

<b>DOCKETED</b>	
<b>Docket Number:</b>	24-OPT-01
<b>Project Title:</b>	Perkins Renewable Energy Project
<b>TN #:</b>	254448
<b>Document Title:</b>	Perkins CDFW Streambed Alteration Agreement
<b>Description:</b>	Notification of Lake or Streambed Alteration
<b>Filer:</b>	Emily Capello
<b>Organization:</b>	Panorama Environmental, Inc.
<b>Submitter Role:</b>	Applicant Consultant
<b>Submission Date:</b>	2/14/2024 5:59:24 AM
<b>Docketed Date:</b>	2/14/2024

## **Appendix K    Notification of Lake or Streambed Alteration**



FOR DEPARTMENT USE ONLY				
Date Received	Amount Received	Amount Due	Date Complete	Notification No.
	\$	\$		
Assigned to:				

## NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete EACH field, unless otherwise indicated, following the [instructions](#) and submit ALL required enclosures, attachments, and fee(s) to the [CDFW regional office](#) that serves the area where the project will occur. Attach additional pages to notification, if necessary.

### 1. APPLICANT PROPOSING PROJECT

Name	Simon Ross
Business/Agency	IP Perkins, LLC
Mailing Address	9450 Southwest Gemeni Drive, PMB #68743
City, State, Zip	Beaverton, Oregon 97008
Phone Number	513-885-0372
Email	simon@intersectpower.com

### 2. CONTACT PERSON *(Complete only if different from applicant.)*

Name	Camille Wasinger
Business/Agency	Intersect Power (IP Perkins, LLC)
Mailing Address	9450 Southwest Gemeni Drive, PMB #68743
City, State, Zip	Beaverton, Oregon 97008
Phone Number	303-909-6396
Email	camille@intersectpower.com

While an applicant is legally responsible for complying with Fish and Game Code section 1602 et seq., an applicant may designate and authorize an agent (e.g., lawyer, consultant, or other individual) to act as a Designated Representative. The Designated Representative is authorized to sign the notification and any agreement on behalf of the Applicant.

**Do you authorize the Contact Person above to represent you as your Authorized Designated Representative?**

<input type="checkbox"/> Yes, I authorize.	<input checked="" type="checkbox"/> No, I do not authorize.
--	---

### 3. PROPERTY OWNER *(Complete only if different from applicant)*

Name	USA (Bureau of Land Management, El Centro Field Office)
Mailing Address	1661 S. 4th Street
City, State, Zip	El Centro, CA 92243
Phone Number	760-337-4400
Email	BLM_CA_Web_EC@blm.gov



**4. PROJECT NAME AND AGREEMENT TERM**

A. Project Name		Perkins Renewable Energy Project		
B. Agreement Term Requested		<input checked="" type="checkbox"/> Regular (5 years or less) <input type="checkbox"/> Long-term (greater than 5 years)		
C. Project Term		Beginning (year)	2026	Ending (year)
				2030
D. Seasonal Work Period				
Season(s)*	Start Date (month/day)	End Date (month/day)	E. Number of Work Days	
1	01/01	12/31	800	
2				
3				
4				
5				

\* Continue on additional page(s) if necessary

**5. AGREEMENT TYPE**

Check the applicable box. If boxes B – F are checked, complete the <a href="#">specified attachment</a> .	
A.	<input checked="" type="checkbox"/> Standard (Most construction projects, excluding the categories listed below)
B.	<input type="checkbox"/> Gravel/Sand/Rock Extraction (Attachment A) Mine I.D. Number: _____
C.	<input type="checkbox"/> Timber Harvesting (Attachment B) THP Number: _____
D.	<input type="checkbox"/> Water Diversion/Extraction/Impoundment (Attachment C) SWRCB Number: _____
E.	<input type="checkbox"/> Routine Maintenance (Attachment D)
F.	<input type="checkbox"/> Cannabis Cultivation (Attachment E)
G.	<input type="checkbox"/> CDFW Grant Programs Agreement Number: _____
H.	<input type="checkbox"/> Master
I.	<input type="checkbox"/> Master Timber Operations



**6. FEES**

See the [current fee schedule](#) to determine the appropriate notification fee. Itemize each project’s estimated cost and corresponding fee. **Note: CDFW may not process this notification until the correct fee has been received.**

A. Project Name		B. Project Cost	C. Project Fee
1	Perkins Renewable Energy Project	429025	6580.50
2			
3			
4			
5			
6			
7			
8			
9			
10			
		D. Base Fee (if applicable)	
		<b>E. TOTAL FEE*</b>	<b>6580.50</b>

\* Check, money order, and [Visa or MasterCard](#) (select Environmental Fees from Menu) payments are accepted.

**7. PRIOR NOTIFICATION AND ORDERS**

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, CDFW for the project described in this notification?

Yes (Provide the information below)       No

Applicant	Notification Number	Date

B. Is this notification being submitted in response to a court or administrative order or notice, or a notice of violation (NOV) issued by CDFW?

Yes       No (Enclose a copy of the order, notice, or NOV. If the applicant was directed to notify CDFW verbally rather than in writing, identify the person who directed the applicant to submit this notification, the agency he or she represents, and describe the circumstances relating to the order.)

Name of person who directed notification	Agency

Describe circumstances relating to order

Continued on additional page(s)



**8. PROJECT LOCATION**

A. Address or description of project location. <i>(Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway.)</i>					
The Project Application Area is in Imperial County, approximately 37 miles southeast of the Salton Sea. Imperial County is located in southern California, in the southwestern portion of the Colorado Desert. The Project Application Area is located approximately 1.2 miles north of the U.S.–Mexico border, in a region characterized by undeveloped desert and agricultural uses. The Imperial Valley, which is dominated by agricultural land, is located an estimated 2.5 miles west of the Project Application Area. The Imperial Sand Dunes, the largest mass of sand dunes in California, is located approximately 9 miles east of the Project Application Area.					
<input checked="" type="checkbox"/> <i>Continued on additional page(s)</i>					
B. River, stream, or lake affected by the project.		Ephemeral drainages and vegetated swales. See attachment.			
C. What water body is the river, stream, or lake tributary to?		Salton Sea			
D. Is the river or stream segment affected by the project listed in the state or federal <a href="#">Wild and Scenic Rivers Acts</a> ?			<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No
E. County		Imperial County			
F. USGS 7.5 Minute Quad Map Name		G. Township	H. Range	I. Section	J. ¼ Section
Glamis SW, Midway Well NW, and Midway Well		See attached pages			
<input type="checkbox"/> <i>Continued on additional page(s)</i>					
K. Meridian (check one)		<input type="checkbox"/> Humboldt		<input type="checkbox"/> Mt. Diablo	
				<input checked="" type="checkbox"/> San Bernardino	
L. Assessor's Parcel Number(s)					
056-170-022		056-170-015			
056-170-025					
<input type="checkbox"/> <i>Continued on additional page(s)</i>					
M. Geographic coordinates <i>(Provide the latitude and longitude coordinates for the property where the project(s) will take place. CDFW utilizes decimal degrees and WGS 84 datum. Access <a href="#">Google Maps Help</a> if you need assistance in finding your coordinates.)</i>					
Latitude/Longitude	<i>Latitude: see attached pages</i>		<i>Longitude: -###.#####</i>		
	<i>Latitude: ##.#####</i>		<i>Longitude: -###.#####</i>		
	<i>Latitude: ##.#####</i>		<i>Longitude: -###.#####</i>		
	<i>Latitude: ##.#####</i>		<i>Longitude: -###.#####</i>		
	<i>Latitude: ##.#####</i>		<i>Longitude: -###.#####</i>		



**9. PROJECT CATEGORY**

WORK TYPE	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR-MAINTAIN-OPERATE EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bank stabilization – rip-rap/retaining wall/gabion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat dock/pier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat ramp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel clearing/vegetation management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culvert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debris basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filling of wetland, river, stream, or lake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geotechnical survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat enhancement – revegetation/mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low water crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road/trail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sediment removal: pond, stream, or marina	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
flood control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm drain outfall structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary stream crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utility crossing: horizontal directional drilling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
jack/bore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
open trench	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water diversion without facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water diversion with facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other ( <i>specify</i> ): <b>solar facility</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**10. PROJECT DESCRIPTION**

- A. Describe the project in detail. Include photographs of the project location and immediate surrounding area.
- Written description of all project activities with detailed step-by-step description of project implementation.
  - Include any structures (e.g., rip-rap, culverts) that will be placed or modified in or near the stream, river, or lake, and any channel clearing.
  - Specify volume, and dimensions of all materials and features (e.g., rip rap fields) that will be used or installed.
  - If water will be diverted or drafted, specify the purpose or use and include [Attachment C](#).
  - Enclose diagrams, drawings, design plans, construction specifications, and maps that provide all of the following: site specific construction details; dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; overview of the entire project area (i.e., “bird’s-eye view”) showing the location of each structure and/or activity, significant area features, stockpile areas, areas of temporary disturbance, and where the equipment/machinery will access the project area.
    - A helpful resource to assist in the development of quality PDF maps in Google Earth. See [Using Google Earth to Map your Property \(PDF\)](#).

IP Perkins, LLC (Applicant) and IP Perkins BAAH, LLC, subsidiaries of Intersect Power, LLC, propose to construct, operate, maintain, and decommission a 1,150 megawatt (MW) solar photovoltaic (PV) facility and battery energy storage system (BESS) on public lands administered by the U.S. Bureau of Land Management (BLM) and Bureau of Reclamation (BOR), as well as private lands located southeast of El Centro in Imperial County, California.

Please see attached project description.

*Continued on additional page(s)*

B. Specify the equipment and machinery that will be used to complete the project.

See attachment for a list of construction equipment that would be used to complete the project.

*Continued on additional page(s)*

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).  Yes  No (*Skip to box 11*)

D. Will the project require work in the wetted portion of the channel?  Yes (*Enclose a plan to divert water around work site*)  No





**11. PROJECT IMPACTS**

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

See attached summary of impacts.

Continued on additional page(s)

B. Will the project affect any vegetation?  Yes (Complete the tables below)  No (Include aerial photo with date supporting this determination)

Vegetation Type	Temporary Impact	Permanent Impact
<b>creosote bush scrub</b>	Linear feet: <u>1242.5</u> Total area: <u>0.14</u>	Linear feet: <u>8285.5</u> Total area: <u>1.462</u>
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)
Not applicable.		

Continued on additional page(s)

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

Yes (List each species and/or describe the habitat below)  No  Unknown

See Biological Resources Technical Report and AFC Biological Resources section for a list of special status species that have potential to occur.

Continued on additional page(s)

D. Identify the source(s) of information that supports a “yes” or “no” answer above in Box 11.C.

See attached Biological Resources Technical Report (Appendix J.1 of AFC)

Continued on additional page(s)

E. Has a biological study been completed for the project site?

Yes (Enclose the biological study)  No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.



F. Has one or more technical studies (e.g., engineering, hydrologic, geological, or geomorphological) been completed for the project or project site?

Yes (*Enclose the study(ies)*)  No

*Note: One or more technical studies may be required to evaluate potential project impacts to a lake or streambed.*

G. Have fish or wildlife resources or waters of the state been mapped or delineated on the project site?

Yes (*Enclose the mapped results*)  No

*Note: Check “yes” if fish and wildlife resources or waters of the state on the project site have been mapped or delineated. “Wildlife” means and includes all wild animals, birds, plants, fish, amphibians, reptiles and related ecological communities, including the habitat upon which the wildlife depends.” (Fish & G. Code, § 89.5.) If “yes” is checked, submit the mapping or delineation. If the mapping or delineation is in digital format (e.g., GIS shape files or KMZ), you must submit the information in this format for CDFW to deem your notification complete. If “no” is checked, or the resolution of the mapping or delineation is insufficient, CDFW may request mapping or delineation (in digital or non-digital format), or higher resolution mapping or delineation for CDFW to deem the notification complete.*

**12. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES**

A. Describe the techniques that will be used to prevent sediment, hazardous, or other deleterious materials from entering watercourses during and after construction.

Refer to Attachment A.

*Continued on additional page(s)*

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

Refer to Attachment A.

*Continued on additional page(s)*

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

The applicant proposed compensation and mitigation plan for impacts on waters and other biological resources is provided in Attachment B.

*Continued on additional page(s)*



**13. PERMITS**

List any local, State, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A. RWQCB Waste Discharge Requirements  Applied  Issued

B. \_\_\_\_\_  Applied  Issued

C. \_\_\_\_\_  Applied  Issued

D. Unknown whether  local,  State, or  federal permit is needed for the project. (Check each box that applies)

Continued on additional page(s)

**14. ENVIRONMENTAL REVIEW**

A. Has a [CEQA](#) lead agency been determined?  Yes (Complete boxes B, C, D, E, and F)  No (Skip to box 14.G)

B. CEQA Lead Agency California Energy Commission

C. Contact Person CEC to provide D. Phone Number CEC to provide

E. Has a draft or final document been prepared for the project pursuant to CEQA and/or NEPA?

Yes (Check the box below for each CEQA or NEPA document that has been prepared and enclose a copy of each.)

No (Check the box below for each CEQA or NEPA document listed below that will be or is being prepared.)

<input type="checkbox"/> Notice of Exemption <input type="checkbox"/> Initial Study <input type="checkbox"/> Negative Declaration <input type="checkbox"/> THP/ NTMP	<input type="checkbox"/> Mitigated Negative Declaration <input checked="" type="checkbox"/> Environmental Impact Report <input type="checkbox"/> Notice of Determination (Enclose) <input checked="" type="checkbox"/> Mitigation, Monitoring, & Reporting Plan	<input checked="" type="checkbox"/> NEPA document (type): <u>Environmental Assessment</u>
---	--	--

F. [State Clearinghouse Number](#) (if applicable) CEC to provide once available

G. If the project described in this notification is not the “whole project” or action pursuant to CEQA, briefly describe the entire project (Cal. Code Regs., tit. 14 § 15378).

The whole project is described in the Project Description enclosed in the Application for Certification.

Continued on additional page(s)



H. Has a CEQA filing fee been paid pursuant to Fish and Game Code section 711.4?

- Yes (Enclose proof of payment)       No (Briefly explain below the reason a CEQA filing fee has not been paid)

Note: The [CEQA filing fee](#) is in addition to the notification fee. If a CEQA filing fee is required, the Lake or Streambed Alteration Agreement may not be finalized until paid.

This application is provided with the Application for Certification. The California Energy Commission will start the CEQA process upon deeming the application complete. No CEQA filing fee is due at this time as CEQA has not been completed.

**15. SITE INSPECTION**

Check one box only.

- In the event CDFW determines that a site inspection is necessary, I hereby authorize a CDFW representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant CDFW such entry.
- I request CDFW to first contact (*insert name*) \_\_\_\_\_ to be provided at later date \_\_\_\_\_ at (*insert phone number or email address*) \_\_\_\_\_ to be provided at later date \_\_\_\_\_ to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay CDFW’s determination as to whether a Lake or Streambed Alteration Agreement is required and/or CDFW’s issuance of a draft agreement pursuant to this notification.

**16. DIGITAL FORMAT**

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?

- Yes (Please enclose the information via digital media with the completed notification form.)  
 No

**17. SIGNATURE**

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, CDFW may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless CDFW has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

\_\_\_\_\_  
 Signature of Applicant or Applicant’s Authorized Representative

02 / 02 / 2024

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Simon Ross, Chief Commercial Officer  
 Print Name

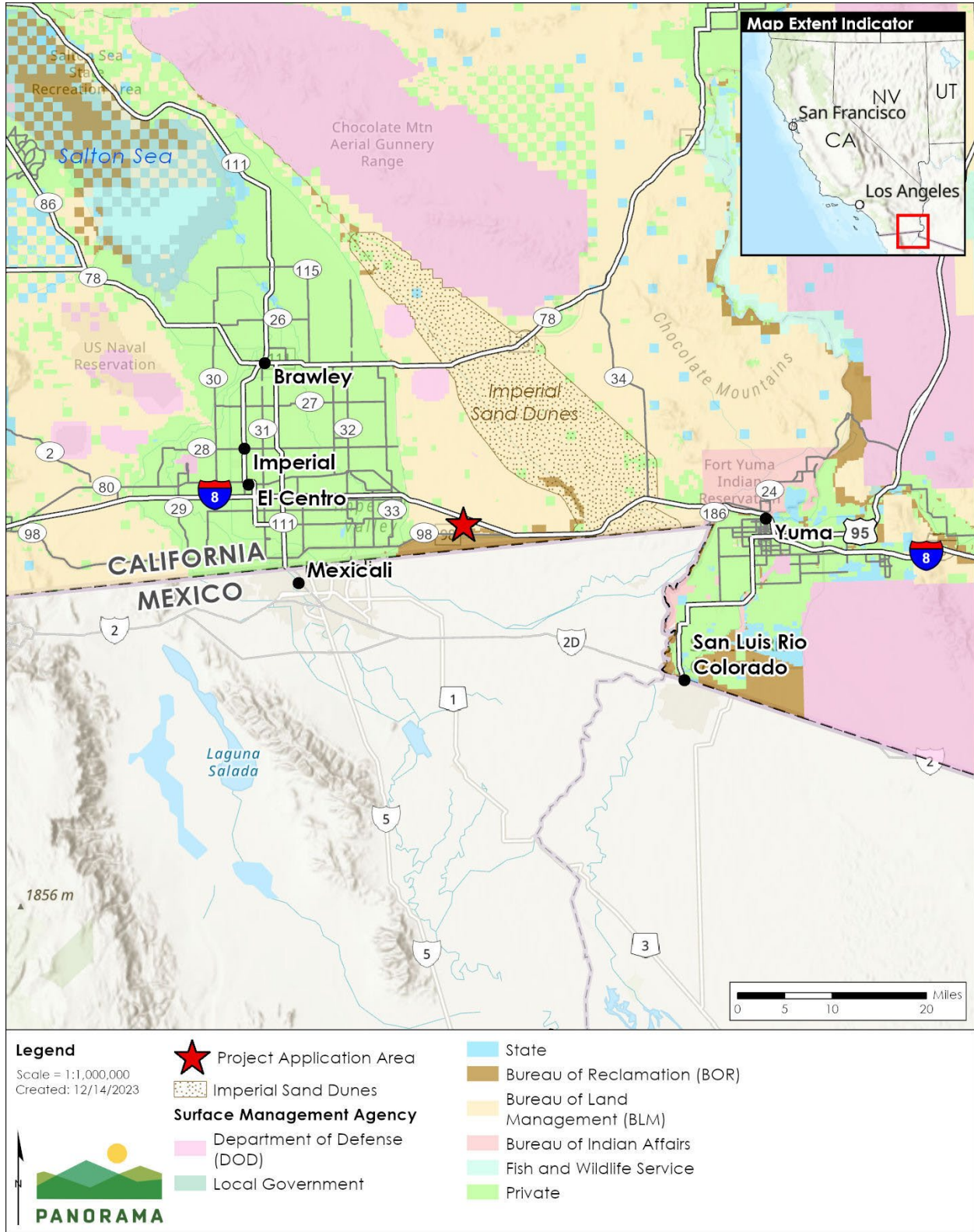
## 8. Project Location

### 8A. Project Location

The Project is located in Imperial County, approximately 37 miles southeast of the Salton Sea. Imperial County is in southern California, in the southwestern portion of the Colorado Desert. The Project Application Area is located approximately 1.2 miles north of the U.S.–Mexico border, in a region characterized by undeveloped desert and agricultural uses. The Imperial Valley, which is dominated by agricultural land, is located an estimated 2.5 miles west of the Project Application Area. The Imperial Sand Dunes, the largest mass of sand dunes in California, is located approximately 9 miles east of the Project Application Area. A regional location map is provided in Figure 1 and vicinity map is provided in Figure 2.

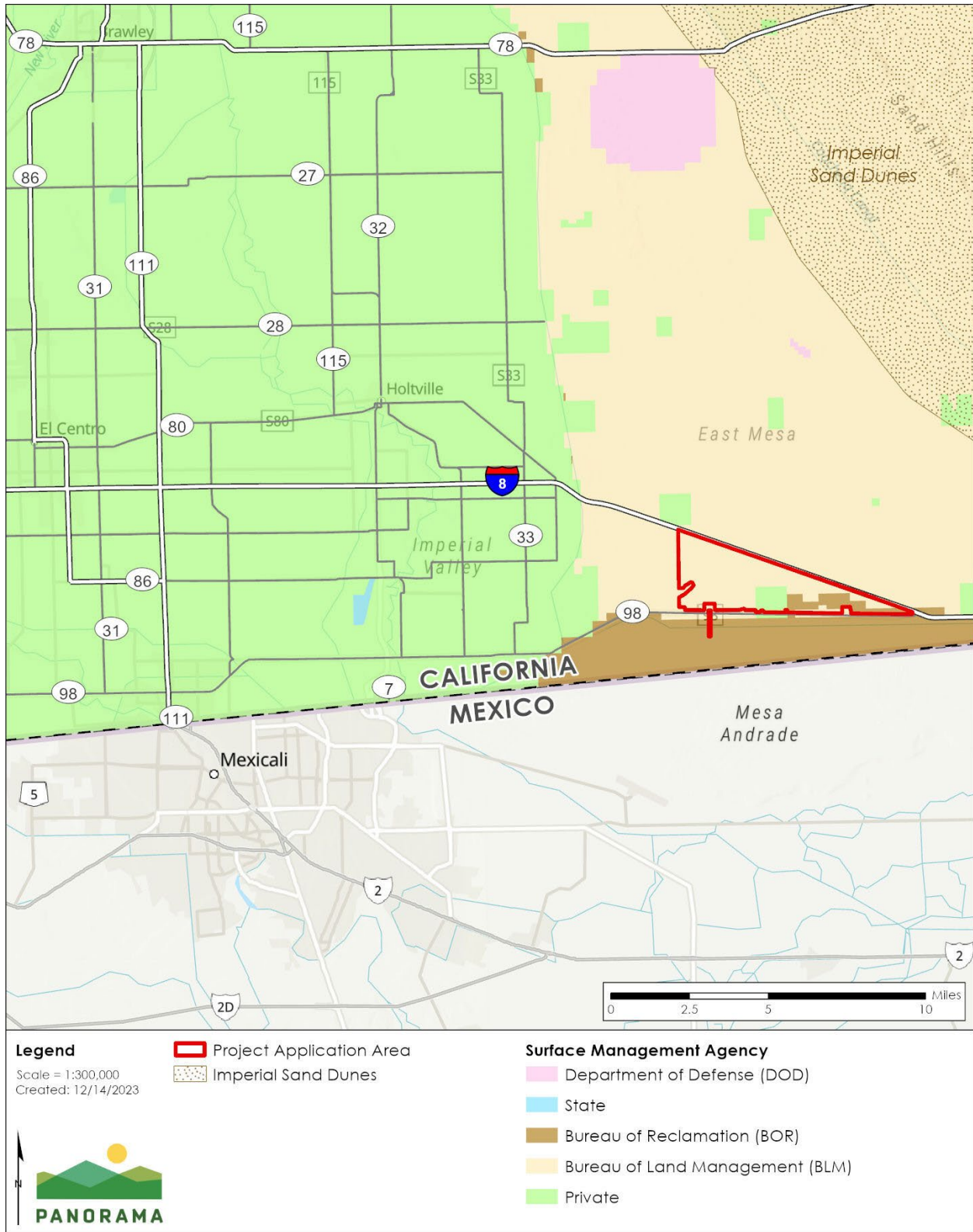
# ATTACHMENT A – SUPPLEMENTAL PAGES

**Figure 1 Regional Setting**



# ATTACHMENT A – SUPPLEMENTAL PAGES

**Figure 2 Project Vicinity**



## ATTACHMENT A – SUPPLEMENTAL PAGES

### 8M. Geographic Coordinates

The latitude and longitude for each water resource is provided below.

No.	Latitude	Longitude
1	32.723668°	-115.219132°
2	32.723567°	-115.218992°
3	32.723239°	-115.218695°
4	32.719889°	-115.212903°
5	32.719580°	-115.213225°
6	32.719171°	-115.213953°
7	32.718898°	-115.214012°
8	32.718578°	-115.213882°
9	32.718600°	-115.212537°
10	32.721262°	-115.199395°
11	32.720717°	-115.200509°
12	32.720297°	-115.199846°
13	32.718979°	-115.199163°
14	32.719746°	-115.200386°
15	32.719659°	-115.201125°
16	32.723400°	-115.219596°
17	32.723260°	-115.220184°



## 10. Project Description

### 10A. Project Description

IP Perkins, LLC, IP Perkins BAAH, LLC, and any related affiliates (collectively, "Applicant"), subsidiaries of Intersect Power, LLC, propose to construct, operate, maintain, and decommission a 1,150 megawatt (MW) solar photovoltaic (PV) facility and battery energy storage system (BESS) on public lands administered by the U.S. Bureau of Land Management (BLM) and Bureau of Reclamation (BOR), as well as private lands located southeast of El Centro in Imperial County, California.

A fenced area referred to as the "Project site" would contain the solar plant, BESS, Project interconnection generation tie (gen-tie) line, Project substation, and operations and maintenance (O&M) yard and facility. The Project would also include a high-voltage breaker-and-a-half switchyard (BAAH switchyard) and two 500 kilovolt (kV) loop-in transmission lines, each within a 200-foot-wide loop-in transmission corridor, that would be required to interconnect to the existing San Diego Gas and Electric (SDG&E) Southwest Power Link (SWPL) 500 kV transmission line that traverses east–west to the south of the Project site. Together the Project site, the BAAH switchyard, and the 500 kV loop-in transmission corridors are referred to as the "Project Application Area" in the AFC (refer to Figure 3).

#### Solar Arrays

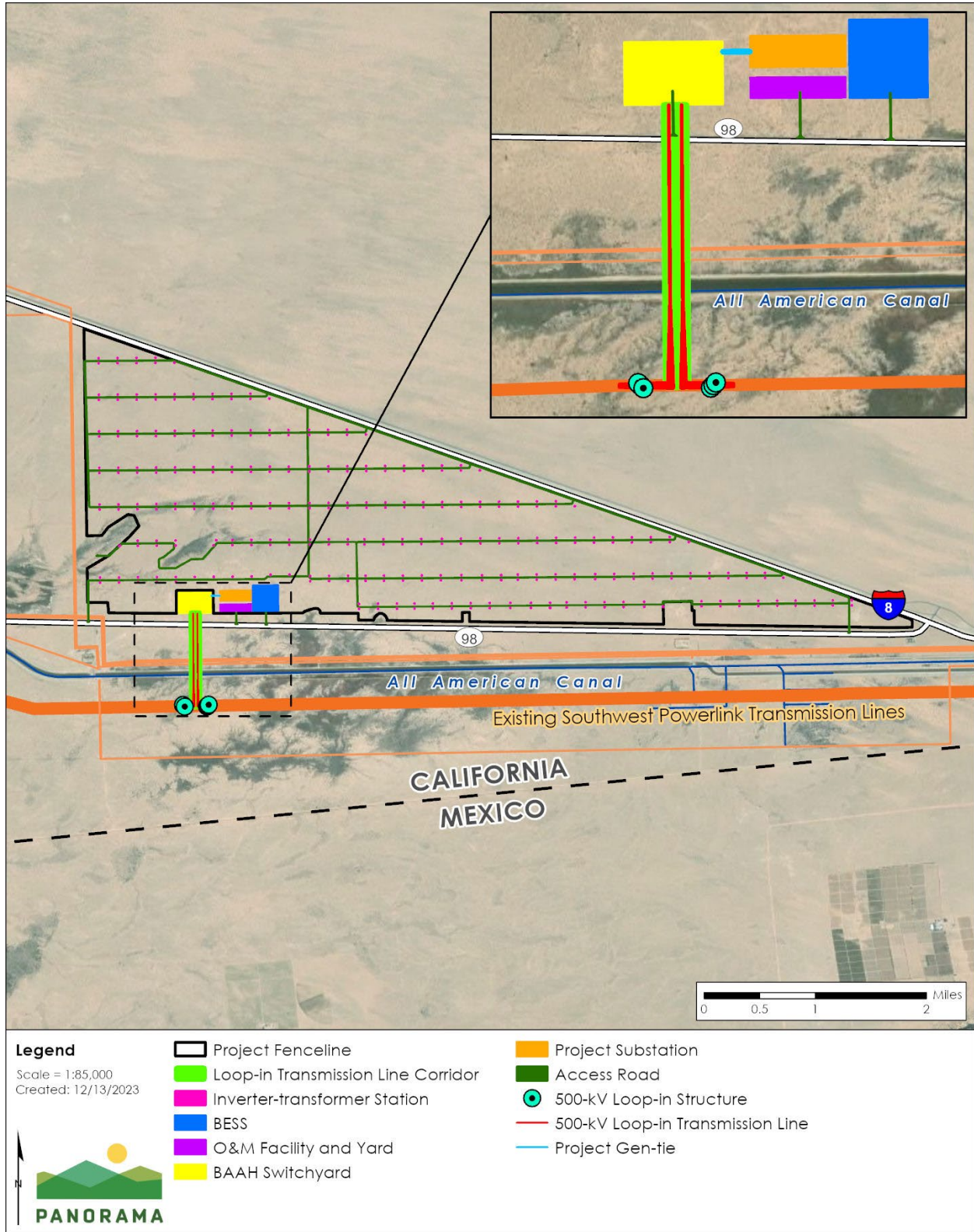
The solar facility would include several million PV panels; the precise panel count would depend on the technology ultimately selected at the time of procurement and efficiency of the technology at the time. The ultimate decision for the panel types and racking systems would depend on market conditions and environmental factors, including the recycling potential of the panels at the end of their useful lives.

Either mono-facial or bi-facial modules could be used, with a maximum height of approximately 10 feet at full tilt depending on topography and hydrology. Panel mounting systems that may be installed include either fixed-tilt or single-axis tracking technology, depending on the PV panels ultimately selected. Panels would either be mounted in a portrait orientation as single panels or mounted in a landscape orientation and stacked two high on a north-south oriented single-axis tracking system that would track the sun from east to west during the day. Panel faces would be minimally reflective, dark in color, and highly absorptive. Refer to Figure 4 for an elevation of an example solar PV technology that may be selected. Refer to Figure 5 for a visual representation of an example solar PV technology.

The PV panels would be manufactured at an off-site location and transported to the Project site. Panels would be arranged on the site in solar arrays. For single-axis tracking systems, the length of each row of panels would be approximately 350 feet along the north–south axis. For fixed-tilt systems, a row would consist of multiple tables four panels high by 10 panels wide (contingent on final design), each table being approximately 65 feet along the east–west axis, with 1-foot spacing between each table. Spacing between each row would be a minimum of 4 feet.

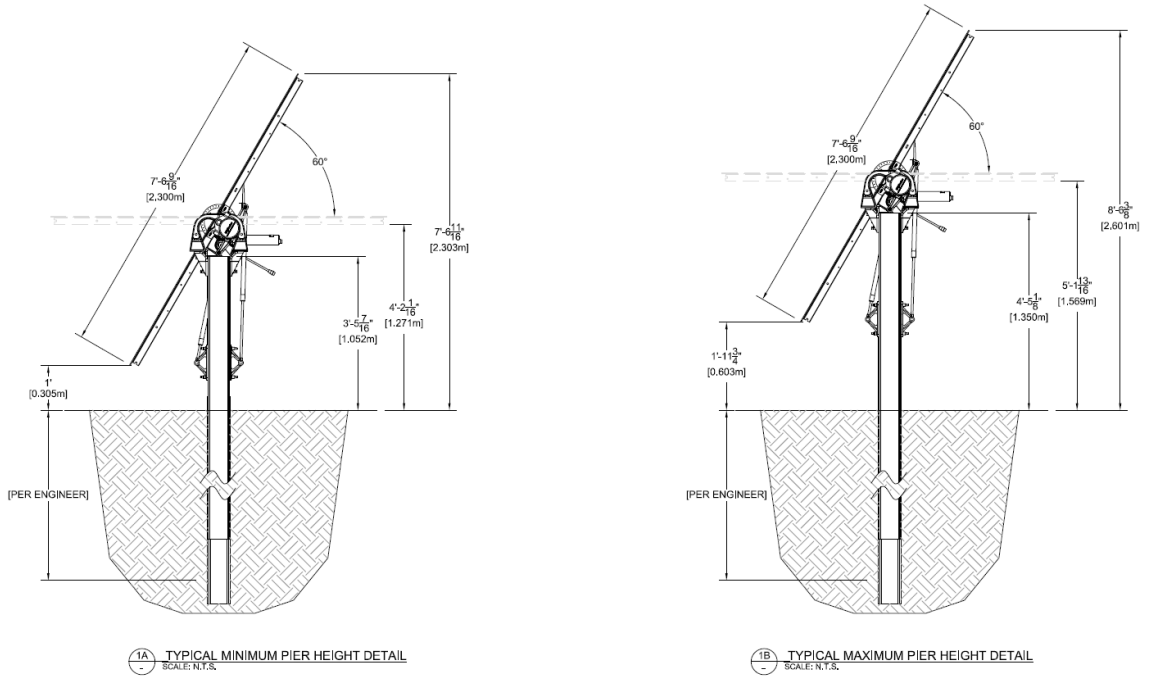
# ATTACHMENT A – SUPPLEMENTAL PAGES

**Figure 3 Project Layout Option 1**



# ATTACHMENT A – SUPPLEMENTAL PAGES

**Figure 4 Solar PV Example Technology**



**Figure 5 Visual Representation of Solar PV Example Technology**



## ATTACHMENT A – SUPPLEMENTAL PAGES

Electricity would be generated directly from sunlight by the solar arrays and collected to the Project substation.

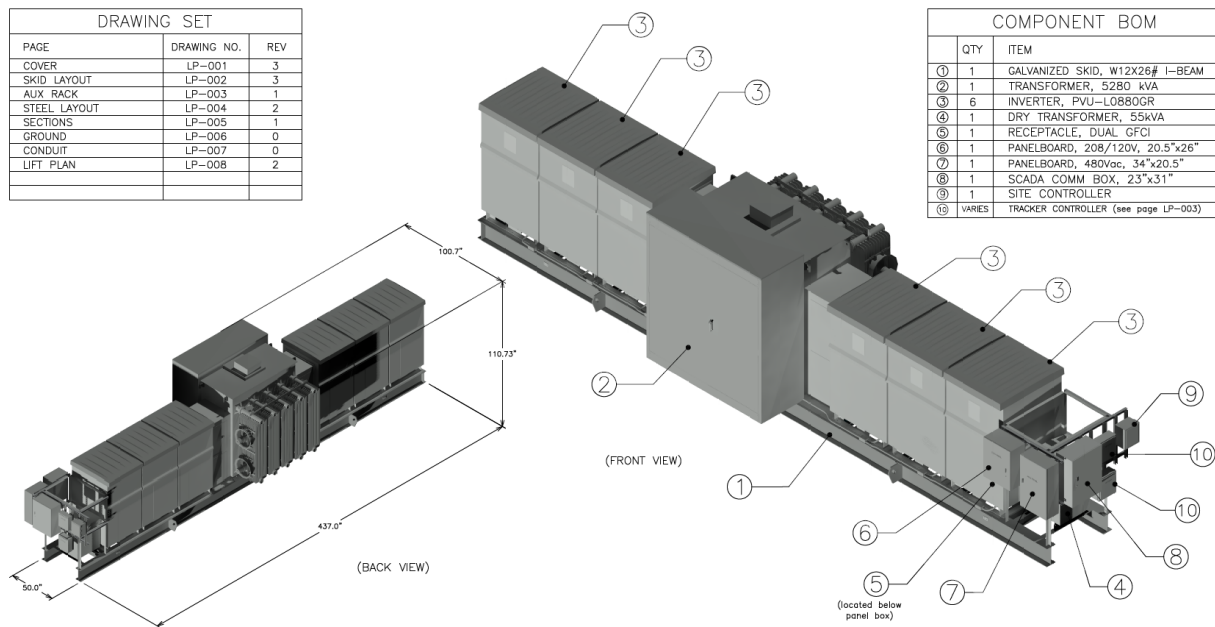
Structures supporting the PV panels would consist of steel piles (e.g., cylindrical pipes, H-beams, helical screws, or similar). The piles would typically be spaced 18 feet apart. The height of the piles above the ground would vary based on the racking configuration specified in the final design. For a single-axis tracking system, piles typically would be installed to a reveal height of approximately 4 to 6 feet above grade (minimum 1 foot clearance between bottom edge of panel and ground but could be higher to compensate for terrain variations and clearance for overland flow during stormwater events). For a fixed-tilt system, the reveal height would vary based on the racking configuration specified in the final design. Fixed-tilt arrays would be oriented along an east–west axis, with panels facing generally south. Tracking arrays would be oriented along a north–south axis, with panels tracking east to west to follow the movement of the sun. For fixed-tilt systems, the panels would be fixed at an approximate 20- to 60-degree angle or as otherwise determined necessary during final Project design.

### Inverters, Transformers, and Electrical Collection System

The Project would be designed and laid out primarily in 4 to 7 MW solar arrays. Non-conforming module blocks would be designed and sized as appropriate to accommodate the irregular shape of the Project site where necessary to avoid identified sensitive environmental resources.

Each 4 to 7 MW solar array would include an inverter-transformer station measuring 40 feet by 25 feet and approximately 10 feet tall, constructed on a concrete pad or steel skid and centrally located within the PV arrays (refer to Figure 6).

**Figure 6 Inverters, Transformers and Electrical Collection System**



## ATTACHMENT A – SUPPLEMENTAL PAGES

The color of the inverter equipment would be light colored or neutral, depending on thermal requirements and availability from the manufacturer. Each inverter-transformer station would contain up to six inverters, a transformer, a battery enclosure, and a switchboard 8 to 11 feet high. The battery would provide an uninterruptible power supply as emergency back-up power for the inverter-transformer station. Each pad would have a security camera at the top of an approximately 20-foot-tall wood or metal pole. If required based on site meteorological conditions, an inverter shade structure would be installed at each pad. The shade structures, if needed, would consist of wood or metal supports and a durable outdoor material shade structure (metal, vinyl, or similar). The shade structure would extend up to 10 feet above the ground surface.

PV panels would be electrically connected into panel strings using wiring secured to the panel racking system. Cables would be installed to convey the DC electricity from the panels via combiner boxes or combiner harnesses with a trunk bus system located throughout the solar arrays to inverters to convert the DC to AC electricity. The output voltage of the inverters would be stepped up to the collection system voltage via transformers located near the inverters. The 34.5 kV collection cables would be either buried underground or installed overhead on wood poles. An underground 34.5 kV line would likely be buried in a trench 4 feet below grade but could go as deep as 6 feet and include horizontal drilling to avoid environmental resources and constraints. Thermal specifications require 10 feet of spacing between the medium voltage lines. In some locations closer to the step-up substation, more than 20 medium voltage AC lines may run in parallel.

In locations where the collection system crosses a road or pipeline overhead, wood poles spaced at intervals between 150 to 250 feet would be installed across the Project site. The typical height of the poles would be approximately 60 to 100 feet, with an embedment depth of 10 to 15 feet depending on the type of crossing, and diameters varying from 12 to 20 inches. Due to potential for operations and maintenance challenges, as well as for security purposes, the intent is to install the 34.5 kV collection lines underground; however, overhead installation could be used in the event sensitive resources need to be avoided.

### **Solar Facility Access Driveways and Roads**

The Project's roadway system would include a perimeter road, access roads and driveways from SR 98, and internal roads. Up to five access roads and driveways from SR 98 would be constructed for access to the Project site. The access roads and driveways would be 24 feet wide (20 feet wide with a 2-foot shoulder on either side) and constructed to achieve facility maintenance requirements and Imperial County standards. The access roads and driveways would be surfaced with gravel, compacted soil, or another commercially available surface, depending upon site conditions and constraints. Shoulders would be of the same material albeit less compacted and would allow vehicles to pass one another.

A 20-foot-wide perimeter road (16 feet wide with 2-foot-wide shoulder on either side) would be built on the inside of the fence. A network of regularly spaced 20-foot-wide internal roads

## ATTACHMENT A – SUPPLEMENTAL PAGES

would be installed connecting to the perimeter road. Roads would be surfaced with compacted soil or another commercially available surface acceptable to regulatory agencies and would provide a fire buffer, accommodate Project operation and maintenance activities such as cleaning of solar panels, and facilitate on-site circulation for emergency vehicles. The roadway system would be designed to allow small wildlife passage across the site. If aggregate or gravel is used for road surfaces, such as to reduce dust or for low water crossings, portions of road lengths may remain free of gravel in strategic locations in order to facilitate wildlife movement. In addition, wildlife passage culverts may be placed at key locations along Project roads to allow wildlife to avoid the road.

### **Site Security, Fencing, and Lighting**

#### **Controlled Access**

Ingress/egress locations would be accessed via locked gates along the Project fenceline located at up to five points connecting to SR 98. The exact locations of the access points would be determined in coordination with CalTrans and based on resource survey results. The Project site would not be accessed from I-8.

#### **Fencing**

The Project site would be enclosed with fencing that meets National Electric and Safety Code (NEC) requirements for protective arrangements in electric supply stations. The boundary of the Project site would be secured by up to 6-foot-high chain-link perimeter fences topped with 1 foot of three-strand barbed wire or other fencing as dictated by BLM and/or North American Electric Reliability Corporation (NERC) specifications. The fence would typically be installed approximately 100 feet from the edge of the solar arrays.

### **Solar Facility Construction**

#### **Site Preparation and Grading**

The majority of the Project site would be mowed rather than cleared of vegetation. Mass grading of the Project site would not be needed for site preparation due to the relatively flat terrain. Spot grading would be employed for select solar array and storage facility components. Best management practices (BMPs) identified in the Fugitive Dust Control Plan would be implemented during all grading, vegetation removal, and construction activities.

The roads would require vegetation clearing, grading, and compaction. Inverter-transformer station locations would require light grubbing. Due to undulations within the Project site, some areas of grading would be needed within the solar arrays. Where solar site grading is necessary for discrete facilities or within the solar arrays, cut and fill would be balanced to the extent feasible. Some import and export of material would be necessary (refer to Table 2-4). Where excavation is required, most construction activities would be limited to less than 6 feet in depth within the Project Site; however, some excavations, such as those undertaken for the installation of collector poles, may reach depths of 45 feet or more.

## ATTACHMENT A – SUPPLEMENTAL PAGES

Within the solar arrays that do not require grading, mowing and grubbing would be conducted to allow for construction access and installation. Mowing and grubbing involves surface removal of vegetation, including mechanical mowing and removal of larger vegetation by hand cutting/trimming to the ground surface. The intent is to leave root balls and seeds in place to allow for regrowth of native vegetation after construction. During mowing, collection of mowed vegetation would be considered for future mulching to minimize dust and soil erosion on portions of the site and enhance restoration. A qualified restoration biologist would determine where the collected mulching material should be applied.

Non-native vegetation would be removed to the extent feasible during the construction phase via manual and mechanical methods and herbicide application. Any non-native species found in the Project Application Area that has not been evaluated for its potential to invade or alter surrounding natural lands would be considered a “weed” for purposes of the Restoration and Integrated Weed Management Plan implementation. Cutting, damaging, or uprooting microphyll woodland tree species would be avoided by Project design and BMPs, in accordance with the DRECP Conservation Management Actions (CMAs).

**Table 1 Solar Facility Disturbance Details**

Project component	Cut/fill quantity	Type of disturbance
Fenced solar facility with arrays and access roads	Balanced	Solar array areas to be mowed and grubbed to provide for construction access and installation
Inverter-transformer stations and electrical collection system	Balanced	Graded and backfilled to an elevation above surrounding grade to avoid flooding for inverter-transformer stations

Note:

<sup>a</sup> Estimated base for the areas requiring import of material is assumed to require a 12-inch depth.

### Access Roads

The existing surface area of the access roads would be cleared and compacted using on-site, native materials and may be covered in aggregate for dust or erosion control. The design standard for the access roads within the solar arrays would be consistent with the amount and type of use they will receive.

### Solar Array Installation

The steel piles (i.e., cylindrical pipes, H-beams, or similar) supporting the PV panels would be driven into the soil using pneumatic techniques, similar to a hydraulic rock hammer attachment on the boom of a rubber-tired backhoe excavator. The piles typically are spaced 10 feet apart and would be driven into the ground to a depth of 9 to 15 feet.

For single-axis tracking systems, following pile installation, the associated motors, torque tubes, and drivelines (if applicable) would be placed and secured. Some designs allow for PV panels to

## ATTACHMENT A – SUPPLEMENTAL PAGES

be secured directly to the torque tubes using appropriate panel clamps. For some single-axis tracking systems and for all fixed-tilt systems, a galvanized metal racking system, which secures the PV panels to the installed foundations, would then be field-assembled and attached according to the manufacturer's guidelines. A portion of the PV panel racking and modules may be assembled at staging areas.

### **Inverters, and Electrical Collection System**

The Project site electrical collection system would involve installation of inverter-transformer stations from which the medium voltage cabling collection system would lead to the Project substation(s). Electrical inverter-transformer stations would be delivered to locations around the Project site and placed on concrete pads or steel skids, which would be elevated as necessary with steel piles to allow for stormwater flow beneath the inverter structures. Concrete for foundations of the inverter-transformer stations and other electrical collection facilities would be brought on site from a regional batching plant or would be batched on site as necessary.

Medium-voltage cabling would be installed either underground or, for the low-impact design portion of the Project, overhead along panel strings in a cable management system to avoid the need for underground cabling and trenching. Cables, if underground, would be installed using direct bury equipment and/or typical trenching techniques, which involves use of a rubber-tired backhoe excavator or trencher. Shields or trench shoring would be temporarily installed for safety to brace the walls of the trench if required based on the trench depth. After the excavation, cable rated for direct burial would be installed in the trench, and the excavated soil would be used to fill the trench and compressed to 90- to 95-percent maximum dry density or in accordance with final engineering.

## **10B. Equipment and Machinery**

The following equipment would be used to construct the Project:

- Aerial lift
- Crane
- Forklift
- Grader
- Pile drivers
- Roller
- Rubber tired loaders
- Rubber tired dozer
- Skid steer loaders
- Tractor/loader/backhoe
- Trencher
- Welders
- One-pass



## 11. Project Impacts

### 11A. Project Impacts

Impacts to waters of the State are summarized in Table 2 below and shown on Figure 7.

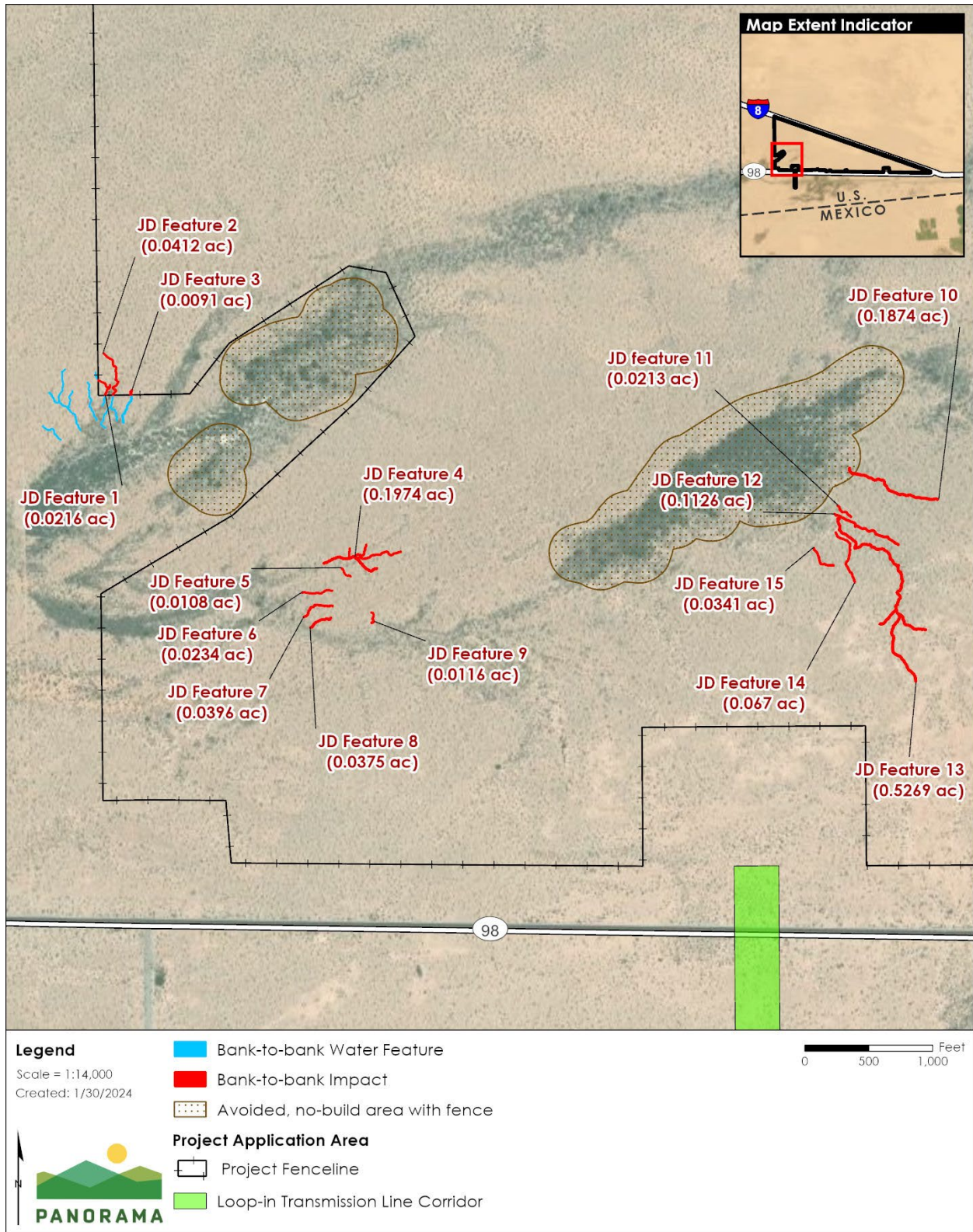
**Table 2 Permanent Impact to Waters of the State**

No.	Length of Impact (Feet)	Area of Impact (Acres)	Type of Impact/Facility	Material	Volume of Material (cy)
1	380.5	0.0393	Fence	Fence and Native Fill	127
2	911.5	0.0872	PV Array	Native Fill, Steel	844
3	281.5	0.0657	PV Array	Native Fill, Steel	636
4	1125	0.1974	PV Array	Native Fill, Steel	1,911
5	116	0.0108	PV Array	Native Fill, Steel	105
6	254	0.0234	PV Array	Native Fill, Steel	227
7	289	0.0396	PV Array	Native Fill, Steel	383
8	201	0.0375	PV Array	Native Fill, Steel	363
9	126	0.0116	PV Array	Native Fill, Steel	112
10	812	0.1874	PV Array	Native Fill, Steel	1,814
11	153	0.0213	PV Array	Native Fill, Steel	206
12	611	0.1127	PV Array	Native Fill, Steel	1,091
13	2295	0.527	PV Array	Native Fill, Steel	5,101
14	483.5	0.067	PV Array	Native Fill, Steel	649
15	246.5	0.0341	PV Array	Native Fill, Steel	330
<b>Total</b>	<b>8,285.5</b>	<b>1.462</b>	<b>N/A</b>	<b>N/A</b>	<b>13,899</b>

**Table 3 Temporary Impact to Waters of the State**

No.	Length of Impact (Feet)	Area of Impact (Acres)	Type of Impact/Facility	Material	Volume of Material (cy)
16	348	0.04	Roads	Native Fill	129
17	894.5	0.1029	Roads	Native Fill	332
<b>Total</b>	<b>1,242.5</b>	<b>0.1429</b>	<b>N/A</b>	<b>N/A</b>	<b>461</b>

Figure 7 Impacts to CDFW Jurisdictional Waters



## 12. Measures to Protect Fish, Wildlife, and Plant Resources

### 12A. Pollution Prevention, Erosion and Sediment Control

A Stormwater Pollution Prevention Plan (SWPPP) would be prepared by a qualified engineer or erosion control specialist and, once approved by the State Water Resources Control Board and a BLM hydrologist, would be implemented before and during construction. The SWPPP would reduce potential impacts related to erosion and surface water quality during construction activities and throughout the lifespan of the Project. The SWPPP would include Project information and erosion and sediment control BMPs. The BMPs would include stormwater runoff quality control measures, management for concrete waste, fugitive dust control, and construction of perimeter silt fences, as needed. The Erosion and Sediment Control Plan would include types and locations of erosion control BMPs to be implemented.

#### **Construction Site Stabilization, Restoration, and Wildlife Monitoring**

Following the completion of major construction, temporarily stockpiled topsoils would be spread within disturbed areas to be revegetated with native plant species for the operations phase pursuant to an approved Restoration and Integrated Weed Management Plan (refer to Appendix M.5). This plan would describe the Applicant's strategy to minimize adverse effects on native vegetation, soils, and habitat. Where necessary, native re-seeding or vertical mulching techniques would be used; however, it is anticipated that many species would regenerate post-construction due to preservation of desert vegetation during the construction phase. The Project Restoration and Integrated Weed Management Plan would be implemented during construction to ensure the control of non-native plant species under an approved Pesticide Use Proposal.

At the conclusion of restoration activities, and if determined beneficial by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and the BLM biologists, previously relocated plants and wildlife would be reintroduced to the Project site and monitored for safety and health.

#### **Applicable Best Management Practices, Project Design Features, and Conservation Management Actions**

As part of the Project, the Applicant is committed to implementing BMPs, Project Design Features, and Conservation Management Actions (refer to AFC Appendix D). The Applicant has also prepared mitigation plans as required by the BLM.

#### **Best Management Practices and Project Design Features**

The Project would implement the following BMPs and PDFs related to soils:

- BMP 79, Construction: Construction shall be conducted in stages to limit the areas of exposed soil at any given time. The project will comply with LUPA-BIO-9.
- BMP 80, Construction: Ground-disturbing activities shall be minimized, especially during the rainy season. The project will comply with LUPA-BIO-9.

## ATTACHMENT A – SUPPLEMENTAL PAGES

- BMP 81, Construction: Foundations and trenches shall be backfilled with originally excavated material as much as possible. Excess excavation materials shall be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities. The project will comply with LUPA-BIO-7.
- BMP 82, Construction: Water or other stabilizing agents shall be used to wet roads in active construction areas and laydown areas to minimize the windblown erosion of soil. The project will comply with LUPA-BIO-9.
- BMP 83, Disturbance area: The footprint of disturbed areas, including the number and size/length of roads, fences, borrow areas, and laydown and staging areas, shall be minimized. The project will comply with LUPA-BIO-9.
- BMP 84, Disturbance area: Electrical lines from solar collectors shall be buried along existing features (e.g., roads or other paths of disturbance) to minimize the overall area of surface disturbance whenever possible. The project will comply with LUPA-BIO-16.
- BMP 85, Disturbance area: Temporary stabilization of disturbed areas that are not actively under construction shall occur. The project will comply with LUPA-BIO-9.
- BMP 86, Disturbance area: Permanent stabilization of disturbed areas shall occur during final grading and landscaping of the site. The project will comply with LUPA-BIO-9.
- BMP 87, Drainages: Drainage crossings shall be stabilized as quickly as possible, and channel erosion shall be prevented from runoff caused by the project. The project will comply with LUPA-BIO-9.
- BMP 88, Stockpiles: Originally excavated materials shall be stockpiled and used for backfill. The project will comply with LUPA-BIO-7.
- BMP 89, Fill: Borrow materials shall be obtained only from authorized and permitted sites; existing sites shall be used in preference to new sites. The project will comply with LUPA-BIO-7.
- BMP 90, Erosion control: Potential soil erosion shall be controlled at culvert outlets with appropriate structures. The project will comply with LUPA-BIO-9.
- BMP 91, Erosion control: Catch basins, roadway ditches, and culverts shall be cleaned and maintained regularly. The project will comply with LUPA-BIO-9.
- BMP 92, Erosion control: Sediment-laden waters from disturbed, active areas within the project site shall be retained through the use of barriers and sedimentation devices (e.g., berms, straw bales, sandbags, jute netting, or silt fences). The project will comply with LUPA-BIO-9.
- BMP 93, Erosion control: Routine site inspections shall be conducted to assess the effectiveness and maintenance requirements for erosion and sediment control systems. The project will comply with LUPA-BIO-9.
- BMP 94, Operation: All appropriate mitigation measures developed for the construction phase shall be applied to similar activities during the operations phase. The project will comply with LUPA-BIO-5.

## ATTACHMENT A – SUPPLEMENTAL PAGES

- BMP 95, Revegetation: Project areas are to be replanted with vegetation at spaced intervals to the extent possible to break up areas of exposed soil and reduce soil loss by wind erosion. The project will comply with LUPA-BIO-9.
- BMP 96, Reclamation: All areas of disturbed soil shall be reclaimed using weed-free native grasses, forbs, and shrubs. Reclamation activities shall be undertaken as early as possible on disturbed areas. The project will comply with LUPA-BIO-9.
- BMP 97, Reclamation: All mitigation measures developed for the construction phase shall be applied to similar activities during the decommissioning/reclamation phase. The project will comply with LUPA-BIO-5.
- BMP 121, Revegetation: A combination of seeding, planting of nursery stock, and transplanting of local vegetation within the proposed disturbance areas. Where feasible, native vegetation shall be used for revegetating, establishing a composition consistent with the form, line, color, and texture of the surrounding undisturbed landscape. The project will comply with LUPA-BIO-7.
- BMP 122, Mitigation: The full range of visual best management practices shall be considered, and plans shall incorporate all pertinent BMPs. Visual resource monitoring and compliance strategies shall be included as a part of the project mitigation plans to cover the construction, operation and decommissioning phases. The project will comply with LUPA-VPL-VRM-3.
- BMP 123, Reclamation: All areas of disturbed soil shall be reclaimed by using weed-free native grasses, forbs, and shrubs representative of the surrounding and intact native vegetation composition and/or use non-native species, if necessary to ensure successful revegetation. The project will comply with LUPA-BIO-7.
- BMP 124, Reclamation: Rock and brush debris shall be restored whenever possible to approximate pre-existing visual conditions. The project will comply with LUPA-BIO-7.
- PDF HWQ-1. Drainage Erosion and Sedimentation Control Plan (DESCP).

### Conservation Management Actions

The Project would implement the following DRECP CMAs relevant to soils:

- LUPA BIO-7: Where DRECP vegetation types or Focus or BLM Special Status Species habitats may be affected by ground- disturbance and/or vegetation removal during pre-construction, construction, operations, and decommissioning related activities but are not converted by long-term (i.e., more than two years of disturbance, see Glossary of Terms) ground disturbance, restore these areas following the standards, approved by BLM authorized officer, following the most recent BLM policies and procedures for the vegetation community or species habitat disturbance/impacts as appropriate, summarized below:
  - Implement site-specific habitat restoration actions for the areas affected including specifying and using:
    - The appropriate seed (e.g., certified weed- free, native, and locally and genetically appropriate seed)

## ATTACHMENT A – SUPPLEMENTAL PAGES

- Appropriate soils (e.g., topsoil of the same original type on site or that was previously stored by soil type after being salvaged during excavation and construction activities)
  - Equipment
  - Timing (e.g., appropriate season, sufficient rainfall)
  - Location
  - Success criteria
  - Monitoring measures
  - Contingency measures, relevant for restoration, which includes seeding that follows BLM policy when on BLM administered lands.
- Salvage and relocate cactus, nolina, and yucca from the site prior to disturbance using BLM protocols. To the maximum extent practicable for short-term disturbed areas (see Glossary of Terms), the cactus and yucca will be re-planted back to the original site.
  - Restore and reclaim short-term (i.e. 2 years or less, see Glossary of Terms) disturbed areas, including pipelines, transmission projects, staging areas, and short-term construction-related roads immediately or during the most biologically appropriate season as determined in the activity/project specific environmental analysis and decision, following completion of construction activities to reduce the amount of habitat converted at any one time and promote recovery to natural habitats and vegetation as well as climate refugia and ecosystem services such carbon storage.
- LUPA BIO-9: Implement the following general LUPA CMA for water and wetland dependent resources:
    - Implement construction site standard practices to prevent toxic chemicals, hazardous materials, and other fluids from entering vegetation type streams, washes, and tributary networks through water runoff, erosion, and sediment transport by, at a minimum, implementing the following:
      - On project sites, vehicles and other equipment will be maintained in proper working condition and only stored in designated containment areas where runoff is collected or controlled and that are located outside of streams, washes, and distributary networks to minimize accidental fluids and hazardous materials spills.
      - Hazardous material leaks, spills, or releases will be immediately cleaned and equipment will be repaired upon identification. Removal and disposal of spill and related clean-up materials will occur at an approved off-site landfill.
      - Maintenance and operations vehicles will carry the appropriate equipment and materials to isolate, clean up, and repair any hazardous material leaks, spills, or releases.
    - Activity-specific drainage, erosion, and sedimentation control actions, which meet the approval of BLM and the applicable regulatory agencies, will be carried out during all appropriate phases of the approved project. These actions,

## ATTACHMENT A – SUPPLEMENTAL PAGES

as needed, will address measures to ensure the proper protection of water quality, site-specific stormwater and sediment retention, and design of the project to minimize site disturbance, including the following:

- Identify site-specific surface water runoff patterns and implement measures to prevent excessive and unnatural soil deposition and erosion.
  - Implement measures to maintain natural drainages and to maintain hydrologic function in the event drainages are disturbed.
  - Reduce the amount of area covered by impervious surfaces through use of permeable pavement or other pervious surfaces. Direct runoff from impervious surfaces into retention basins.
  - Stabilize disturbed areas following grading in the manner appropriate to the soil type so that wind or water erosion is minimized.
  - Minimize irrigation runoff by using low or no irrigation native vegetation landscaping for landscaped retention basins.
  - Conduct regular inspections and maintenance of long-term erosion control measures to ensure long-term effectiveness.
  - Project applicants for sites that may affect intermittent and perennial streams, springs, swales, ephemeral washes, wetland vegetation, other DRECP water land covers, or sites occupied by aquatic or riparian Focus and BLM Special Status Species due to groundwater or surface water extraction will conduct hydrologic studies during project planning to determine the potential effect of groundwater and surface water extraction on the hydrologic unit. These studies will include both watershed effects as well as effects on perched, alluvial, and regional aquifers. Projects that are likely to affect ground-water resources in a manner that would result in substantial loss of riparian or wetland communities or habitat for riparian or aquatic Focus and BLM Special Status Species are prohibited.
  - The use of evaporation ponds for water management will be avoided when the water could harm birds or other terrestrial wildlife due to constituents of concern present in the wastewater (e.g., selenium, hypersalinity, etc.). Evaporation ponds will be configured to minimize attractiveness to shorebirds (e.g., maintain water depths over two feet; maintain steep slopes along edge; enclose evaporation ponds in long-term structures; or obscure evaporation ponds from view using materials that blend in with the natural surroundings).
- Ramps that allow the egress of wildlife from ponds or other water management infrastructure will be installed.
- LUPA BIO-16: For activities that may impact Focus and BLM sensitive birds, protected by the ESA and/or Migratory Bird Treaty Act of 1918, and bat species, implement appropriate measures as per the most up-to-date BLM state and national policy and guidance, and data on birds and bats, including but not limited to activity specific plans and actions. The goal of the activity -specific bird and bat

## ATTACHMENT A – SUPPLEMENTAL PAGES

actions is to avoid and minimize direct mortality of birds and bats from the construction, operation, maintenance, and decommissioning of the specific activities. Activity-specific measures to avoid and minimize impacts may include, but are not limited to:

- Siting and designing activities will avoid high bird and bat movement areas that separate birds and bats from their common nesting and roosting sites, feeding areas, or lakes and rivers.
- For activities that impact bird and bat Focus and BLM Special Status Species, during project siting and design, conducting monitoring of bird and bat presence as well as bird and bat use of the project site using the most current survey methods and best procedures available at the time.
- Reusing or co-locating new transmission facilities and other ancillary facilities with existing facilities and disturbed areas to reduce habitat destruction and avoid additional collision risks.
- Reducing bird and bat collision hazards by utilizing techniques such as unguyed monopole towers or tubular towers. Where the use of guywires is unavoidable, demarcate guywires using the best available methods to minimize avian species strikes.
- When fencing is necessary, use bird and bat compatible design standards.
- Using lighting that does not attract birds and bats or their prey to project sites including using non-steady burning lights (red, dual red and white strobe, strobe-like flashing lights) to meet Federal Aviation Administration requirements, using motion or heat sensors and switches to reduce the time when lights are illuminated, using appropriate shielding to reduce horizontal or skyward illumination, and avoiding the use of high-intensity lights (e.g., sodium vapor, quartz, and halogen).
- Implementing a robust monitoring program to regularly check for wildlife carcasses, document the cause of mortality, and promptly remove the carcasses.
- Incorporating a bird and bat use and mortality monitoring program during operations using current protocols and best procedures available at time of monitoring

### **Mitigation Plans**

The Project would implement the following mitigation plans relevant to soils:

- Fugitive Dust Control Plan (AFC Appendix I.1)
- Restoration and Integrated Weed Management Plan (AFC Appendix M.5)

## **12B. Avoidance and Minimization Measures for Plants and Wildlife**

As part of the Project, the Applicant is committed to implementing BMPs, PDFs, and CMAs. The Applicant has also prepared mitigation plans as required by the BLM.



## ATTACHMENT A – SUPPLEMENTAL PAGES

### Best Management Practices and Project Design Features

The Project would implement the following BMPs and PDFs related to biological resources:

- **BMP-17**
  - **Staging Areas.** As practical, staging and parking areas shall be located within the Project site to minimize habitat disturbance in areas adjacent to the site.
- **BMP-18**
  - **Construction Activities.** Before beginning construction, delineate the boundaries of areas to be disturbed including roads, borings, soil testing sites, and pull and tensioning areas prior to any ground disturbance, and confine disturbances, project vehicles, and equipment to the delineated project areas.
- **BMP-19**
  - **Construction.** To the extent practicable, work personnel shall stay within the ROW and/or easements.
- **BMP-20**
  - **Fugitive Dust.** If the application of water is needed to abate dust in construction areas and on dirt roads, use the least amount needed to meet safety and air quality standards and prevent the formation of puddles, which could attract wildlife to construction sites.
- **BMP-21**
  - **Traffic.** Existing access roads, utility corridors, and other infrastructure shall be used to the maximum extent feasible.
- **BMP-22**
  - **Noise.** Noise reduction devices (e.g., mufflers) shall be employed to minimize the impacts on wildlife and special status species populations. Operators shall ensure that all equipment is adequately muffled and maintained in order to minimize disturbance to wildlife.
- **BMP-23**
  - **Power lines.** Place low and medium voltage connecting power lines underground whenever possible. In certain circumstances, burial of the lines may be prohibitively expensive (for example in shallow bedrock areas) or may cause unacceptable impacts to wetland habitats and dependent species. Overhead lines may be acceptable:
    - if sited away from high bird crossing locations, such as between roosting and feeding areas or between lakes, rivers, and nesting areas; and/or
    - when the structures parallel tree lines or are otherwise screened so that collision risk is reduced.
- **BMP-24**
  - **Habitat.** To reduce the extent of habitat disturbance during construction and operation, existing access roads, utility corridors, and other infrastructure shall

## ATTACHMENT A – SUPPLEMENTAL PAGES

be used to the maximum extent feasible and foot and vehicle traffic through undisturbed areas shall be minimized.

- **BMP-26**
  - **Habitat.** Areas left in a natural condition during construction (e.g., wildlife crossings) shall be maintained in as natural a condition as possible within safety and operational constraints.
- **BMP-27**
  - **Habitat.** All pits and trenches shall contain wildlife escape ramps. All uncovered pipes shall be capped and/or covered at the end of each workday to prevent animals from entering the pipes. If a special status species is discovered inside a component, that component must not be moved or, if necessary, moved only to remove the animal from the path of activity, until the animal has escaped.
- **BMP-28**
  - **Birds.** The Project should establish buffer zones and protection, mitigation, and monitoring plans for active nests detected during surveys.
- **BMP-29**
  - **Special Status Species.** In consultation with permitting agencies, avoid special status species or unique plant assemblages when installing and maintaining transmission line towers/ poles, access roads, pulling sites, and storage and parking areas adjacent to linear facilities.
- **BMP-30**
  - **General Wildlife Protection.** Implement general standards practices to protect federal and state special-status species.
- **BMP-31**
  - **General Wildlife Protection.** Prior to any ground-disturbing activity, seasonally appropriate surveys shall be conducted by qualified biologists to ensure that important or sensitive species or habitats are not present in or near project areas. Habitats or locations to be avoided (with appropriately sized buffers) shall be clearly marked.
- **BMP-32**
  - **Vegetation.** Project-specific vegetation management plans shall investigate possibilities of revegetating parts of the Project Area.
- **BMP-33**
  - **Noxious Weeds.** The establishment and spread of invasive species and noxious weeds within the Project Area and loop-in transmission line corridors shall be prevented. The areas shall be monitored regularly, and invasive species should be eradicated immediately.
- **BMP-34**

## ATTACHMENT A – SUPPLEMENTAL PAGES

- **Herbicide Use.** Only herbicides with low toxicity to wildlife and nontarget native plant species shall be used, as determined in consultation with the BLM, BOR, CEC, and USFWS. The typical herbicide application rate shall be used rather than the maximum application rate, where effective. All herbicides shall be applied in a manner consistent with their label requirements and in accordance with guidance provided in the Final PEIS on vegetation treatments using herbicides (BLM 2007c).
- **BMP-35**
  - **Waste.** Construction debris, especially treated wood, shall not be stored or disposed of in areas where it could come in contact with aquatic habitats.
- **BMP-36**
  - **Reclamation.** Access roads shall be reclaimed when they are no longer needed.
- **BMP-37**
  - **Reclamation.** All holes and ruts created by removal of structures and access roads shall be filled or graded.
- **BMP-38**
  - **Reclamation.** While structures are being dismantled, care shall be taken to avoid leaving debris on the ground in areas in which wildlife regularly move.
- **BMP-39**
  - **Reclamation.** The facility fence shall remain in place for several years following decommissioning to help reclamation (e.g., would preclude large mammals and vehicles from disturbing revegetation efforts).
- **PDF BIO-1**
  - **Biological monitoring.** Monitoring to ensure conformance with conditions of approval, including effective protection and avoidance of biological resources, shall be implemented by the Applicant as follows:
  - **Biological Monitoring Team.** During construction and decommissioning, the Applicant shall employ a biological monitoring team to oversee Project activities. Any activity that may impact vegetation, wildlife, and sensitive resources shall be monitored to ensure compliance with all mitigation measures for biological resources. The biological monitoring team shall consist of:
    - **Lead Biologist:** The Applicant shall assign a Lead Biologist, approved by BLM, BOR, CEC, CDFW, and USFWS as the primary point of contact for the federal, state, and resource agencies regarding biological resources mitigation and compliance.
    - **Biological monitors:** Biological monitors shall be overseen by the Lead Biologist and shall perform any required surveys, ground disturbance and construction monitoring, wildlife monitoring, inspections, marking sensitive resource buffers, and revegetation monitoring during Project activities.

## ATTACHMENT A – SUPPLEMENTAL PAGES

- Biological monitors shall include trained flat-tailed horned lizard and nest monitors (PDF BIO-5).
- The Applicant shall provide the resumes of the proposed Biological Monitoring Team to the BLM, BOR, CEC, CDFW, and USFWS for approval prior to onset of ground-disturbing activities. The Biological Monitoring Team shall have demonstrated expertise with the biological resources within the Project region. The Biological Monitoring Team shall have authority to halt any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources. The duties of the Biological Monitoring Team shall vary during the construction, operation and maintenance, and decommissioning phases, based on the biological monitoring tasks needed for compliance during each phase. An Applicant staff member serving as a compliance manager may perform the duties of the Lead Biologist to ensure compliance with biological mitigation measures, such as performing inspections for entrapped wildlife and fence condition, reporting dead or injured wildlife, and avoiding nesting birds. In general, the duties of the Lead Biologist shall include, but shall not be limited to, the following:
    - Regular, direct communication with representatives of the federal, state, and resource agencies, as appropriate. The Lead Biologist or, during operation and maintenance, the Applicant’s compliance manager shall immediately notify the federal, State, and applicable resource agencies in writing of dead or injured special status species or of any non-compliance with biological mitigation measures or permit conditions.
    - Train and supervise biological monitors, including flat-tailed horned lizard monitors, nest monitors, and construction monitors.
    - Conduct or oversee Worker Environmental Awareness Program (WEAP) training.
    - During construction and decommissioning, clearly mark and inspect sensitive biological resource areas in compliance with regulatory terms and conditions.
    - Oversee wildlife clearance surveys, ground disturbance and grading, and biological monitoring and ensure that all biological monitoring is completed properly and on schedule.
    - Conduct or oversee bi-weekly compliance inspections during ground-disturbing activities and communicate any remedial actions needed (e.g., trash, fence, weed maintenance; wildlife mortality) to maintain compliance with mitigation measures.
  - **Reporting.** The Lead Biologist or, during operation and maintenance, the Applicant’s compliance manager shall report regularly to the BLM, BOR, CEC, CDFW, and USFWS to document the status of compliance with biological mitigation measures.
  - **During construction and decommissioning:**

## ATTACHMENT A – SUPPLEMENTAL PAGES

- Provide weekly verbal or written updates to the BLM, BOR, CEC, CDFW, and USFWS.
- Prepare and submit monthly and annual compliance reports to include a summary of Project activities that occurred, biological resources surveys and monitoring that were performed, any sensitive or noteworthy species observed, weed infestations removed, and non-compliance issues and remedial actions that were implemented.
- **During operation and maintenance:**
  - Conduct quarterly compliance inspections and reporting to be submitted to the BLM, BOR, CEC, CDFW, and USFWS to document the condition of fencing, wildlife mortality, and any biological resource issues of note.
- **PDF BIO-2**
  - **Worker Environmental Awareness Program.** The Lead Biologist shall prepare and implement a Worker Environmental Awareness Program (WEAP). The Applicant shall be responsible for ensuring that all workers at the site receive WEAP training prior to beginning work on the Project and throughout construction and operations. The WEAP shall be available in English and Spanish. The Applicant shall submit the WEAP to the lead agency and resource agencies for approval prior to implementation. The WEAP will:
    - Be developed by or in consultation with the Lead Biologist and consist of an on-site or training center presentation with supporting written material and electronic media, including photographs of protected species, available to all participants;
    - Provide an explanation of the function of flagging that designates authorized work areas; specify the prohibition of soil disturbance or vehicle travel outside designated areas;
    - Discuss general safety protocols such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures;
    - Review mitigation and biological permit requirements;
    - Explain the sensitivity of the vegetation and habitat within and adjacent work areas, and proper identification of these resources;
    - Discuss the federal and State Endangered Species Act, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act and the consequences of non-compliance with these acts;
    - Discuss the locations and types of sensitive biological resources on the Project site and adjacent areas and explain the reasons for protecting these resources;
    - Inform participants that no snakes or other reptiles, birds, bats, or any other wildlife shall be harmed or harassed;
    - Place special emphasis on species that may occur on the Project site and/or loop-in transmission lines, including special status plants, flat-tailed horned

## ATTACHMENT A – SUPPLEMENTAL PAGES

- lizard, Colorado desert fringe-toed lizard, desert kit fox, and western burrowing owl;
- Specify guidelines for avoiding rattlesnakes and reporting rattlesnake observations to ensure worker safety and avoid killing or injuring rattlesnakes. Rattlesnakes should be safely removed from the work area using appropriate snake handling equipment, including a secure storage container for transport, or by calling local animal control;
  - Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the Project site and surrounding areas and describe the Integrated Weed Management Plan;
  - Provide contact information for the Lead Biologist and instructions for notification of any vehicle-wildlife collisions or dead or injured wildlife species encountered during Project-related activities;
  - Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.
- **PDF BIO-3**
    - **Minimization of Vegetation and Habitat Impacts.** Prior to construction, operation and maintenance, or decommissioning activities, authorized work areas shall be clearly delineated by the contractor. These areas shall include, but not be limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils. Delineation may be implemented with “fencing” or staking to clearly identify the limits of work and will be verified by the Lead Biologist. No paint or permanent discoloring agents shall be applied to rocks or vegetation (to indicate surveyor construction activity limits or for any other purpose). Fencing/staking shall remain in place for the duration of work activities. Spoils shall be stockpiled in disturbed areas. All disturbances, vehicles, and equipment shall be confined to the fenced/flagged areas.

Construction activities shall minimize soil and vegetation disturbance to minimize impacts to soil and root systems. Upon completion of construction activities in any given area, all unused materials, equipment, staking and flagging, and refuse shall be removed and properly disposed of, including wrapping material, cables, cords, wire, boxes, rope, broken equipment parts, twine, strapping, buckets, and metal or plastic containers. Any unused or leftover hazardous products shall be properly disposed of off site. Hazardous materials shall be handled and spills or leaks promptly corrected and cleaned up according to applicable requirements. Vehicles shall be properly maintained to prevent spills or leaks. Hazardous materials, including motor oil, fuel, antifreeze, hydraulic fluid, grease, shall not be allowed to enter drainage channels.
    - **Low-impact site preparation.** Native vegetation shall be allowed to recover from rootstocks and seed bank wherever facilities do not require permanent

## ATTACHMENT A – SUPPLEMENTAL PAGES

vegetation removal (e.g., access roads, foundations, paved areas, fire clearance requirements) within the perimeter fence line of the Project solar site and under solar arrays. Vegetation height and density shall be managed as needed for operation and maintenance and fire safety, but vegetation management shall otherwise focus on maintaining habitat and soil conditions.

- **PDF BIO-4**

- **Integrated Weed Management Plan.** The Applicant shall prepare and implement an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from infesting the site or spreading into surrounding habitat. The IWMP must comply with existing BLM plans and permits, including the Vegetation Treatments Using Herbicides and Vegetation Treatment Using Aminopyralid, Fluroxypyr, and Rimsulfuron PEISs (BLM 2007; 2016a), including requiring a Pesticide Use Permit approved by the BLM and BOR. The IWMP shall identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds. The IWMP shall identify herbicides that may be used for control or eradication, and avoid herbicide use in or around any environmentally sensitive areas. The IWMP shall also include a reporting schedule, to be implemented by the Lead Biologist.

- **PDF BIO-5**

- **Wildlife protection.** The Applicant shall undertake the following measures during construction, operation and maintenance, and decommissioning to avoid or minimize impacts to wildlife. Implementation of all measures shall be subject to review and approval by BLM, BOR, CEC, CDFW, and USFWS.
  - **Wildlife avoidance.** Project activities shall minimize interference with wildlife (including ground-dwelling species, birds, bats) by allowing animals to escape from a work site prior to disturbance; conducting pre-construction surveys and exclusion measures for certain species as specified in other measures; checking existing structures (e.g., homes, trailers) for animals such as bats, barn owls, skunks, or snakes that may be present, and safely excluding them prior to removing the structures.
  - **Minimize traffic impacts.** The Applicant shall specify and enforce maximum vehicle speed limits as specified in the Traffic Control Plan to minimize risk of wildlife collisions and fugitive dust.
  - **Minimize lighting impacts.** Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light towards surrounding fish or wildlife habitat.

## ATTACHMENT A – SUPPLEMENTAL PAGES

- Avoid use of toxic substances. Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to wildlife and plants.
- Minimize noise and vibration impacts. The Applicant shall conform to noise requirements specified in the noise analysis of the NEPA and CEQA reviews to minimize noise to off-site habitat.
- Water. Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering. Prevention methods may include storing water within closed tanks or covering open tanks with 2-centimeter netting. Dust abatement shall use the minimum amount of water on dirt roads and construction areas to meet safety and air quality standards. Water sources (e.g., hydrants, tanks) shall be checked periodically by biological monitors to ensure they do not create puddles.
- Trash. All trash and food-related waste shall be contained in vehicles or covered trash containers inaccessible to ravens, coyotes, or other wildlife and removed from the site regularly.
- Workers. Workers shall not feed wildlife or bring pets to the Project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
- Wildlife netting or exclusion fencing. The Applicant may install temporary or permanent netting or fencing around equipment, work areas, or Project facilities to prevent wildlife exposure to hazards such as toxic materials or vehicle strikes or prevent birds from nesting on equipment or facilities. Bird deterrent netting shall be maintained free of holes and shall be deployed and secured on the equipment in a manner that, insofar as possible, prevents wildlife from becoming trapped inside the netted area or within the excess netting. The biological monitor shall inspect netting (if installed) twice daily, at the beginning and close of each workday. The biological monitor will inspect exclusion fence (if installed) weekly.
- Wildlife entrapment. Project-related excavations and water tanks shall be secured or covered to prevent wildlife entry, entrapment, and drowning. Holes and trenches shall be backfilled, securely covered, or fenced. Open water tanks shall be covered or shall have other means of exit provided to prevent wildlife from drowning. Excavations that cannot be fully secured shall incorporate wildlife ramp or other means to allow trapped animals to escape. At the end of each workday, a biological monitor shall ensure that excavations and water tanks have been secured or provided with appropriate means for wildlife escape.
- All pipes or other construction materials or supplies shall be covered or capped in storage or laydown areas. Netting shall be installed over porta-potty vents. No pipes or tubing shall be left open either temporarily or permanently except during active use or installation. Any construction pipe,



## ATTACHMENT A – SUPPLEMENTAL PAGES

culvert, or other hollow materials shall be inspected for wildlife before it is moved, buried, or capped.

- Dead or injured wildlife shall be reported to USFWS (for federally listed species and migratory birds) and CDFW (for all wildlife) and/or the local animal control agency, as appropriate, by the Lead Biologist (or the Applicant's compliance manager during operation and maintenance). A biological monitor shall safely move the carcass out of the road or work area if needed and dispose of the animal as directed by the agency. If an animal is entrapped, a biological monitor shall free the animal if feasible, work with construction crews to free it in compliance with safety requirements, or work with animal control or CDFW to resolve the situation.
  - Pest control. No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the Project site, on off-site Project components, or in support of any other Project activities.
- **PDF BIO-6**
    - **Bird and Bat Conservation Strategy (BBCS).** The Applicant will implement the final BBCS, developed in accordance with guidelines recommended by the USFWS, to avoid or minimize take of migratory birds that may nest on the site or may be vulnerable to collision with Project components. The BCS describes the proposed Project components, summarizes baseline data regarding birds and bats in the Project vicinity, assesses potential risks to those species that could result from Project construction, operation and maintenance and decommissioning, and describes conservation measures to be implemented in order to minimize those risks.

Over the course of construction and operation and maintenance, fatality thresholds and future conservation measures may be subject to revision in coordination with USFWS and CDFW as new information is obtained. The BBCS outlines an adaptive management process to address such revisions to monitoring.

**Construction.** As an Appendix to the BBCS, the Applicant will prepare and implement a Nesting Bird Management Plan (NBMP), to include nest surveys, avoidance, and protection. The Project will either avoid vegetation clearing during the nesting season or conduct pre-construction nest surveys of potential habitat and implement no-disturbance buffer areas around active nests. Pre-construction surveys for active nests will be conducted by one or more biological monitors at the direction of the Lead Biologist. The biologists' qualifications will be subject to review and approval by USFWS, CDFW, BLM, BOR, and CEC. Nest surveys will be conducted for all Project activities throughout the nesting season, identified here as beginning January 1 for raptors and hummingbirds and February 1 for other species and continuing through August 15. Nest surveys will be completed at each work site no more

## ATTACHMENT A – SUPPLEMENTAL PAGES

than 7 days prior to initiation of site preparation or construction activities. Nest surveys will cover all work sites, including the Project solar site and loop-in transmission lines, and surrounding buffer areas of 1,200 feet for raptors and 250 feet for other species. If adjacent properties are not accessible to the biological monitors, the off-site nest surveys may be conducted with binoculars. At each active nest, the biological monitor will establish and mark a buffer area surrounding the nest where construction activities that could disrupt nesting behavior will be excluded. The BBCS may identify species-specific buffer distances or variable distances, depending on activity levels (e.g., driving past the nest to access work sites may be less disruptive than foundation construction). Alternately, buffer distances will be 1,200 feet for raptor nests and 250 feet for other species. The extent of nest protection will be based on proposed construction activities, species, human activities already underway when the nest is initiated (e.g., a house finch nest built in the eaves of an occupied structure would warrant less avoidance or protection than a loggerhead shrike nest built in native shrubland), topography, vegetation cover, and other factors. The avoidance and protection measures will remain in effect until the nest is no longer active.

If for any reason a bird nest must be removed during the nesting season, the Applicant or its agent will notify the CDFW and USFWS and retain written documentation of the correspondence. Nests will be removed only if they are inactive or if an active nest presents a hazard.

**Operation and maintenance.** The BBCS specifies monitoring and conservation measures to be implemented by the Applicant to document bird mortality or injury that may result from the operation of the Project, such as downed exhausted birds on the site that are unable to take flight or collision with Project components including loop-in transmission and gen-tie line collisions. The BBCS includes conservation measures and an adaptive management framework to be implemented through design and operations to minimize bird and bat fatalities at the Project solar site and loop-in transmission and gen-tie lines. Provisions for a potential O&M monitoring and reporting program for bird and bat fatalities are included based on monitoring at other active projects in the vicinity.

- **PDF BIO-7**
  - **Loop-in transmission and gen-tie lines.** Loop-in transmission and gen-tie line support structures and other associated structures shall be designed in compliance with current standards and practices to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices). Mechanisms to visually warn birds (permanent markers or bird flight diverters) shall be placed on loop-in transmission and gen-tie lines at regular intervals to prevent birds from colliding with the lines (APLIC 2006; 2012) (APLIC, 2006, 2012). To the extent practicable, the use of guy wires shall be

## ATTACHMENT A – SUPPLEMENTAL PAGES

avoided because they pose a collision hazard for birds and bats. Necessary guy wires shall be clearly marked with bird flight diverters to reduce the probability of collision. Shield wires shall be marked with devices that have been scientifically tested and found to significantly reduce the potential for bird collisions. Loop-in transmission and gen-tie lines shall maintain sufficient distance between all conductors and grounded components to prevent potential for electrocution of the largest birds that may occur in the area (e.g., golden eagle, turkey vulture). They shall utilize non-specular conductors and non-reflective coatings on insulators.

- **PDF BIO-8**

- **Streambed and watershed protection.** Prior to construction activities in jurisdictional waters of the State, the Applicant will obtain a Lake and Streambed Alteration Agreement (LSAA) from the CDFW. A Stormwater Pollution Prevention Plan (SWPPP) or SWPPP-equivalent document may also be required and shall be prepared by a qualified engineer or qualified individual and shall be implemented before and during construction. The SWPPP shall include BMPs for stormwater runoff quality control measures, management for concrete waste, stormwater detention, watering for dust control, and construction of perimeter sediment controls, as needed. The Applicant will implement BMPs identified below to minimize adverse impacts to streambeds and watersheds.
  - Vehicles and equipment will not be operated in ponded or flowing water except as specified by resource agencies.
  - The Applicant will minimize road building, construction activities, and vegetation clearing within ephemeral drainages.
  - The Applicant will prevent water containing mud, silt, or other pollutants from grading or other activities from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows.
  - Spoil sites will not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.
  - Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, unapproved herbicides, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities will be prevented from contaminating the soil and/or entering ephemeral drainages. The Applicant shall ensure that safety precautions specified by this measure, as well as all other safety requirements of other measures and permit conditions, are followed during all phases of the Project.
  - When operations are completed, any excess materials or debris will be removed from the work area. No rubbish will be deposited within 150 feet of

## ATTACHMENT A – SUPPLEMENTAL PAGES

the high-water mark of any drainage during construction, operation and maintenance, and decommissioning the Project.

- No equipment maintenance will occur within 150 feet of any qualifying jurisdictional waterway (waterway to be avoided during construction). No petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state jurisdictional waters under any flow.
- With the exception of the drainage control system installed for the Project, the installation of bridges, culverts, or other structures will be such that water flow (velocity and low flow channel width) is not impaired. Bottoms of temporary culverts will be placed at or below stream channel grade.
- No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity of whatever nature will be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, off-site State jurisdictional waters.
- Stationary equipment such as motors, pumps, generators, and welders located within or adjacent to a drainage will be positioned over drip pans. Stationary heavy equipment will have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as brooms, absorbent pads, and skimmers will be on site prior to the start of construction.
- The cleanup of all spills will begin immediately. BLM, BOR, CEC, and CDFW will be notified immediately by the Applicant of any spills and will be consulted regarding clean-up procedures if these spills occurred in a qualifying jurisdictional waterway.

### **CMAAs**

The Desert Renewable Energy Conservation Plan (DRECP) requires Conservation Management Actions (CMAAs) for renewable energy projects. The following CMAAs apply to biological resources:

- LUPA-BIO-PLANT-1: Conduct properly timed protocol surveys in accordance with the BLM's most current (at time of activity) survey protocols for plant Focus and BLM Special Status Species.
- LUPA-BIO-PLANT-2: Implement an avoidance setback of 0.25 mile for all Focus and BLM Special Status Species occurrences. Setbacks will be placed strategically adjacent to occurrences to protect ecological processes necessary to support the plant Species.
- LUPA-BIO-SVF-1: For activity-specific NEPA analysis, a map delineating potential sites and habitat assessment of the following special vegetation features is required: Yucca clones, creosote rings, Saguaro cactus, Joshua tree woodland, microphyll woodland, Crucifixion thorn stands. BLM guidelines for mapping/surveying cactus, yuccas, and succulents shall be followed.

## ATTACHMENT A – SUPPLEMENTAL PAGES

- LUPA-BIO-SVF-6: Microphyll woodland: impacts to microphyll woodland will be avoided, except for minor incursions.
- LUPA-BIO-VEG-1: Promote appropriate levels of dead and downed wood on the ground, outside of campground areas, to provide wildlife habitat, seed beds for vegetation establishment, and reduce soil erosion, as determined appropriate on an activity-specific basis.
- LUPA-BIO-VEG-2: Allow for the collection of plant material consistent with the maintenance of natural ecosystem processes.
- LUPA-BIO-IFS-10: Comply with the conservation goals and objectives, criteria, and management planning actions identified in the most recent revision of the Flat-tailed Horned Lizard Rangeland Management Strategy (RMS). Activities will include appropriate design features using the most current information from the RMS and RMS Interagency Coordinating Committee to minimize adverse impacts during siting, design, pre-construction, construction, operation, and decommissioning; ensure that current or potential linkages and habitat quality are maintained; reduce mortality; minimize other adverse impacts during operation; and ensure that activities have a neutral or positive effect on the species.
- LUPA-BIO-IFS-12: If burrowing owls are present, a designated biologist will conduct appropriate activity-specific biological monitoring to ensure avoidance of occupied burrows and establishment of the 656 feet (200 meter) setback to sufficiently minimize disturbance during the nesting period on all activity sites, when practical.
- LUPA-BIO-IFS-13: If burrows cannot be avoided on-site, passive burrow exclusion by a designated biologist through the use of one-way doors will occur according to the specifications in Appendix D or the most up-to-date agency BLM or CDFW specifications. Before exclusion, there must be verification that burrows are empty as specified in Appendix D or the most up-to-date BLM or CDFW protocols. Confirmation that the burrow is not currently supporting nesting or fledgling activities is required prior to any burrow exclusions or excavations.
- LUPA-BIO-IFS-14: Activity-specific active translocation of burrowing owls may be considered, in coordination with CDFW.
- LUPA-BIO-COMP-1: Impacts to biological resources, identified and analyzed in the activity specific environmental document, from activities in the LUPA Decision Area will be compensated using the standard biological resources compensation ratio, except for the biological resources and specific geographic locations listed as compensation ratio exceptions, specifics in CMAs LUPA-BIO-COMP-2 through -4, and previously listed CMAs. Compensation acreage requirements may be fulfilled through non-acquisition (i.e., restoration and enhancement), land acquisition (i.e., preserve), or a combination of these options, depending on the activity specifics and BLM approval/authorization.
- LUPA-BIO-COMP-2: Birds and Bats – The compensation for the mortality impacts to bird and bat Focus and BLM Special Status Species from activities will be determined based on monitoring of bird and bat mortality and a fee re-assessed

## ATTACHMENT A – SUPPLEMENTAL PAGES

every 5 years to fund compensatory mitigation. The initial compensation fee for bird and bat mortality impacts will be based on pre-project monitoring of bird use and estimated bird and bat species mortality from the activity. The approach to calculating the operational bird and bat compensation is based on the total replacement cost for a given resource, a Resource Equivalency Analysis. This involves measuring the relative loss to a population (debt) resulting from an activity and the productivity gain (credit) to a population from the implementation of compensatory mitigation actions. The measurement of these debts and gains (using the same “bird years” metric as described in Appendix D) is used to estimate the necessary compensation fee.

- LUPA-BIO-1: Conduct a habitat assessment of Focus and BLM Special Status Species’ suitable habitat for all activities and identify and/or delineate the DRECP vegetation types, rare alliances, and special features (e.g., Aeolian sand transport resources, Joshua tree, microphyll woodlands, carbon sequestration characteristics, seeps, climate refugia) present using the most current information, data sources, and tools (e.g., DRECP land cover mapping, aerial photos, DRECP species models, and reconnaissance site visits) to identify suitable habitat for Focus and BLM Special Status Species. If required by the relevant species specific CMAs, conduct any subsequent protocol or adequate presence/absence surveys to identify species occupancy status and a more detailed mapping of suitable habitat to inform siting and design considerations. If required by relevant species specific CMAs, conduct analysis of percentage of impacts to suitable habitat and modeled suitable habitat.
- LUPA-BIO-2: Designated biologist(s), will conduct, and oversee where appropriate, activity-specific required biological monitoring during pre-construction, construction, and decommissioning to ensure that avoidance and minimization measures are appropriately implemented and are effective. The appropriate required monitoring will be determined during the environmental analysis and BLM approval process. The designated biologist(s) will submit monitoring reports directly to BLM.
- LUPA-BIO-3: Resource setbacks have been identified to avoid and minimize the adverse effects to specific biological resources. Setbacks are not considered additive and are measured as specified in the applicable CMA.
- LUPA-BIO-4: For activities that may impact Focus and BLM Special Status Species, implement all required species-specific seasonal restrictions on pre- construction, construction, operations, and decommissioning activities.
- LUPA-BIO-5: All activities, as determined appropriate on an activity-by-activity basis, will implement a worker education program that meets the approval of the BLM. The program will be carried out during all phases of the project (site mobilization, ground disturbance, grading, construction, operation, closure/decommissioning or project abandonment, and restoration/reclamation activities). The worker education program will provide interpretation for non-English speaking workers, and provide the same instruction for new workers prior to their working on site.

## ATTACHMENT A – SUPPLEMENTAL PAGES

- LUPA-BIO-6: Subsidized predator standards, approved by BLM, in coordination with the USFWS and CDFW, will be implemented during all appropriate phases of activities, including but not limited to renewable energy activities, to manage predator food subsidies, water subsidies, and breeding sites.
- LUPA-BIO-14: Implement general standard practices outlined in the DRECP to protect Focus and BLM Special Status Species.
- LUPA-BIO-15: Use state-of-the-art, as approved by BLM, construction and installation techniques, appropriate for the specific activity/project and site, that minimize new site disturbance, soil erosion and deposition, soil compaction, disturbance to topography, and removal of vegetation.
- LUPA-BIO-16: For activities that may impact Focus and BLM sensitive birds, protected by the ESA and/or Migratory Bird Treaty Act of 1918, and bat species, implement appropriate measures as per the most up-to-date BLM state and national policy and guidance, and data on birds and bats, including but not limited to activity specific plans and actions. The goal of the activity -specific bird and bat actions is to avoid and minimize direct mortality of birds and bats from the construction, operation, maintenance, and decommissioning of the specific activities.
- LUPA-BIO-17: For activities that may result in mortality to Focus and BLM Special-Status bird and bat species, a Bird and Bat Conservation Strategy (BBCS) will be prepared with the goal of assessing operational impacts to bird and bat species and incorporating methods to reduce documented mortality. The BBCS actions for impacts to birds and bats during these activities will be determined by the activity-specific bird and bat operational actions.
- LUPA-BIO-RIPWET-1: The riparian and wetland DRECP vegetation types and other features listed in Table 17 will be avoided to the maximum extent practicable, except for allowable minor incursions with the specified setbacks.
- LUPA-BIO-RIPWET-3: For activities that occur within 0.25 mile of a riparian or wetland DRECP vegetation type and may impact BLM Special Status riparian and wetland birds species, conduct a pre-construction/activity nesting bird survey for BLM Special Status riparian and wetland birds according to agency-approved protocols.
- LUPA-DFA-VPL-BIO-COMP-1: Impacts to biological resources from all activities in DFAs and VPLs will be compensated using the same ratios and strategies as LUPA-BIO-COMP-2 through 4, with the exception identified in DFA-BPL-BIO-COMP-2.

### Mitigation Plans

The Project would implement the following mitigation plans relevant to biological resources:

- Bird and Bat Conservation Strategy (Appendix M.1)
- Nesting Bird Management Plan (Appendix M.2)
- Raven Management Plan (Appendix M.3)

## **ATTACHMENT A – SUPPLEMENTAL PAGES**

- Wildlife Protection and Translocation Plan (Appendix M.4)
- Restoration and Integrated Weed Management Plan (Appendix M.5)
- Decommissioning and Revegetation Plan (Appendix M.6)