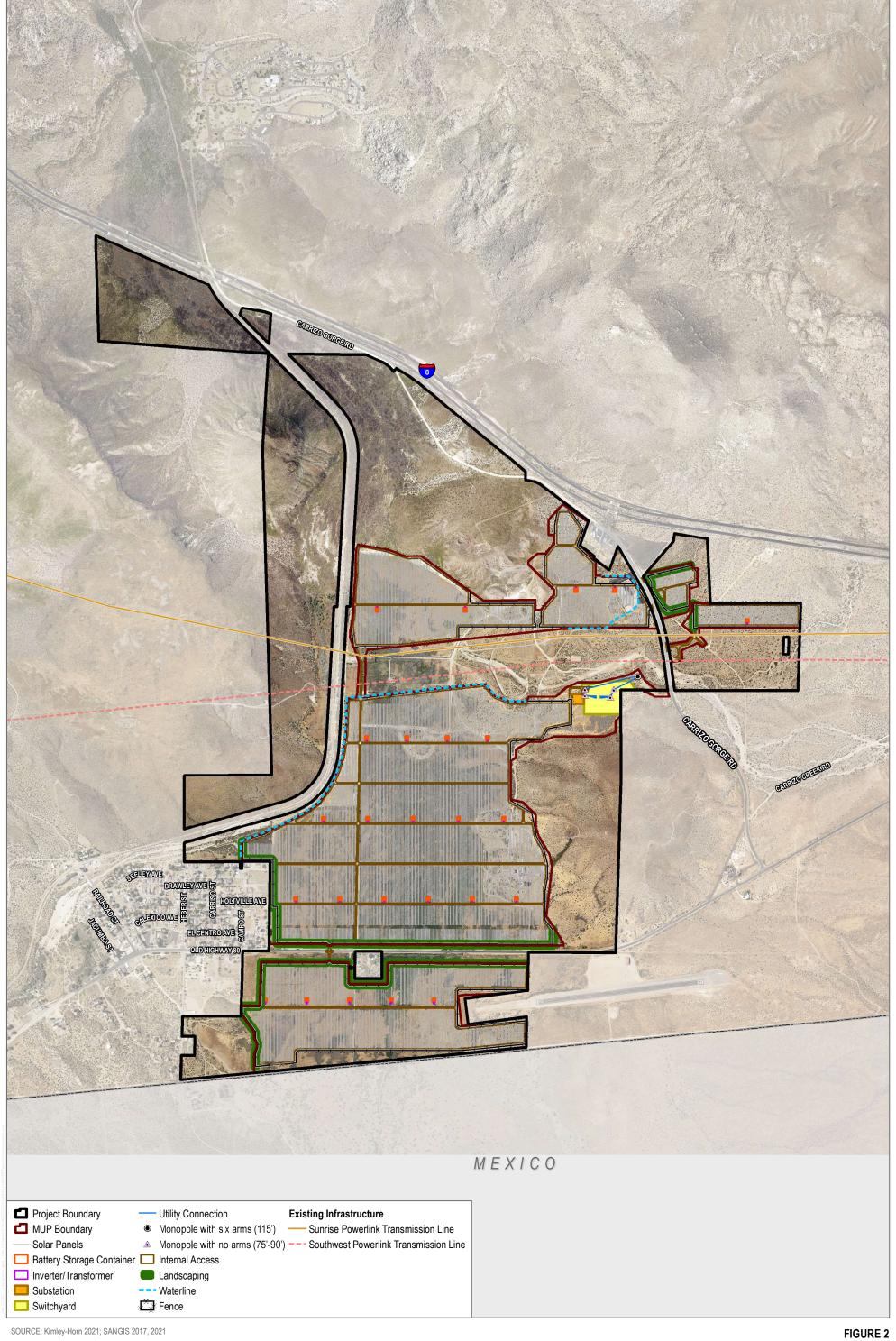
## 2.3.4 Fire History

Fire history data provides valuable information regarding fire spread, fire frequency, ignition sources, and vegetation/fuel mosaics across a given landscape. One important use for this information is as a tool for preplanning. It is advantageous to know which areas may have burned recently and therefore may provide a tactical defense position, what type of fire burned on the site, and how a fire may spread. There have been 16 fires recorded since 1911 by CAL FIRE in their Fire Resource and Assessment Program (FRAP) database in the vicinity of the Proposed Project. A total of three fires, ranging from 29 acres (2003 Range Fire) to 40 acres (2005 Railroad Fire) are noted to have burned within one mile of the site. The fire history is provided in more detail in the Draft Fire Protection Plan (Dudek 2019c).

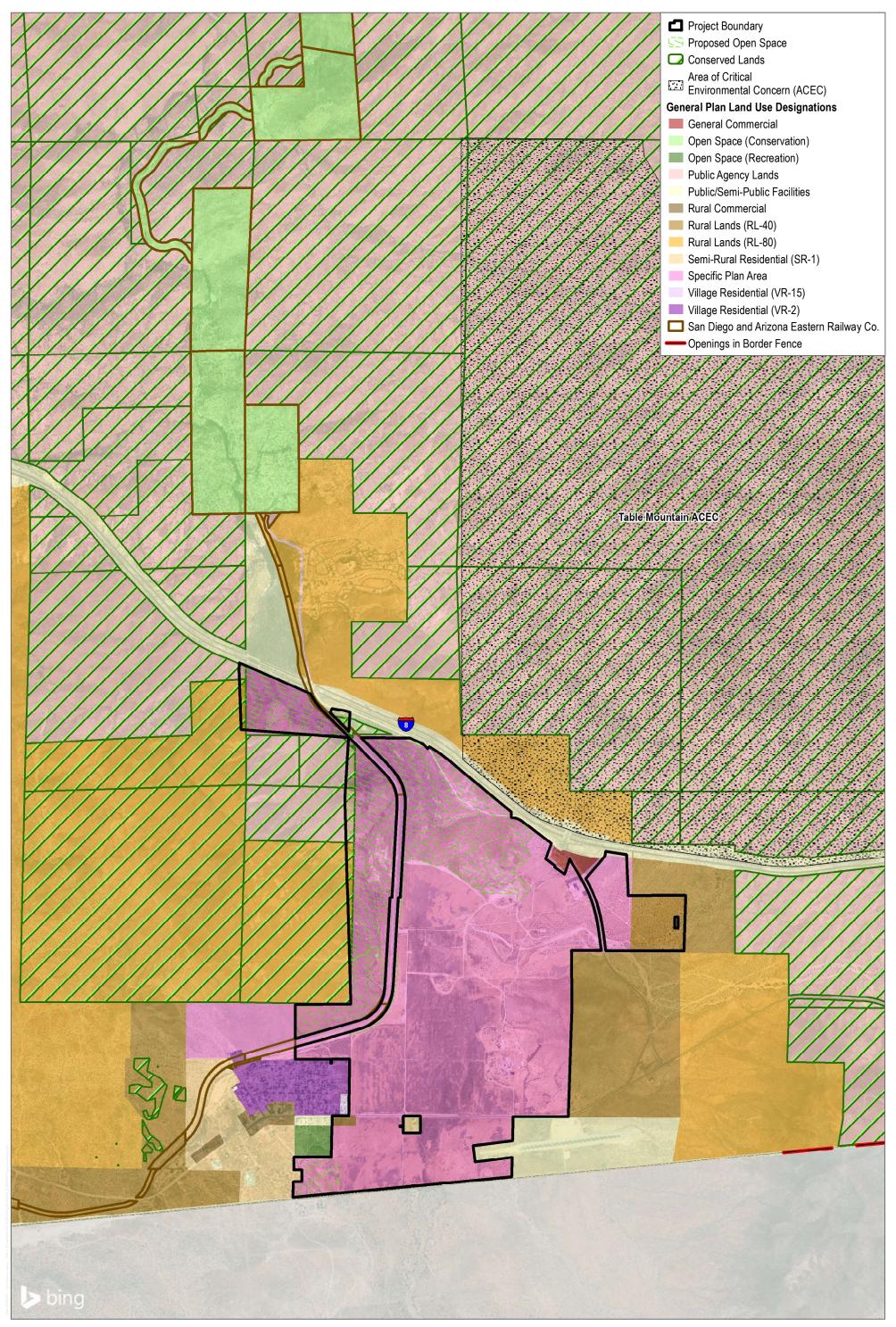




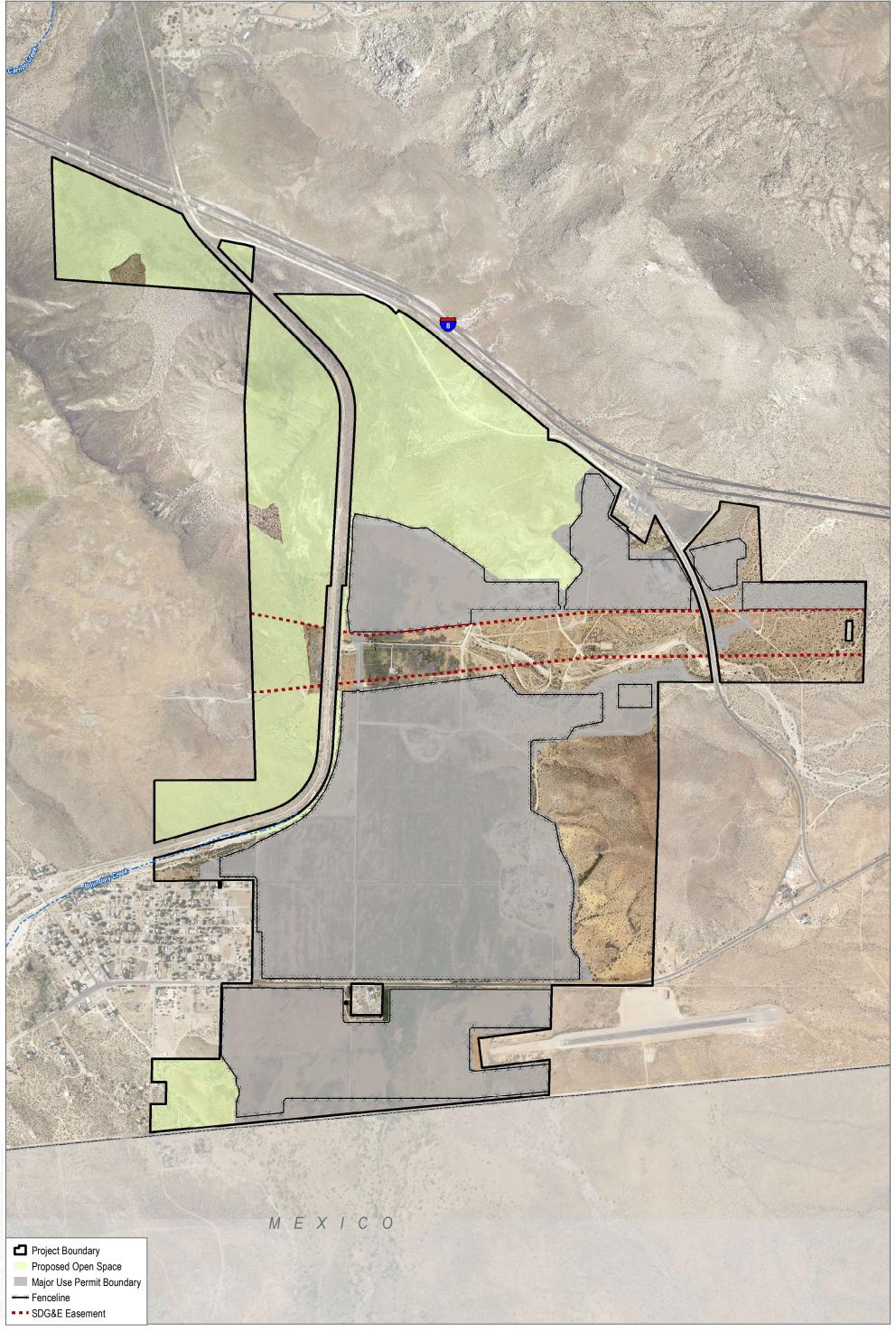
**DUDEK & 0** 500 1,000



**DUDEK** 



**DUDEK** 



SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

**DUDEK &** 

# 3 Biological Resources Description

Ten vegetation communities and land covers were identified within the Open Space Preserve: desert saltbush scrub, desert sink scrub, disturbed freshwater marsh, mesquite bosque, Sonoran mixed woody scrub, Sonoran mixed woody and succulent scrub, fallow agriculture, disturbed habitat, developed lands and non-vegetated channel are within the Open Space Preserve (see Table 1 above) (Figure 5). These habitat types/vegetation communities are described in the following section, 3.1 Habitat Types. Refer to the Biological Resources Report for the Proposed Project prepared by Dudek (2020) for a more detailed description of the biological resources on the entire Project site, including a comprehensive list of native and non-native plant and wildlife species recorded on site.

# 3.1 Habitat Types

## 3.1.1 Desert Saltbush Scrub (36110)

Desert saltbush scrub is characterized by spaced, low, microphyllous 1- to 3.2-foot-tall shrubs typically dominated by allscale (*Atriplex polycarpa*) and alkali goldenbush (*Isocoma acradenia* var. *eremophila*) (Oberbauer et al. 2008). This vegetation community commonly occurs on fine-textured, poorly drained soils with high alkalinity in drier areas. Characteristic species include quailbush (*Atriplex lentiformis*), fourwing saltbush, and spiny hop sage (*Grayia spinosa*).

## 3.1.2 Desert Sink Scrub (36120)

Desert sink scrub is characterized by widely spaced low, microphyllous 1- to 3.2-foot-tall shrubs (Oberbauer et al. 2008). Desert sink scrub is dominated by succulent chenopods and occurs on fine-textured, poorly drained soils with high alkalinity or salt content. Characteristic species on site include iodine bush (*Allenrolfea occidentalis*), fourwing saltbush, and salt heliotrope (*Heliotropium curassavicum*).

# 3.1.3 Disturbed Freshwater Marsh (52400)

Freshwater marsh is a wetland habitat that develops at permanently flooded sites by freshwater lacking a significant current (Oberbauer et al. 2008). Because it often is permanently flooded by fresh water, there is an accumulation of deep, peaty soils. It typically is dominated by species such as cattails (*Typha* spp.), sedge (*Carex* spp.), yellow nutsedge (*Cyperus* esculentus), and bulrushes (*Scirpus* spp.).

On site, there is a small patch of cattails and Mexican juncus (*Juncus mexicanus*) in saturated soils (at the time of the site visit) in the southwestern portion of the site. These were not present during the initial vegetation mapping in 2018, indicating that this area fluctuates based on the annual rainfall and availability of subsurface water. The cattails and juncus are relatively small and patchy, with a few tamarisk and herbs growing along the fringes. The freshwater marsh was classified as a "disturbed" form of the community based on the presence of tamarisk and other non-native species comprising approximately 50% of the relative cover of shrubs and herbs.

# 3.1.4 Mesquite Bosque (61820)

Mesquite bosque is characterized by an open to fairly dense, drought-deciduous streamside thorn forest with open annual and perennial grass understory (Oberbauer et al. 2008). This vegetation community is dominated by mesquite (*Prosopis glandulosa*); additional characteristic species include alkali goldenbush, white bursage,

DUDEK 23 June 2021

quailbush, and fourwing saltbush. Salt grass (*Distichlis spicata*) and mustards (*Sisymbrium* spp.) are present in some of the understory, but much is bareground. Iodine bush (*Allenrolfea occidentalis*) occurs sporadically within some of the mesquite, but is not present at a high percent absolute cover to be considered co-dominant. Mesquite bosque occurs on higher alluvial terraces and near washes, streambanks, alkali sinks, or outwash plains with substantial groundwater.

## 3.1.5 Sonoran Mixed Woody Scrub (33210)

Sonoran mixed woody scrub is characterized as being predominantly woody shrubs, 1.6 to 9.8 feet tall, and includes a mixture of three or more woody species (Oberbauer et al. 2008). Characteristic species include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and brittle bush (*Encelia farinosa*). In San Diego County, this vegetation community commonly occurs on lower alluvial fans, above the desert floor, and below the coarse mountain substrates (Oberbauer et al. 2008).

## 3.1.6 Sonoran Mixed Woody and Succulent Scrub (33220)

Sonoran mixed woody and succulent scrub occurs in the Colorado Desert and is dominated by 1.6- to 9.8-foot-tall shrubs and cacti and other stem succulents (Oberbauer et al. 2008). Common characteristic species include desert agave (*Agave deserti*), brittle bush, and Mojave yucca (*Yucca schidigera*). In San Diego County, this vegetation community is dominated by more than 50% cover of succulent species (Oberbauer et al. 2008).

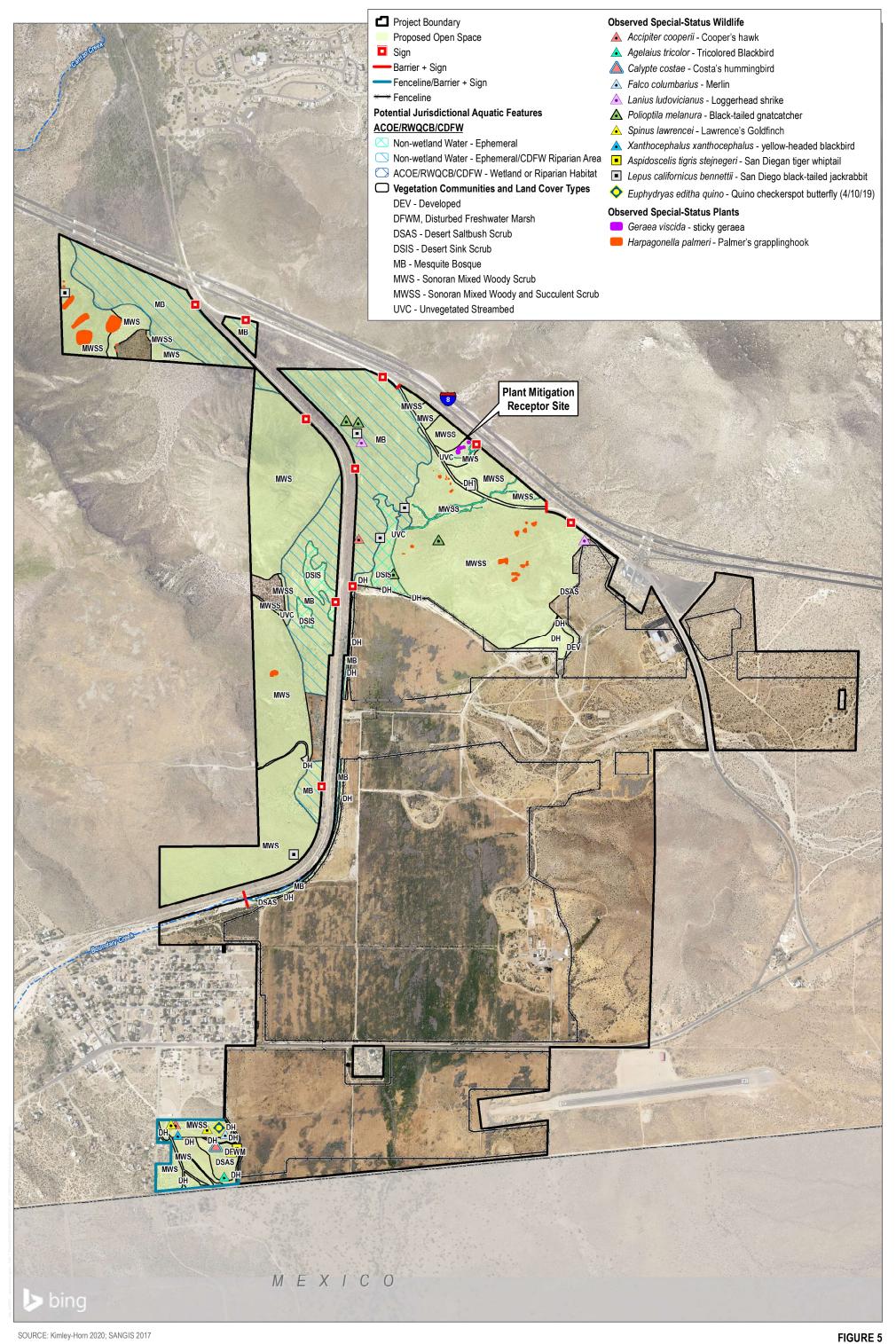
## 3.1.7 Unvegetated Streambed

Several ephemeral drainages area mapped as unvegetated streambed. These do not conform to classifications in Oberbauer et al. 2008.

## 3.1.8 Disturbed Habitat (11300)

Disturbed habitat is characterized by predominantly non-native species introduced and established through human action (Oberbauer et al. 2008). Oberbauer further describes disturbed habitat as "areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continues to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal."

On site, areas such as dirt roads and other areas lacking vegetation due to previous disturbance are mapped as disturbed habitat.



INTENTIONALLY LEFT BLANK

### 3.1.9 Fallow Agriculture (No Code)

On site, the areas mapped as "fallow agriculture" include the previous agriculture field that has been fallow for over 8 years and has since revegetated in varying degrees of cover with non-native (ruderal) forbs and grasses. Some portions of these areas are nearly entirely dominated by Russian thistle (Salsola tragus), while others are more sparsely dominated by a variety of non-native mustards (Brassica tournefortii, Hirschfeldia incana, and Sysimbrium spp.), redstem stork's bill (Erodium cicutarium), mallows (Malva spp.), and puncturevine (Tribulus terrestris). The fallow agriculture areas also support a variety of non-native grasses (Bromus spp., smooth barley (Hordeum murinum ssp. glaucum), and common Mediterranean grass (Schismus barbatus)); however, they do not represent a dominant cover within these areas. Vegetation sampling done at representative locations throughout the fallow agriculture documented less than 1% cover of brome and smooth barley within these areas. The common Mediterranean grass occurs in various patches ranging from 0% cover in some areas to 25% cover in smaller areas where it was found with a variety of non-native mustards and other forbs described above. Common Mediterranean grass is a low-growing grass, typically between 2-16 cm in height (Jepson eFlora 2020) and by itself is not characteristic of non-native grassland, which is characterized by grasses 0.2 to 1 meter high in height (Oberbauer 2008). Further, the County characterizes non-native grassland in Section 3.4.5 of their Report Format and Content Requirements: Biological Resources (County of San Diego 2010b) with grasses typically comprising at least 30% of the vegetation with characteristic species consisting of "foxtail chess (Bromus madritensis ssp. rubens), ripgut grass (Bromus diandrus), wild oats (Avena spp.), fescues (Vulpia spp.), red-stem filaree (Erodium cicutarium), mustards (Brassica spp.), lupines (Lupinus spp.) and goldfields (Lasthenia spp.), among others." While some of these species co-occur, the study area still lacks the bromes (as a dominant or co-dominant), wild oats, and fescues that are characteristic of non-native grassland. Additionally, because these areas are not comprised of active agriculture, they do not meet the definition of "agriculture" described in Oberbauer (2008).

Because the fallow agriculture field does not fit neatly into the agriculture, non-native grassland, or disturbed habitat categories, upon considering the species present within these areas (primarily mustards and Russian thistle) and the lack of overall function as a grassland community, these areas were classified as fallow agriculture, which is not specifically defined in Oberbauer (2008) or Holland (1986).

### 3.1.10 Urban/Developed (12000)

Urban/developed land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Oberbauer et al. 2008).

# 3.2 Jurisdictional Wetlands and Waters

During the 2018 and 2019 jurisdictional wetlands delineation performed by Dudek, approximately 139.41 acres of potential jurisdictional waters of the United States/state were identified within the Open Space Preserve. These jurisdictional resources are likely regulated by ACOE, the Regional Water Quality Control Board, and the CDFW.

#### **RPO Wetland Determination**

The County's RPO identifies wetlands as follows: "at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places)", "substratum is predominantly undrained soil", or "an ephemeral or perennial stream is present whose substratum is predominately non-soil and such lands contribute substantially to biological functions or values of wetlands in the drainage system" (County 2012). One feature supports RPO wetlands within the Open Space Preserve: disturbed freshwater marsh. Per County Guidelines, all RPO wetlands and their buffers are included in the Open Space Preserve.

# 3.3 Flora

A total of 225 vascular plant species, consisting of 187 native species (83%) and 38 non-native species (17%), were recorded within the Project study area during initial surveys. The majority of the plants observed within the disturbed habitat or fallow agriculture areas are non-native, disturbance related species, such as Russian thistle, shortpod mustard, Asian mustard, rocketsalad (*Eruca vesicaria* ssp. sativa), mustards (*Sisymbrium* spp., *Brassica tournefortii*, *Descurainia* spp., *Hirschfeldia incana*, etc.), burclover, bromes (*Bromus* spp.), and stork's bills (*Erodium* spp.). Commonly observed plants in the native scrub vegetation types include creosote, California buckwheat, California joint fir, common Mediterranean grass, desert woollystar, common deerweed, and cholla (*Cylindropuntia* spp.). Western honey mesquite is the dominant species in the mesquite bosque vegetation type.

# 3.3.1 Non-Native and/or Invasive Plant Species

The majority of the plants observed within the disturbed habitat or fallow agriculture areas are non-native, disturbance related species, such as Russian thistle, shortpod mustard, Asian mustard, rocketsalad (*Eruca vesicaria* ssp. sativa), mustards (*Sisymbrium* spp.), burclover, bromes (*Bromus* spp.), and stork's bills (*Erodium* spp.) (see Section 3.1.8). These are very common annual species that occur throughout the region. Due to their annual life cycle, their locations tend to change and therefore are not mapped as part of the existing conditions. Within the native vegetation communities, the non-native species are low.

### 3.4 Fauna

The study area supports habitat for common upland and riparian wash species. Desert and Sonoran scrubs, as well as mesquite bosque and fallow agriculture, provide foraging and nesting habitat for migratory and resident birds, and serve as habitat for other wildlife species, including reptiles, invertebrates, and mammals.

There were 153 wildlife species observed in the study area during the 2018 and 2019 surveys (Dudek 2021). Species observed within the study area were recorded during focused surveys, habitat assessments, vegetation mapping, and special-status plant surveys. Species richness in the study area is moderate due to the property size, amount of undeveloped land, and the number of native upland habitats. Species richness is generally increased with the presence of more habitat types and ecotones.

# 3.4.1 Non-Native and/or Invasive Wildlife Species

Seven non-native wildlife species were observed on site: brown-headed cowbird (*Molothrus ater*), house sparrow (*Passer domesticus*), rock pigeon (*Columba livia*), Eurasian collared-dove (*Streptopelia decaocto*), European starling (*Sturnus vulgaris*), domestic horse (*Equus caballus*), and domestic cattle sign (*Boa taurus*).

# 3.5 Rare, Threatened, or Endangered Plant Species Present, Including MSCP Coverage Status

Endangered, rare, or threatened plant species, as defined in CEQA Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status plant species" in this report and include (1) endangered or threatened plant species recognized in the context of CESA and ESA (CDFW 2019a), (2) plant species with a CRPR of 1 through 4 (CDFW 2019b; CNPS 2019), and (3) plant species considered "sensitive" by the County (Table 2 of County 2010).

Five sensitive plant species—pygmy lotus (*Acmispon haydonii*; County List A), Higgins' barberry (*Berberis higginsiae*; County List C), Colorado Desert larkspur (*Delphinium parishii* ssp. *subglobosum*; County List D), sticky geraea (*Geraea viscida*; County List B) and Palmer's grapplinghook (*Harpagonella palmeri*; County List D)—were observed within the study area during focused surveys. Sticky geraea and Palmer's grapplinghook are both located within the Open Space Preserve (Figure 5).

#### Critical Habitat

There is no USFWS-designated critical habitat for plant species within the Project boundary. There is critical habitat for Quino checkerspot butterfly located approximately 0.25 miles west of the Project boundary, and for Peninsular bighorn sheep (*Ovis canadensis nelsoni*) approximately 3.4 miles northwest of the Project boundary (USFWS 2019).

# 3.6 Rare, Threatened, or Endangered Wildlife Species Present or Likely to Occur, Including MSCP Coverage Status

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status wildlife species" in this report and include (1) endangered or threatened wildlife species recognized in the context of the California Endangered Species Act and federal Endangered Species Act; (2) California Species of Special Concern and Watch List species, as designated by the CDFW (2019b); (3) mammals and birds that are fully protected species, as described in the California Fish and Game Code Sections 4700 and 3511; (4) Birds of Conservation Concern, as designated by the USFWS (2008); and (5) wildlife species considered "sensitive" by the County of San Diego (County 2010, Table 3).

The following special-status species were observed within the study area: San Diegan tiger whiptail (County Group 2, SSC), Cooper's hawk (*Accipiter cooperii*; County Group 1, WL), sharp-shinned hawk (*Accipiter striatus*; County Group 1), tricolored blackbird (*Agelaius tricolor*; Group 1, ST [state threatened], BCC, SSC), golden eagle

(Aquila chrysaetos; Group 1, BCC, FP, WL), burrowing owl (Athene cunicularia; County Group 1, BCC, SSC), Costa's hummingbird (Calypte costae; BCC), turkey vulture (Cathartes aura; County Group 1), Vaux's swift (Chaetura vauxi; SSC), northern harrier (Circus hudsonius; County Group 1, SSC), California horned lark (Eremophila alpestris actia; County Group 2, WL), merlin (Falco columbarius; County Group 2, WL), loggerhead shrike (Lanius ludovicianus; County Group 1, BCC, SSC), black-tailed gnatcatcher (Polioptila melanura; WL), Brewer's sparrow (Spizella breweri; BCC), Lawrence's goldfinch (Spinus lawrencei; BCC), yellow-headed blackbird (Xanthocephalus xanthocephalus; SSC), San Diego black-tailed jackrabbit (Lepus californicus bennettii; Group 2, SSC), San Diego desert woodrat (Neotoma lepida intermedia; County Group 2, SSC), mule deer (sign only) (Odocoileus hemionus; County Group 2), American badger (potential burrow) (Taxidea taxus; Group 2, SSC), and Quino checkerspot butterfly (Euphydryas editha quino; County Group 1; FE [federally endangered]).

The following are special-status species and County of San Diego Group List species with high potential to occur in the study area (Dudek 2021): California glossy snake (*Arizona elegans occidentalis*; SSC), San Diego banded gecko (*Coleonyx variegatus abbotti*; County Group 1, SSC), red diamond rattlesnake (*Crotalus ruber*; County Group 2, SSC), rosy boa (*Lichanura trivirgata*; County Group 2), Blainville's horned lizard (*Phrynosoma blainvillii*; County Group 2, SSC), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; County Group 1, WL), pallid bat (*Antrozous pallidus*; County Group 2, SSC), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*; County Group 2, SSC), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*; County Group 2, SSC), Yuma myotis (*Myotis yumanensis*; County Group 2), and Jacumba pocket mouse (*Perognathus longimembris internationalis*; County Group 2, SSC).

Figure 5 shows the special-status wildlife species observed within the Open Space Preserve.

#### **Habitat Connectivity and Wildlife Corridors**

Wildlife species generally inhabit suitable habitat patches distributed across a landscape. These habitat blocks, which may make up the species' home range or breeding territory, support most, if not all, of the species' life history needs (e.g., food resources, mates, refuge). Critical to the survival of most wide-ranging species is the ability to access or move between various habitat blocks to allow for juvenile dispersal, to access food and/or shelter during the winter months, to escape catastrophic events (e.g., flood, fire), and to ward against genetic inbreeding (Rosenberg et al. 1997). In undisturbed or unfragmented landscapes, such movements by some species may occur throughout the landscape without a defined movement route (e.g., between mosaics of suitable habitat patches). However, where landscapes have movement constraints related to either natural conditions, such as vegetation types or topography (e.g., steep slopes), or man-made obstacles (e.g., urban areas, roads), wildlife may have to move along defined landscape linkages or "wildlife corridors." The phrase "wildlife corridors," as used in this report, are generally linear landscape features that permit species to disperse between favorable habitats.

Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. The linkage represents a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as "stepping-stones" for dispersal.

The study area is included within a Core Wildlife Area defined by the County based on its size and the surrounding undeveloped land. The project site is currently undeveloped, except for dairy and ranch structures north of Old Highway 80, but the international border fence limits the ability of the project site to function as a linear north—south wildlife corridor for large mammals. The project vicinity is generally surrounded by undeveloped landscapes to the north (north of I-8), east, and northwest. Old Highway 80, a two-lane highway, traverses the project site in an

east–west direction within the southern portion of the project site. Carrizo Gorge Road traverses the project site in a generally north–south direction along the eastern portion of the project site. There are no wildlife crossings along the highway or road, but wildlife are generally able to make at-grade crossings over the highway. Wildlife currently are able to traverse the project site and surrounding undeveloped areas in an unencumbered manner until they arrive at the international border fence south of the site. Since openings in the border fence are located off site, north–south wildlife movement is anticipated to be higher in these areas. These breaks are in steeper terrain. This topography does not pose difficulties for most wildlife use, however. Coyote, cougar (or mountain lion; *Puma concolor*), bobcat (*Lynx rufus*), and other species are readily able to scale steep slopes. Further, the project site is situated adjacent to, or near, Bureau of Land Management holdings, which allows for unhindered wildlife movement. More information is described in the Biological Resources Technical Report for the Proposed Project prepared by Dudek (2021).

The mesquite-dominated floodplain along the western study area may serve as a wildlife movement area between the site and the north side of I-8 for a variety of wildlife species, including mammals, birds, reptiles, and invertebrates. The western portion of the floodplain (i.e., Boundary Creek) narrows, but larger wildlife may still move through the area at night if they are traveling to the west. The eastern portion of the study area is flatter and more open, with smaller drainages and dirt roads that could serve as movement areas for wildlife travel. Birds can move freely through the region; invertebrates and smaller mammals can move relatively freely through the region. All terrestrial species' movement is hindered by I-8, and, to a lesser degree, Old Highway 80 and surface streets.

There is critical habitat for Quino checkerspot butterfly located approximately 0.25 miles west of the project site. The Jacumba Occurrence Complex appears to be the most southeasterly occurrence of Quino checkerspot butterfly in its U.S. range (USFWS 2019, 2003). According to the Recovery Plan for Quino Checkerspot Butterfly (USFWS 2003), there is occupied habitat south of El Condor, Baja California, Mexico, farther southeast of Jacumba, although this location is not specifically mentioned in the 5-Year Review (USFWS 2009). The Jacumba Occurrence Complex west of the project site is likely connected to the vicinity of McCain Valley and Campo west of the Project boundary, potentially suitable habitat in the Table Mountain area northeast of the project site, and occupied habitat in El Condor southeast of the project site (USFWS 2003).

The In-Ko-Pah and Jacumba Mountains are north of the proposed Project boundary; the Peninsular Ranges and Anza-Borrego Desert are to the east. The project site is approximately 3.4 miles southeast of designated critical habitat for Peninsular bighorn sheep (*Ovis canadensis nelsoni*), and 2.6 miles from the western slope of the Peninsular Ranges. The project site is too removed from mountainous terrain to provide habitat attractive to bighorn sheep; it does not provide inter-mountain connectivity habitat between occupied mountain ranges; and the species has not been identified in the area previously. Based on their known range, USFWS Critical Habitat, and unsuitable habitat between the site and the species' known range (CDFG 2011), this species is not expected to occur on the project site.

The Pacific Flyway is a major north–south migration route for birds that travel between North and South America. This is a broad-front route that covers large amounts of landscape. In Southern California, birds typically use the coast and inland areas. The Pacific Coast route is used by gulls, ducks, and other water birds. The longest and most important route of the Pacific Flyway is that originating in northeastern Alaska. This route, which includes most waterfowl and shorebirds, passes through the interior of Alaska and then branches such that large flights continue southeast into the Central and Mississippi Flyways, or they may turn in a southwesterly direction and pass through the interior valleys of California, ending or passing through the Salton Sea (BirdNature 2014). The southward route of long-distance migratory land birds of the Pacific Flyway that typically overwinter south of the United States extends through the interior of California to the mouth of the Colorado River and on to their winter quarters, which may be located in western Mexico (USGS 2006).

The Salton Sea, approximately 40 miles northeast of the project site, is an important stopover for many birds that travel inland (SDG&E 2009); the inland Pacific Flyway migration route, which is focused on a stopover at the Salton Sea, is east of the Project boundary. A study from 1985 to 1999 focused on shorebird migration and recorded avian use at the Salton Sea and the adjacent Imperial Valley. Large numbers of shorebirds, including blacknecked stilt (Himantopus mexicanus), American avocet (Recurvirostra americana), western sandpiper (Calidris mauri), and dowitchers (Limnodromus spp.) were recorded during migration periods (Shuford et al. 2002). In addition, the study showed that many birds traveling to the Salton Sea, including the mountain plover (Charadrius montanus), use the sea not only as a migratory stopover, but also as a wintering area (Shuford et al. 2002). Migration timing varies from species to species, and for some, there is little documentation of the timing; for others, the arrival and departure has been well documented species by species (Unitt 2004). In general, bird migration occurs during the months of March through April and August through November. However, the Project boundary does not support any bodies of water or large wetlands that attract large migration stopovers or attractants for avian and bat species. The closest large bodies of water to the project site are Tule Lake, located approximately 4 miles to the northwest, and Lake Domingo, located approximately 8 miles to the west. Therefore, while birds likely migrate over the site, and certain birds may forage on site, the project site is not considered a stopover for birds migrating to and from the Salton Sea, particularly with the agricultural fields and irrigation resources available in the El Centro and Brawley areas south of the Salton Sea. Additionally, many birds are known to migrate at night (Emlen 1975; Lowery 1951; USGS 2013), which reduces visibility and glare-related impacts on migrants.

Certain types of solar panels may create a "pseudo-lake effect," and birds may collide with solar panels that appear like a body of water due to the sky's reflection. However, there is little scientific information available regarding the pseudo-lake effect, and a detailed discussion of the impacts would be speculative. Further, the following factors would minimize the risk of collision due to sky reflection: (1) the project is not located near bodies of water that would attract wetland-associated birds; (2) the locale is not considered to be a major contributor to the Pacific Flyway; and (3) the solar units would be uniformly dark in color, coated to be non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces, and may not appear like water from above, as water displays different properties by both reflecting and absorbing light waves.

#### Special Habitat Management Areas

Several regional habitat management programs are planned for eastern San Diego County, including a future MSCP East County Plan. Conservation initiatives, including the Las Californias Binational Conservation Initiative and the Parque-to-Park Binational Corridor, include lands in the Project boundary (Stallcup et al. 2015).

The proposed project would not preclude or prevent the preparation of the subregional MSCP because the project has been planned in accordance with the planning principles of the MSCP and in consideration of preparation of the East County MSCP Plan. As described in Section 4.8, the proposed project is designed within the "Agriculture or Natural Upland outside Focused Conservation Area" and "Other Public/Semi-Public Lands," and avoids the major mapped drainages, as well as the following East County MSCP Plan designations: "Land Managed as Open Space" and "Land managed with Ecological Protection."

Although the County and Wildlife Agencies (i.e., USFWS and CDFW) have developed a list of covered species and have created a preliminary draft map of the focused conservation areas, the East County MSCP Plan currently has no current schedule for completion. The project design has been evaluated according to the general Preliminary Conservation Objectives outlined in the Planning Agreement for East County MSCP Plan (County 2014) and in consideration of future preparation of the East County MSCP Plan.

# 3.7 Overall Biological Value

The on-site open space supports native semi-desert habitats, mesquite bosque, and non-wetland ephemeral waters. It is adjacent to contiguous areas of undeveloped habitat to the east and west, providing habitat connectivity to conserved lands to the west and BLM land (Figure 3). The open space preserve provides preservation of nearly 435 acres of native vegetation communities and unvegetated channel (see Table 1) that are suitable for the variety of plant and wildlife species that have been identified on site as well as have potential to occur in the area. The open space preserve is also adjacent to land a portion of Anza-Borrego Desert State Park and federal Bureau of Land Management lands. The preservation of the mesquite-dominated floodplain and smaller stream channels will continue to function as hydrologic connections to downstream water sources and provide movement and habitat for species.

# 3.8 Enhancement and Restoration Opportunities

The 435 acres of open space held within the conservation easement will be preserved in their natural state. Enhancement and restoration opportunities include areas that were previously disturbed and non-native plant removal. At this time, no restoration is proposed within the onsite open space.

# 3.9 Cultural Resources Description

#### **Project Area**

Dudek conducted a records search of files obtained from the South Coastal Information Center (SCIC) for the Project study area and a 0.5-mile buffer surrounding the study area. SCIC records indicate that 35 previous cultural resources studies have been performed within 0.5-miles of the study area; of these, 19 cover at least a portion of the Project boundary. The SCIC records search also identified 143 cultural resources previously recorded within the 0.5-miles of the Project boundary. Of the 143 resources, 51 are located within the Project boundary, 23 of which are within the Project's area of direct impact (ADI). Prehistoric resources located within the Project boundary include 36 artifact scatters, six (6) temporary campsites, a village site, a bedrock milling station, and an isolated flake. There are also five (5) multicomponent artifact scatters, and one historic railroad track.

Dudek contacted the Native American Heritage Commission (NAHC) to request a search of their Sacred Lands Files. The NAHC responded indicating the presence of Native American cultural sites and recommended Dudek contact Native American representatives who may have information about cultural resources within the Project boundary. Dudek sent outreach letters and have received four responses. San Diego County staff initiated formal Native American consultation as required by Assembly Bill 52 on January 31, 2019. Eight tribes (Barona, Campo, Jamul, Kwaaymii, Manzanita, Santa Ysabel, Sycuan, Viejas) who have requested to consult under Assembly Bill 52 were notified of the Proposed Project. Five tribes (Campo, Jamul, Manzanita, Santa Ysabel, Viejas) responded. Santa Ysabel deferred to the Campo tribe. The County has been consulting with Campo, Jamul, Manzanita and Viejas. Consultation is ongoing and will continue throughout the processing of the Proposed Project.

An intensive pedestrian survey was completed in July and August 2018 and February 2019 for the Proposed Project and this was followed by significance evaluation testing in February and March 2019. The pedestrian survey identified nine (9) newly identified archaeological resources and 25 new isolates. The survey also revisited 27 previously recorded archaeological sites and one (1) isolate. Following the initial intensive pedestrian survey in July and August

2018, the Project design was adjusted to avoid project impacts to significant archaeological sites. The pedestrian survey included the current Project ADI and additional portions of the Project Boundary that were previously included in the Project ADI. The pedestrian survey did not include the entire Project Boundary or the 435-acre Open Space Preserve. More information on the cultural resources is provided in the Cultural Resources Report for the Proposed Project (Dudek 2019a).

#### **Open Space Easement**

Twenty-six archeological sites and isolates are located within the 435-acre Open Space Preserve (Confidential Appendix A. Cultural Resources within Project Area). Table 3 lists the cultural resources found within the Open Space Preserve.

Table 3. Cultural Resources Located within the Open Space Preserve

Resource Number	Period	Туре	Dimensions
CA-SDI-11676	Prehistoric	Lithic scatter	225 x 120 m
(portion)			
CA-SDI-11677	Prehistoric	Lithic scatter/Bedrock milling station	295 x 260 m
CA-SDI-11678	Prehistoric	Artifact Scatter/Quarry	265 x 160 m
(portion)			
CA-SDI-11679	Prehistoric	Artifact Scatter/Quarry	165 x 65 m
CA-SDI-11681	Prehistoric	Artifact scatter	180 x 235 m
(portion)			
CA-SDI-11690	Prehistoric	Lithic scatter	40 x 75 m
CA-SDI-11691	Prehistoric	Lithic scatter	15 x 40 m
CA-SDI-11692	Prehistoric	Bedrock milling	1 x 2 m
CA-SDI-11693	Prehistoric	Lithic scatter	5 x 25 m
CA-SDI-11694	Prehistoric	Lithic scatter	10 x 15 m
CA-SDI-19906	Prehistoric	Lithic scatter (destroyed)	55 x 40 m
(portion)			
CA-SDI-19910	Prehistoric	Lithic scatter	20 x 10 m
(portion)	D 1111	5 1 1 200 1 20	10 10
CA-SDI-22730	Prehistoric	Bedrock milling station	10 x 10 m
CA-SDI-22731	Prehistoric	Lithic scatter	65 x 45 m
CA-SDI-22732	Prehistoric	Lithic scatter/Bedrock milling station	70 x 50 m
CA-SDI-4455 (portion)	Prehistoric	Village	1,025 x 400 m
CA-SDI-4457 (portion)	Prehistoric	Artifact Scatter	250 x 135 m
CA-SDI-4459	Prehistoric	Artifact Scatter	110 x 95 m
CA-SDI-7036 (portion)	Prehistoric	Artifact Scatter	25 x 25
CA-SDI-7037 (portion)	Prehistoric	Isolated flakes	<1 sq m
CA-SDI-7917	Multi-Component	Artifact Scatter; Historic Refuse Scatter; Mining	350 x 185 m
P-37-038620	Prehistoric	Isolated flake	10 × 10 m
P-37-038621	Prehistoric	Isolated milling stone	<1 sq m
P-37-038622	Prehistoric	Isolated flake	<1 sq m
P-37-038623	Prehistoric	Isolated hand stone	<1 sq m
P-37-038625	Prehistoric	Isolated flake	<1 sq m

Source: Report references as cited in Dudek 2019b.

**Notes:** m = meters; sq m = square meters.



# 3.10 Historical Resources Description

Dudek conducted a records search of files obtained from the South Coastal Information Center (SCIC) for the Project study area and a 0.5-mile buffer surrounding the study area. The SCIC records search identified one (1) historical built environment resource (P-37-025680) previously recorded within the 0.5-miles of the Project boundary, but none were identified within the Project ADI. In addition, one previous study reviewed the Mountain Meadow Dairy complex within the Project ADI and determined that the site did not qualify as significant under CEQA, although there was not sufficient evidence provided to adequately support the rationale behind the findings. An intensive pedestrian survey of the Project ADI was conducted by a qualified architectural historian on August 9, 2019. The pedestrian survey did not include the entire Project Boundary or the 435-acre Open Space Preserve. The pedestrian survey identified one historic-era built environment resource, the Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex. The Complex was evaluated for significance, and recommended not eligible under all designation criteria due to a lack of significant historical associations and compromised integrity. More information on the cultural resources is provided in the Historical Resources Technical Report for the Proposed Project (Dudek 2019e).

Only one historic-era built environment resources was identified within the Project ADI, the Mountain Meadow Dairy complex. The Mountain Meadow Dairy complex is not located within the 435-acre Open Space Preserve. Only one other historic-era built environment resource was identified within the records search 0.5-mile buffer, P-37-025680. This resource consists of the San Diego and Arizona Eastern (SDAE) Railway tracks but is also known as the Union Pacific Railroad. A segment of the SDAE tracks bisects the Project Boundary and the Open Space Preserve (Confidential Appendix A. Resources within Project Area). However, by design, the Project Boundary and the Open Space Preserve do not include the railway right-of-way, so resource P-37-025680 is not located within the Open Space Preserve. No historic-era built environment resources are located within the Open Space Preserve.

INTENTIONALLY LEFT BLANK



# 4 Biological Resource Management

This RMP identifies activities to manage and preserve the sensitive biological resources within the Open Space Preserve. The main goal is to preserve and manage the 435 acres of on-site open space described, including the sensitive plant and animal species they support.

# 4.1 Management Goals

Goal: To preserve and manage lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the natural communities occurring within the Open Space Preserve.

A baseline inventory has been collected during the evaluation of the Project under CEQA. As such, ongoing species and habitat monitoring shall occur in accordance with County and regional standards. These standards typically include vegetation mapping every 5 years. Habitat maintenance may be required if vegetation mapping indicates habitat conversion that is detrimental to the preservation of native ecosystem functions. Specific management tasks are described in Section 4.2, Biological Management Tasks.

# 4.2 Biological Management Tasks

# 4.2.1 Baseline Biological Inventory

The existing vegetation and other biological resources information is described in detail in Section 3. The quantity and quality of vegetation communities within the on-site Open Space Preserve will be documented during the first year of active management. This inventory will incorporate data from the Project's Biological Resources Report with the findings of an initial baseline inventory field survey. These data will allow the resource manager to measure habitat changes caused by natural and human effects and to evaluate management efforts during subsequent years.

The baseline inventory update will be conducted during the first year of active management. To optimize the probability of detecting sensitive species reported or expected to occur within the on-site Open Space Preserve, this survey should be conducted between March and June, when the majority of sensitive plant and animal species are most likely to be detected.

### 4.2.2 Update Biological Mapping

Every 5 years, the resource manager will update the vegetation and sensitive resources mapping on a current aerial photograph of the site or in the field if updated aerial photography is not available. If mapping will be done from aerial photographs, sampling ground-truthing should occur to verify desktop mapping. The vegetation mapping shall conform to Oberbauer (2008) or the County's most current vegetation mapping standards. Additionally, incidental observations of special-status resources shall be recorded and reported in the annual reports.

# 4.2.3 Rare Plant Mitigation

The proposed project will result in impacts to two plant species which require mitigation: pygmy lotus (County list A) and sticky geraea (County List B). Impacts to one pygmy lotus requires translocation of the one plant and additional plantings to reach a 3:1 mitigation to impact ratio. Impacts to 21 individuals of sticky geraea require 1:1 mitigation. The biological open space will preserve 20 individuals. However, twenty one plants will be transplanted, or reestablished through seed, from the impact site into the open space.

DUDEK

### 4.2.3.1 Overview of Methods and Implementation Procedures

The general approach will involve transplanting one pygmy lotus and one sticky geraea from planned impact areas into suitable habitat within the biological open space preserve. Additionally, seed from pygmy lotus and sticky geraea has been collected and will be hand broadcast within the designated translocation area.

The salvaged plants and seeds will be placed in areas unoccupied by the target species but in habitat types that mimic the locations that they were translocated from. Since sticky geraea occurs within the biological open space, the translocated individuals as well as collected seed will be planted within occupied sticky geraea habitat within 25 feet of an existing sticky geraea individual. Temporary exclusionary fencing, or plant cages, will be installed around each translocated individual to ensure that herbivory is controlled during the plant establishment period.

The salvage and reseeding efforts are planned for spring or summer 2021.

### 4.2.3.2 Rationale for Expecting Project Success

Appropriate site conditions at the selected translocation site will be key to project success. The receptor site for both pygmy lotus and sticky geraea occurs within a suitable habitat area currently supporting sticky geraea that will be included in the biological open space (Figure 5). The close proximity of the receptor sites to a natural population with appropriate soils, hydrology, elevation, and slope exposure will help ensure that the plants experience the same environmental conditions in which the natural population presently exists. The physical and chemical similarities of the environmental conditions at these sites increase the probability for success of the proposed mitigation.

### 4.2.3.3 Performance Criteria

Performance criteria are based on the requirements as stated in M-BI-3, which require a 3:1 replacement of pygmy lotus and 1:1 replacement of sticky geraea. Therefore, if one pygmy lotus and twenty one sticky geraea are transplanted, then success of this Mitigation Program will be achieved when at least three pygmy lotus plants and twenty one sticky geraea plant are documented within the reception site during one or more years during the 3-year monitoring period. All target species individuals within the reception site will count toward the performance criteria whether established through transplantation or seeding. If the performance criteria are met before the end of the 3-year monitoring program, then maintenance and monitoring may be reduced with agreement from the County.

# 4.2.4 Sensitive Species Monitoring

### 4.2.4.1 Special-Status Plant Species

Two special-status plant species are located within the Open Space Preserve—sticky geraea (County List B) and Palmer's grapplinghook (County List D). All special-status plants within the Open Space Preserve shall be monitored and managed. In addition, the transplantation area will be maintained until the plants become established. The maintenance focus during this early establishment period will be to facilitate habitat development through the control of non-native weeds, with particular attention given to developing native seedlings. Supplemental water may also be provided during the first year to aid establishment if rainfall is insufficient. Monitoring at the receptor site will continue for a period of 3 years to document survival and establishment of pygmy lotus and the survival of transplanted sticky geraea.

### 4.2.4.2 Special-Status Wildlife Species

The following special-status species were observed within the Open Space Preserve: Cooper's hawk, loggerhead shrike, black-tailed gnatcatcher, tri-colored black bird, Costa's hummingbird, Lawrence's Goldfinch, Quino checkerspot butterfly, Merlin, yellow-headed blackbird, San Diegan tiger whiptail and San Diego black-tailed jackrabbit (Figure 5).

Protective measures to monitor and manage these species should be implemented, as necessary, to help ensure the persistence of preserved biological resources in the Open Space Preserve. These measures may include nesting bird surveys if any management tasks, such as exotic plant control, are required. The resource manager will confirm the presence of sensitive species during regular site visits at the appropriate time of year. Field notes and maps will be updated following each visit.

Per mitigation measure **M-BI-6** in the JVR Energy Park Project Final Environmental Impact Report (SCH No. 2019039044), if there is a potential or known roost of a special-status bat within a structure to be demolished, a replacement roost installation shall occur be installed within the biological open space easement. The land east of the structures shall be added to the open space easement if replacement roosts are required. The property analysis record (PAR) and endowment shall be updated as needed to reflect this additional land added to the open space. If the bat houses are required, maintenance of the bat houses shall occur to ensure long-term use/functionality. Monitoring should occur each month during construction and quarterly thereafter until it can be established that the bat box is being used by bats and the species of bats using the box is determined.

The tricolored blackbird is a SSC, and County Group 1 species. The Proposed Project would result in Impacts to suitable foraging habitat for this species. This species will be monitored for two years during their breeding season with a brief report prepared once the monitoring is completed. Their behavior and locations shall be mapped to document which areas of the open space they are utilizing for foraging. Additional observations during regular quarterly monitoring shall be included in this report. If it is determined that this species would benefit from additional monitoring or other measures, the annual report will provide suggestions on how to accomplish this.

Cameras will be installed to monitor wildlife movement. Motion-sensor cameras will be located within the Open Space Preserve at locations where wildlife movement is anticipated (e.g., near the I-8 bridge, near Boundary Creek, etc.) to document wildlife using and moving through the preserve. The camera study will occur over one year and include monitoring visits as needed. A report documenting the camera study will be provided following the one-year camera study.

### 4.2.5 Exotic Plant Control

The resource manager will identify and track exotic plant species infestations if they should occur in accordance with the goals of the Management Priorities for Invasive Non-native Plants A Strategy for Regional Implementation, San Diego, California (Cal-IPC et al. 2012; Invasive Plant Strategic Plan). Many non-native species have become naturalized (e.g., annual grasses) or are widely established in the landscape (e.g., mustards and clover), and control of these species is not feasible (Cal-IPC et al. 2012). However, the Invasive Plant Strategic Plan identifies some specific annual grasses for management, including purple false brome (*Brachypodium distachyon*), long-flowered veldt grass (*Ehrharta longiflora*), barbed goat grass (*Aegilops triuncialis*), medusahead (*Elymus caput-medusae*), and Pacific bent grass (*Agrostis avenacea*). Additionally, where there are new infestations of naturalized annual grasses or widely established mustards categorized as moderate or high priority in the Cal-IPIC Inventory, control measures will be implemented as soon as possible to prevent spread.

Weed control measures will be implemented, as necessary, to control existing non-native invasive plant species and prevent spread of new invasive plant species in the Open Space Preserve. The resource manager will coordinate assessments of non-native plant species during the quarterly site visits as well as an annual assessment of invasive plant species. If invasive plant species considered a high priority species for management (Cal-IPC 2019; Cal-IPC et al. 2012) are observed, the resource manager will report the occurrences to the San Diego Management and Monitoring Program (SDMMP) and coordinate control measures as necessary.

The selection of the appropriate removal methodology should be determined with consideration of many variables, including the time of year, severity of infestation, the presence of sensitive plants and wildlife, the degree of intermixing of invasive species with sensitive native habitats, access, and proximity to surface water. General recommendations for weed control are provided in the following subsections.

#### 4.2.5.1 Manual Removal

Manual vegetation removal (e.g., hand-pulling, grubbing, and hoeing) is a low-impact method of controlling invasive non-native plant species within a focused area. Due to the perennial nature of many of the target invasive plant species, their large size, and/or the difficulty of control, manual vegetation control is primarily applicable to the smaller annual species. Appropriate applications for manual removal are small occurrences of annual weeds and seedlings of perennial species when complete removal of the root system is possible. More mature perennial plants will limit the possibility of manual removal based on their size and root mass. Manual removal should be incorporated where herbicide application alone is inadequate, or where proximity of sensitive plant species prevents safe application (e.g., overspray or drifting of herbicides could affect nearby sensitive plants). All invasive non-native plant material that is feasibly removable (portions of trees may be too large to remove without significant effort or impact) should be removed and disposed of in a manner that does not promote spread or infestation of the species into new areas.

#### 4.2.5.2 Mechanical Removal

Mechanical removal may be necessary for control of some larger target invasive non-native plant species, such as saltcedar (*Tamarix ramosissima*), and is recommended to be combined with herbicide application. Cutting and removal of the aboveground plant material can be conducted with chainsaws and/or hand saws. The resulting material should be chipped and hauled off site. Subsequent application of herbicides should follow product guidelines for safe transport, storage, and application. Stumps remaining on site after cutting and herbicide application are not recommended for removal or grinding, but should be left to decompose in place.

### 4.2.5.3 Herbicide Application

The application of herbicides to control target invasive non-native plant species may be used on its own or as a secondary treatment following manual or mechanical removal for controlling sprout growth and regeneration. Herbicide application is recommended following removal of all target invasive tree species and other perennial species with the ability to regenerate from root fragments when removal of all plant material is not feasible. To eliminate the possibility of drift and impacts to neighboring desirable plant species, herbicide use should be limited to localized applications rather than foliar applications. A wide range of herbicides is available for such types of treatment. Herbicide labels and material safety data sheets list susceptible target plant species and provide proper direction in the use and handling of the products. Herbicides should be applied in accordance with state and federal laws.

#### 4.2.5.4 Cut and Daub Treatment

Cut and daub treatment is recommended for larger invasive plants to control regrowth and kill the portion of the plant remaining belowground. Cut and daub involves the cutting of invasive plant stalks or trunks and then the direct application of an appropriate herbicide directly to the freshly cut stump. Other related methods include drill and fill, where holes are drilled into the trunk of a tree and herbicide is injected. It is critical that the herbicide treatment occur immediately after the plants are severed so that the herbicide is carried into the plant tissue. If enough time elapses to allow the cut surface of the severed plant to dry out, a fresh cut should be made prior to herbicide application.

### 4.2.6 Predator/Pest Control

Non-native predator/pest species are not anticipated to be an issue within the Open Space Preserve. The resource manager will evaluate the need for predator/pest control and identify appropriate measures (e.g., traps) to reduce/eliminate the problem. In general, a moderate to high tolerance of predator/pest species will be afforded before action is taken. If significant predator/pest eradication actions are determined to be necessary, the resource manager will notify the appropriate regulatory oversight agencies. To the extent practicable, predator/pest control will be coordinated with similar activities conducted on adjacent lands.

# 4.2.7 Off-Highway Vehicle Control

Signs will be posted along all open space edges where open space is adjacent to Carrizo Gorge Road; along the perimeter of the Open Space Preserve; and at existing dirt roads within the Open Space Preserve to prevent OHV use (Figure 5). The signs must be corrosion resistant, must be 12 inches by 18 inches in size, must be placed on posts not less than 3 feet in height from the ground surface, and must state "Sensitive Environmental Resources Protected by Easement. Entry without express written permission from the County of San Diego is prohibited." Signage placement will be consistent with California Penal Code Part 1, Title 14, Section 602.8 regarding the placement of "No Trespassing" signs to be posted "at intervals not less than three to the mile along all exterior boundaries and at all roads and trails entering the lands."

Barriers will be constructed at select areas along the preserve boundary and within the Open Space Preserve in order to prevent access to the Open Space Preserve. These barriers may consist of large boulders, K-Rail, fencing, or similar material that will prevent OHV use, but will allow natural water flow to occur where installed at drainages. Where barriers occur at drainages, their placement shall be such that no additional permitting is required from resource agencies. The resource manager will report unauthorized OHV use to the local sheriff and will identify additional measures that may be necessary should OHV use become a problem. Potential measures to keep OHVs out of the Open Space Preserve include additional signs, dispersal of educational materials to nearby residents, enforcement partnerships with BLM and State Parks, and additional strategic installation of barriers at OHV access points.

# 4.3 Cultural Resources Management

Twenty-six sites or isolates are located within the proposed Open Space Preserve (see Table 3). Under County guidelines, all archaeological sites are considered important. The resource manager will execute an MOU with a cultural resources expert in the event there is any activity within the open space preserve and for annual inspections.

# 4.4 Fire and Flood Management

Fire is an important element in the ecology of Southern California but can also present potential hazards to habitat within the Open Space Preserve. Following natural fire events, vegetation within the Open Space Preserve will be allowed to recover naturally; however, seeding may be required at the discretion of the resource manager.

While the drainages and washes do flood, generally the Open Space Preserve parcels are not located in an area prone to flooding. Therefore, flooding is not anticipated to be a significant issue. Should flooding occur, the effect upon sensitive resources within the Open Space Preserve will be evaluated. In general, it is anticipated that the habitat within the Open Space Preserve will be allowed to regenerate naturally following a flood event. Adaptive measures may be recommended if the resource manager determines them to be necessary.

# 4.5 Adaptive Management

The resource manager is responsible for interpreting the results of site monitoring to determine the ongoing success of the RMP. If it is necessary to modify the plan between regularly scheduled updates, plan changes shall be submitted to the County and wildlife agencies for approval, as required.

# 4.6 Operations, Maintenance, and Administrative Tasks

Table 2 and Section 4, Biological Resource Management, describe a list of tasks such as baseline inventory, vegetation mapping, and regular visits to be conducted by the resource manager. Regular visits will occur quarterly.

### 4.6.1 Goals

Goal: To manage, maintain, and administer the proposed project in an ongoing setting to ensure the integrity of the preserved Open Space Preserve.

- Goal 1. Biological Management. Maintain approximately 415.49 acres of the property in native vegetation communities, with the following targets per community: desert saltbush scrub (4.69 acres, desert sink scrub (12.43 acres), disturbed freshwater marsh (0.08 acres), mesquite bosque (126.12 acres), Sonoran mixed woody scrub (139.33 acres), Sonoran mixed woody and succulent scrub (132.05 acres), and non-vegetated channel (0.78 acres).
  - Objective 1.1: Maintain accurate vegetation mapping to guide management decisions.
    - Strategy 1.1.1 (startup task): Provide the baseline biological inventory by mapping the existing
      vegetation and biological resources within the proposed open space within the first year of
      management and modify the Goal 1 targets if necessary.
    - Strategy 1.1.2 (ongoing task): Update the vegetation map at least once every 5 years and evaluate changes in terms of Goal 1 targets.
  - Objective 1.2: Maintain habitat for sensitive species.
    - Strategy 1.2.1 (ongoing task): Implement measures to ensure persistence of biological resources, including nesting bird surveys, exotic plant control, monitoring sensitive plants, etc.

- o Objective 1.3: Control exotic plants.
  - Strategy 1.3.1 (startup task): Map exotic plants during baseline surveys.
  - Strategy 1.3.2 (ongoing task): Provide exotic plant removal though manual, mechanical, herbicide, and/or cut and daub removal techniques.
- Objective 1.4: Control predators and pests.
  - Strategy 1.4.1 (ongoing task): Evaluate the need for predator and pest control; implement measures such as pesticides and traps as necessary.
- Objective 1.5: Control off-highway vehicles (OHVs) and illegal access in open space.
  - Strategy 1.5.1 (startup task): Post signs along all open space edges as shown on Figure 5. Barriers
    consisting of large boulders, K-rail, fencing, or similar material that will prevent OHV use but will
    allow natural water flow to occur will be constructed at various locations as shown on Figure 5.
  - Strategy 1.5.2 (ongoing task): The resource manager will report unauthorized OHV use to the local sheriff and will identify additional measures that may be necessary should OHV use become a problem.
  - Strategy 1.5.3 (ongoing task): Additional measures to keep OHVs out of the Open Space Preserve
    include additional signs, dispersal of educational materials to nearby residents, enforcement
    partnerships with BLM, and additional strategic installation of barriers at OHV access points.
- o Objective 1.6: Provide trash removal and vandalism repair.
  - Strategy 1.6.1 (ongoing task): Provide trash removal during regular management visits. Note any vandalism issues and provide appropriate tasks to repair/clean vandalized areas.
- Goal 2. Cultural Resource Management. Protection of twenty-six archaeological sites.
  - o **Objective 2.1:** Monitor Cultural Sites
    - Strategy 2.1.1: Monitor and document all natural impacts annually.
    - Strategy 2.1.2: Monitor and document all human impacts annually.
    - Strategy 2.1.3: Allow Native American access annually.

### 4.6.2 Tasks

The general operations, maintenance, and administrative tasks to be conducted by the resource manager will include the following tasks identified below and in Table 4.

Table 4. Summary of Management Responsibilities

Frequency	Activity	Staff Needed
One time	Providing baseline inventory of resources (if original inventory is over 5 years old)	Field staff, wildlife/plant biologist
	Constructing permanent signs (15 total)	Field staff or fencing contractor (if necessary)
	Constructing permanent barriers as part of public access control (4 total)	Field staff or fencing contractor (if necessary)
	Camera study	Field staff

Table 4. Summary of Management Responsibilities

Frequency	Activity	Staff Needed
Quarterly	Providing monitoring visits	Field staff
	Removing trash and debris	Field staff
	Controlling public access	Field staff
	Providing ranger patrol	Field staff
	Removing graffiti and repairing vandalism	Field staff
Annual	Replacing signs	Field staff
	Maintaining permanent barriers as part of public access control	Field staff
	Establishing and maintaining database and analysis of data	Resource manager
	Writing and submittal of annual report to County and wildlife agencies	Resource manager
	Providing review fees for County review of annual report	Resource manager
	Coordinating with law enforcement and emergency services (e.g., fire)	Resource manager
	Coordinating with adjacent land managers	Resource manager
	Update status of known cultural resources	Archaeologist
Every 5 years	Updating biological mapping (including special-status species)	Field staff, wildlife/plant biologist
	Updating aerial photography	Contractor
	Reviewing and, if necessary, updating RMP	Resource manager
Other	Tricolored blackbird monitoring	Field staff, wildlife biologist
As needed	Cultural resources monitoring during ground disturbance	Archaeologist
	Removing invasive species	Field staff
	Controlling post-fire erosion	Field staff
	Providing predator/pest control	Field staff
	Reseeding after fire	Field staff
	Coordinating with applicable fire agencies and access (gate keys, etc.) for these agencies	Field staff
	Maintenance and monitoring of bat houses (if required)	Field staff

#### **Annual Monitoring Reports**

A letter report will be submitted to the County that will summarize the overall condition of vegetation communities and sensitive species in the Open Space Preserve, outline proposed management tasks for the following year, and provide results of management activities proposed in the previous report. Submitted annually by the end of January, this letter report will compare the most recent data with those collected in previous years, evaluate sensitive species status and local wildlife corridor use, and outline appropriate remedial measures. Fees for County review will also be included with submittal of the annual report.

The results of all updated vegetation mapping (every fifth year) and sensitive species monitoring should be included in the appropriate annual letter reports.



#### Management Plan Review

This RMP will be reviewed every 5 years to determine the need for revisions or updates. Due to changing conditions within the Open Space Preserve, it may be necessary to revise the tasks outlined in this plan to ensure continued success of the stated goals.

#### **Access Control**

To prevent human-induced degradation of the Open Space Preserve due to illegal occupancy, trespassing (especially OHV activity), removal of resources, or dumping of trash or debris, the resource manager will restrict public access to the Open Space Preserve. The resource manager will coordinate with local law enforcement and U.S. Border Protection as well as patrolling the Open Space Preserve for signs of illegal trespassing. Permanent signage will be posted consistent with California Penal Code requirements at locations of unauthorized trails entering the Open Space Preserve and shall be maintained by the resource manager. All signs will be corrosion-resistant, measure at a minimum 12 inches by 18 inches in size, be posted on a metal post or on the fencing at least 3 feet above ground level, and state "Sensitive Environmental Resources Protected by Easement. Entry without express written permission from the County of San Diego is prohibited" in both Spanish and English. Proposed sign locations are shown on Figure 5.

#### Fencing/Barriers

In order to allow for wildlife movement through the area, perimeter fencing around the Open Space Preserve is not planned, except in the southwest corner where fencing and/or barriers will be erected to prevent access into the Open Space Preserve. Additional barriers will be constructed at select areas along the preserve boundary and within the Open Space Preserve in order to prevent access to the Open Space Preserve (Figure 5). These barriers may consist of large boulders, K-rail, fencing, or similar material that will prevent OHV use but allow natural water flow to occur. The locations of these barriers and signs are shown on Figure 5. Where barriers occur at drainages, their placement shall be such that no additional permitting is required from resource agencies. The entire solar facility footprint will be fenced, which will help prevent inadvertent access into the Open Space Preserve.

#### Illegal Occupancy

The area is frequently patrolled by the U.S. Customs and Border Protection (Border Protection), which discourages illegal use of the site. The resource manager will survey the Open Space Preserve for evidence of illegal access concurrently with other site management activities and file a report with the local sheriff and/or Border Protection, if necessary, to ensure the Open Space Preserve remains free of human occupancy.

#### Removal of Resources

Removal of any plants, animals, rocks, minerals, or other natural resources from the Open Space Preserve is prohibited unless determined to be beneficial to the management of the Open Space Preserve and allowed by the wildlife agencies. No archaeological artifacts shall be removed from the Open Space Preserve, and no archaeological resources shall be damaged during removal of plants or habitat remediation without formal significance evaluation and mitigation, if necessary prior to the undertaking. The resource manager will maintain a log of illegal collecting and may report individuals caught removing natural resources from the Open Space Preserve to the USFWS, CDFW, County, and/or sheriff's office. The resource manager may allow and supervise seed collection and plant cuttings as part of revegetation efforts within the Open Space Preserve and/or in nearby areas. Any such collected plant materials should be limited to such that is necessary and in accordance with state law to ensure successful revegetation while not adversely affecting local plant populations.



#### Trash Removal and Vandalism Repair

The resource manager will also conduct general trash removal within the Open Space Preserve during regular management site visits. Additionally, damage caused by vandalism will be repaired. Trash removal and vandalism repair will occur as needed during quarterly site visits. Upon initiation of the Open Space Preserve, existing trash will be removed to provide for a clean baseline. Following the initial trash removal effort, trash removal will be a regularly scheduled occurrence during quarterly site inspections (small items) and annually (larger items).

# 4.7 Management Constraints

This RMP has been written to satisfy the requirements of the County and attempts to identify possible issues in the future; however, unforeseeable changes may occur that are beyond the control of the resource manager. For example, changes in rainfall patterns may affect the populations of sensitive plant and animal species within the Open Space Preserve. Likewise, changes in other environmental factors such as air pollution, hazardous waste runoff, and erosion could have detrimental effects on the habitat within the management areas. An adaptive management approach will be taken to provide the flexibility to address unforeseen conditions. Adaptive management approaches, as needed, will be addressed as part of the RMP review every 5 years.

### 4.8 Public Use Tasks

The Open Space Preserve will not have public trails or other facilities. The Open Space Preserve is intended to serve as a habitat preserve and as such is not compatible with most activities.

Activities that will be specifically prohibited include:

- Use of herbicides (except to remove non-native species, as necessary), pesticides, rodenticides, biocides, fertilizers, or other agricultural chemicals
- Use of OHVs and any other motorized vehicles except in the execution of management duties
- Grazing or other agricultural activity of any kind
- Recreational activities including, but not limited to horseback riding, biking, target shooting, hunting, or fishing
- Commercial or industrial uses
- Construction, reconstruction, or placement of any building or other improvement, billboard, or sign
- Depositing or accumulation of soil, trash, ashes, refuse, waste, bio-solids or any other material
- Planting, introduction, or dispersal of non-native or exotic plant or animal species
- Altering the general topography of the Open Space Preserve, including but not limited to building of roads and flood control work
- Removing, destroying, or cutting of native trees, shrubs, or other vegetation, except as required by federal, state, or local law or by governmental order for (1) emergency fire breaks, (2) maintenance of existing roads, (3) prevention or treatment of disease, or (4) required mitigation programs
- Manipulating, impounding, or altering any natural watercourse, body of water, or water circulation on the
  open space, except as specified for restoration activities, and activities or uses detrimental to water quality,
  including but not limited to degradation or pollution of any surface or subsurface waters

# 4.9 Fire Management Element

The on-site Open Space Preserve is located away from developed areas and structures that could be destroyed by wildfire. The Proposed Project will have fuel modification activities adjacent to the open space areas in accordance with the Fire Protection Plan (Dudek 2019d). No additional fire management tasks are anticipated for the Open Space Preserve.

INTENTIONALLY LEFT BLANK



# 5 References

- 14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- BirdNature. 2014. "North American Migration Flyways." Accessed December 17, 2014. http://www.birdnature.com/flyways.html (cached).
- CDFG (California Department of Fish and Game). 2011. "Peninsular Bighorn Sheep Study Subpopulations." Distribution map. https://www.wildlife.ca.gov/Conservation/Mammals/Bighorn-Sheep/Desert/Peninsular/Range.
- CDFW (California Department of Fish and Wildlife). 2019a. "State and Federally Listed Endangered, Threatened, and Rare Plants of California." California Natural Diversity Database. CDFW, Biogeographic Data Branch. October 2019. Accessed November 2019. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline
- CDFW. 2019b. California Natural Diversity Database. RareFind Version 5.2.7 (Commercial Subscription).

  Sacramento, California: CDFW, Biogeographic Data Branch. Accessed May 2019. http://www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp.
- Cal-IPC (California Invasive Plant Council). 2019. California Invasive Plant Inventory Database. http://cal-ipc.org/paf/
- Cal-IPC, Dendra, and Conservation Biology Institute. 2012. Management Priorities for Invasive Non-Native Plants, A Strategy for Regional Implementation, San Diego County, California. Prepared for San Diego Association of Governments. Prepared by California Invasive Plant Council; Dendra, Inc; and Conservation Biology Institute. September 2012.
- CNPS (California Native Plant Society). 2019. *Inventory of Rare and Endangered Plants of California* (online ed., version 8-03 0.39). Sacramento, California: CNPS, Rare Plant Program. Accessed June 17, 2019. www.rareplants.cnps.org.
- California Penal Code, Part 1, Title 14, Section 602.8. Malicious Mischief.
- Conservation Biology Institute. 2004. Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation in the Border Region of California and Baja. Prepared for The San Diego Foundation, Resources Legacy Fund Foundation, and The International Community Foundation. September 2004.
- County ALUC (San Diego County Airport Land Use Commission). 2011. *Jacumba Airport Land Use Compatibility Plan*. Adopted December 2006; amended December 2011. San Diego County Regional Airport Authority, County ALUC.
- County (County of San Diego). 2007. Guidelines for Determining Significance, Cultural Resources: Archaeological and Historic Resources. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, San Diego County, California.

- County. 2010. County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources. Fourth Revision. Land Use and Environment Group, Department of Land Use and Planning, Department of Public Works. September 15, 2010.
- County. 2012. Resource Protection Ordinance. October 2012. http://www.sandiegocounty.gov/pds/docs/res\_prot\_ord.pdf.
- County. 2014. Planning Agreement by and among the County of San Diego, California Department of Fish and Wildlife, and the United States Fish and Wildlife Service Regarding the North and East County Multiple Species Conservation Program Plans and Habitat Conservation Plans. Revised and Amended May 12, 2014. http://www.sandiegocounty.gov/pds/mscp/docs/P\_A\_SIGNED.pdf.
- Dudek. 2021. Draft Biological Resources Technical Report for the JVR Energy Park Project, Major Use Permit PDS2018-MUP-18-022, Environmental Review Project Number PDS2018-ER-18-022-001. Encinitas, California: Dudek.
- Dudek. 2019a. Cultural Resources Report for the Jacumba Valley Ranch Energy Park Project. Encinitas, California: Dudek.
- Dudek. 2019b. Draft Groundwater Resources Investigation Report for the JVR Energy Park. Encinitas, California: Dudek. February 2019.
- Dudek. 2019c. Draft JVR Energy Park Fire Protection Plan PDS2018-GPA-18-010. Encinitas, California: Dudek.
- Dudek. 2019d. Historical Resources Technical Report for Jacumba Valley Ranch Solar Energy Park. Encinitas, California: Dudek.
- Emlen, S.T. 1975. "Migration: Orientation and Navigation." In *Avian Biology Volume* 5, edited by D.S. Farner and J.R. King, 129–219. New York: Academic Press.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game.
- Lowery, G.H. Jr. 1951. "A Quantitative Study of the Nocturnal Migration of Birds." *University of Kansas Publications Museum of Natural History* 3(2): 361–472.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* March 2008. Accessed September 12, 2012. http://www.sdcanyonlands.org/ canyon-groups/canyon-group-resources/canyon-enhancement-guide/189-canyon-enhancement-planning-guide-materials.
- Rosenberg, D.M., F. Berkes, R.A. Bodaly, R.E. Hecky, C.A. Kelly, and J.W.M. Rudd. 1997. Large-scale impacts of hydroelectric development. *Environmental Reviews* 5(1): 27–54. https://www.nrcresearchpress.com/doi/10.1139/a97-001.
- SANGIS. 2019. SanBIOS Database, including USGS 7.5-minute Jacumba and In-Ko-Pah Gorge quadrangles and Vegetation.

- SDG&E (San Diego Gas & Electric Company). 2009. Proponent's Environmental Assessment for the East County 500/230/69 kV Substation Project. Volume II. August 2009.
- Shuford, W.D., N. Warnock, K.C. Molina, and K.K. Sturm. 2002. "The Salton Sea as Critical Habitat to Migratory and Resident Waterbirds." *Hydrobiologia* 4713:255–274.
- Stallcup, J.A., J.M. Randall, T. Smith, B.S. Cohen, C. Guerrero Avila, M.A. Vargas, and S.A. Morrison. 2015. Las Californias Binational Conservation Initiative 2015: A Decadal Review of Conservation Status of the California—Baja California Border Region. A report by the Conservation Biology Institute, Terra Peninsular, Pronatura Noroeste, and The Nature Conservancy.
- Unitt, P. 2004. San Diego County Bird Atlas. San Diego, California: San Diego Natural History Museum.
- USDA (U.S. Department of Agriculture). 2018a. *Web Soil Survey*. USDA, Natural Resources Conservation Service, Soil Survey Staff. Accessed May 29, 2018. https://websoilsurvey.sc.egov.usda.gov/.
- USFWS (U.S. Fish and Wildlife Service). 2003. Recovery Plan for the Quino Checkerspot Butterfly (Euphydras editha quino). Portland, Oregon: USFWS, Region 1. August 11, 2003. http://ecos.fws.gov/docs/recovery\_plan/030917.pdf.
- USFWS. 2008. *Birds of Conservation Concern 2008*. Arlington, Virginia: USFWS, Division of Migratory Bird Management. December 2008. Accessed July 26, 2010. http://www.fws.gov/migratorybirds.
- USFWS. 2009. *Quino Checkerspot Butterfly* (Euphydryas editha quino) 5-Year Review: Summary and Evaluation. Carlsbad, California: USFWS Carlsbad Office. August 13, 2009. https://ecos.fws.gov/docs/five\_year\_review/doc4341.pdf.
- USFWS. 2019. "Critical Habitat and Occurrence Data" [map]. Accessed January 2019. http://www.fws.gov/data.
- USGS (U.S. Geological Survey). 2006 "Migration of Birds." Northern Prairie Wildlife Research Center. August 3, 2006. Accessed March 2019. http://www.npwrc.usgs.gov/resource/birds/migratio/routes.htm.
- USGS. 2013. "Migration of Birds: When Birds Migrate." http://www.npwrc.usgs.gov/resource/birds/migratio/when.htm.



INTENTIONALLY LEFT BLANK



# Appendix A

Cultural Resources within Project Area (Confidential)

Appendix J

Jacumba 138 kV Transmission Line – APLIC Requirements



### **ELECTRICAL CONSULTANTS, INC.**

PHOENIX OFFICE: 10851 NORTH BLACK CANYON HIGHWAY, SUITE 660, PHOENIX, AZ 85029 • PHONE: 602-997-9933

TO: Akhila Krishnan

DATE: February 1, 2021

SUBJECT: Jacumba 138 kV Transmission Line – APLIC Requirements

#### Dear Akhila:

APLIC standards are generally met by structures in lines over 138 kV without any modifications with respect to phase to phase and phase to ground configurations. The following considerations to meet APLIC standards and mitigate the danger to raptors and other large bird species have been made.

- Line spacing shall accommodate protection of the Golden Eagle per Chapter 5 in the Suggested Practices for Avian Protection on Power Lines document.
- APLIC recommends a separation of 60 inches between energized and grounded parts for eagles. The
  Jacumba 138 kV transmission structures are designed to meet this recommendation. The proposed
  insulators include an insulated polymer section that shall be at least 69 inches long.
- APLIC recommends the conductor separation for transmission conductors operating at 138 kV to have 76 inches horizontal and a 56 inches vertical minimum spacing. The current proposed design meets these requirements.

The following guidelines have been utilized to insure the structures are adequately framed and the conductor is adequately marked;

- Reducing Avian Collisions with Power Lines: The State of the Art in 2012
- Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006

Sincerely,

Bradley Stringham, P.E. Engineer of Record, ECI

Cc: Patrick Brown, BayWa Phillip Schaffer, BayWa Jeff Greinke, BayWa Yelena Radibratovic, ECI Dallas Brown, ECI Abe Dilworth, ECI