

APPENDIX J

**BIOLOGICAL TECHNICAL
REPORT**



Environment

Prepared for:
Tenaska
Omaha, NE

Prepared by:
AECOM
Camarillo, CA
60250473
4/4/2014

Wistaria Ranch Solar Energy Center Biological Technical Report

June 17, 2014





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A handwritten signature in black ink, appearing to read 'M. Anguiano'.

Prepared By Michael Anguiano

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List of Acronyms

AC	alternating current
ACEC	Area of Critical Environmental Concern
APLIC	Avian Power Line Interaction Committee
BBCS	Bird and Bat Conservation Strategy
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	best management practice
BOFC	Burrowing Owl Friendly Crops
BOSFP	Burrowing Owl Safe Farm Program
BSA	Biological Study Area
BTR	Biological Technical Report
BUOW	burrowing owl(s)
Caltrans	California Department of Transportation
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CPV	concentrated photovoltaic

CRPR	California Rare Plant Ranks
CSP	Conservation Science Partners
CUP	Conditional Use Permit
CWA	Clean Water Act
dBA	A-weighted decibel
DC	direct current
DOE	Department of Energy
EIR	environmental impact report
EDP	Equitable Distribution Plan
ESA	Endangered Species Act
FR	Federal Register
GIS	Geographic Information System
GPS	Global Positioning System
IBA	Important Bird Area
ICAPCD	Imperial County Air Pollution Control District
IID	Imperial Irrigation District
ISECS	Imperial Solar Energy Center South
IVCF-BOSFP	Imperial Valley Community Foundation-Burrowing Owl Stewardship and Education Fund
kW	kilowatt(s)
LOA	Live Oak Associates, Inc.
LORS	laws, ordinances, and regulations
MBTA	Migratory Bird Treaty Act
MW	megawatt(s)

NPPA	Native Plant Protection Act
O&M	operations and maintenance
PCS	Power Conversion System
PFM	protected furbearing mammal
Porter-Cologne	Porter-Cologne Water Quality Control Act
PV	photovoltaic
QSA	Quantification Settlement Agreement
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SDI	supply/demand imbalance
SPUT	Special Permit – Utilities
SR	State route
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
W	watt(s)
WEAP	Worker Environmental Awareness Program
WRS	Wistaria Ranch Solar, LLC

Executive Summary

This Biological Technical Report (BTR) describes the existing biological resources located within the vicinity of the Wistaria Ranch Solar Energy Center project (Project); details the methodologies used to assess potential impacts to sensitive habitats and species; provides results of the assessment; and presents avoidance, minimization, and mitigation measures to reduce potential impacts. The Project is a proposed solar photovoltaic energy-generating facility located in Imperial County, California. The Project consists of three components: the solar energy generation facility, electric collector lines, and a gen-tie line. The solar field and most of the collector line corridor is composed of up to 17 Conditional Use Permit (CUP) areas on 32 parcels totaling approximately 2,793 acres (1,130 hectares). All CUP areas are anticipated to use the existing transmission interconnection (or generation interconnection [gen-tie]) line corridor that extends from the Project site parcels through the Mount Signal Solar Project to the ISECS switchyard.

Biological surveys were completed to evaluate biological resources found or with the potential to occur within the Biological Study Area (BSA). The BSA was initially created based on preliminary solar development designs. Subsequent to the completion of surveys in 2012, the Project footprint changed in size due to design modifications for several of the Project components and to avoid impacts to sensitive biological resources. Thus, the BSA is generally defined as the Project footprint within which all components of the Project (e.g., solar field arrays, gen-tie facilities, O&M building, substation, switchyard, and access roads) would be located, plus additional areas surveyed during 2012 outside of the Project footprint. The BSA is approximately 3,678 acres (1,488 hectares). Biological studies were not conducted within portions of the Project footprint located within the Mount Signal Solar gen-tie line corridor. Appendix E (biological resources) of Final Environmental Impact Report for the Mount Signal and Calexico Solar Farm Projects is referenced to discuss biological resources that exist within the Mount Signal Solar gen-tie line corridor (RECON 2011). Biological field surveys completed for the Project included vegetation mapping, a rare plant habitat assessment, general wildlife surveys, and focused protocol surveys for the western burrowing owl (BUOW; *Athene cunicularia hypugaea*) in spring 2012. A jurisdictional waters and wetlands delineation was completed by RECON in fall 2012 (RECON 2013).

The majority of the BSA consists of agriculture fields, primarily alfalfa, wheat, and other hay/non-alfalfa production. The agriculture fields are relatively flat with sparse vegetation between fields. Irrigation canals and drains traverse the BSA for agricultural purposes. The northern portion of the BSA is near the New River and immediately south of the BSA is the All American Canal and the United States (U.S.)/Mexico border. Greeson Wash flows southeast through the BSA and is directly adjacent to the BSA on the western edge and through the central part of the BSA. Wetlands and/or waters regulated under the Clean Water Act, Porter-Cologne Water Quality Act, and California Fish and Game Code (CFGF) Section 1600 et seq. occur along the New River, Greeson Wash/Drain, and within the Imperial Irrigation District (IID) drains. California Department of Fish and Wildlife (CDFW) exclusive jurisdictional resources include larger portions of the New River and Greeson Wash/Drain floodplains that support the xeroriparian habitat occurring outside of the limits of waters of the U.S.

For the purposes of this report, special-status species were defined to include those listed or proposed (including candidate species) for listing as threatened or endangered per the federal Endangered Species Act, California Endangered Species Act (CESA), CDFW sensitive species, and/or plant species listed as rare by the California Native Plant Society as defined in the Native Plant Protection Act, CFGC Section 1901, or the CESA, CFGC Sections 2050 through 2098. No rare plants were detected in the BSA. A willow flycatcher (*Empidonax traillii*) subspecies, was detected in the field but could not be identified to species because it did not vocalize. All subspecies of willow flycatcher are state-listed as endangered under the CESA. No willow flycatcher breeding habitat occurs within the BSA. Nine other CDFW sensitive species were observed (or definitive sign detected) within the BSA. BUOW, a California Species of Special Concern, was observed throughout the BSA. Agricultural fields provide foraging habitat while the networks of drains and canals provide nesting habitat within BSA. A total of 148 burrows (or burrow clusters) were documented as occupied within the BSA at some point during the course of protocol surveys. Approximately 84 (57 percent) of the 148 were mapped in IID right-of-ways (ROWs). A total of 70 species of migratory birds protected under the Migratory Bird Treaty Act and corresponding state laws were also documented incidentally during survey efforts conducted for the Project.

Permanent direct impacts to biological resources would occur from construction within the Project footprint, including permanent direct loss to special-status wildlife species and their habitats (including jurisdictional waters). Specifically, direct impacts may include injury, death, and/or harassment of special-status wildlife species. Direct impacts may include destruction of habitats necessary for species breeding, feeding, or sheltering. The majority of occupied BUOW burrows occurred within the IID ROWs. Aside from new or upgraded vehicular crossings, no direct impacts would occur within IID ROW easements and their associated canals and drains. Direct long-term O&M impacts could result from avian collisions and electrocution at power lines, solar panels, and solar facilities. Additionally, BUOW inhabiting occupied burrows within IID drains and canals may be displaced due to the removal of adjacent agricultural habitat. Indirect impacts resulting from all stages of the Project may include noise, exotic species introduction, lighting, and fugitive dust, among others. These impacts to sensitive biological resources may be considered significant. Avoidance, minimization, and mitigation measures are provided to address potentially significant impacts to biological resources. General biology and resource-specific measures are provided for each Project stage (i.e., design, construction, O&M, and decommissioning).

1.0 Introduction

The Wistaria Ranch Solar Energy Center project (Project) is a proposed solar photovoltaic (PV) energy-generating facility located in Imperial County, California, approximately 6 miles (9.7 kilometers) southwest of the City of El Centro, California, and 5.5 miles (8.9 kilometers) directly west of Calexico, California (Figure 1). The Project is being developed by Wistaria Ranch Solar, LLC (“WRS” or “Applicant”) to sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to help meet California Renewable Portfolio Standards (RPS) goals.

This Biological Technical Report (BTR) describes the existing biological resources located within the vicinity of the Project; details the methodologies used to assess potential impacts to sensitive habitats and species; provides results of the assessment; and presents avoidance, minimization, and mitigation measures to reduce potential impacts.

1.1 PROJECT LOCATION

The Project site is located in Township 16 and 17 South, Range 13 East, 1852 Baseline, San Bernardino Meridian, and its geographic center roughly corresponds with 32° 41’ 48” North and 115° 37’ 00” West, at an elevation of 13 feet (4 meters) below sea level (Figure 1). The Project site is composed of 32 individual parcels within the area south of Interstate 8, east of Pulliam Road, and north of the All American Canal in southwestern unincorporated Imperial County. The Project site parcels are generally bounded by Wahl Road on the north, Brockman and Rockwood Roads on the west, the United States (U.S.)/Mexico border on the south, and Ferrell and Corda Roads on the east. The northern Project boundary is near the New River, and immediately south of the Project site is the All American Canal (Figure 2). Greens Wash flows southeast through the Project site and is directly adjacent to the Project site on the western edge and through the central area (Figure 2).

1.2 PROJECT DESCRIPTION

The Project consists of three components: the solar energy generation facility, electric collector lines, and a gen-tie line. The solar field and most of the collector line corridor is composed of up to 17 Conditional Use Permit (CUP) areas of approximately 20 megawatts (MW) each on 32 parcels totaling approximately 2,793 acres (1,130 hectares) (Figure 3). The Project may be constructed at one time or developed per 17 individual CUPs over a 10-year period. Each CUP area may have its own off-taker (or customer for the electricity generated at the site) and operate independently from the other CUP areas. The CUP areas may be aggregated during construction and operations and maintenance (O&M) so that multiple CUP areas could be built at one time. This would allow the utilities greater flexibility in obtaining renewable energy to meet ratepayer needs. The Project is anticipated to generate 250 MW, but the ultimate energy output is dependent on several variables, including off-take arrangements and the evolving efficiency of PV panels. As a result, the Project could generate more or less than 250 MW, but would not exceed 2,793 acres (1,130 hectares) of disturbance area for the solar energy generation portion of the Project.

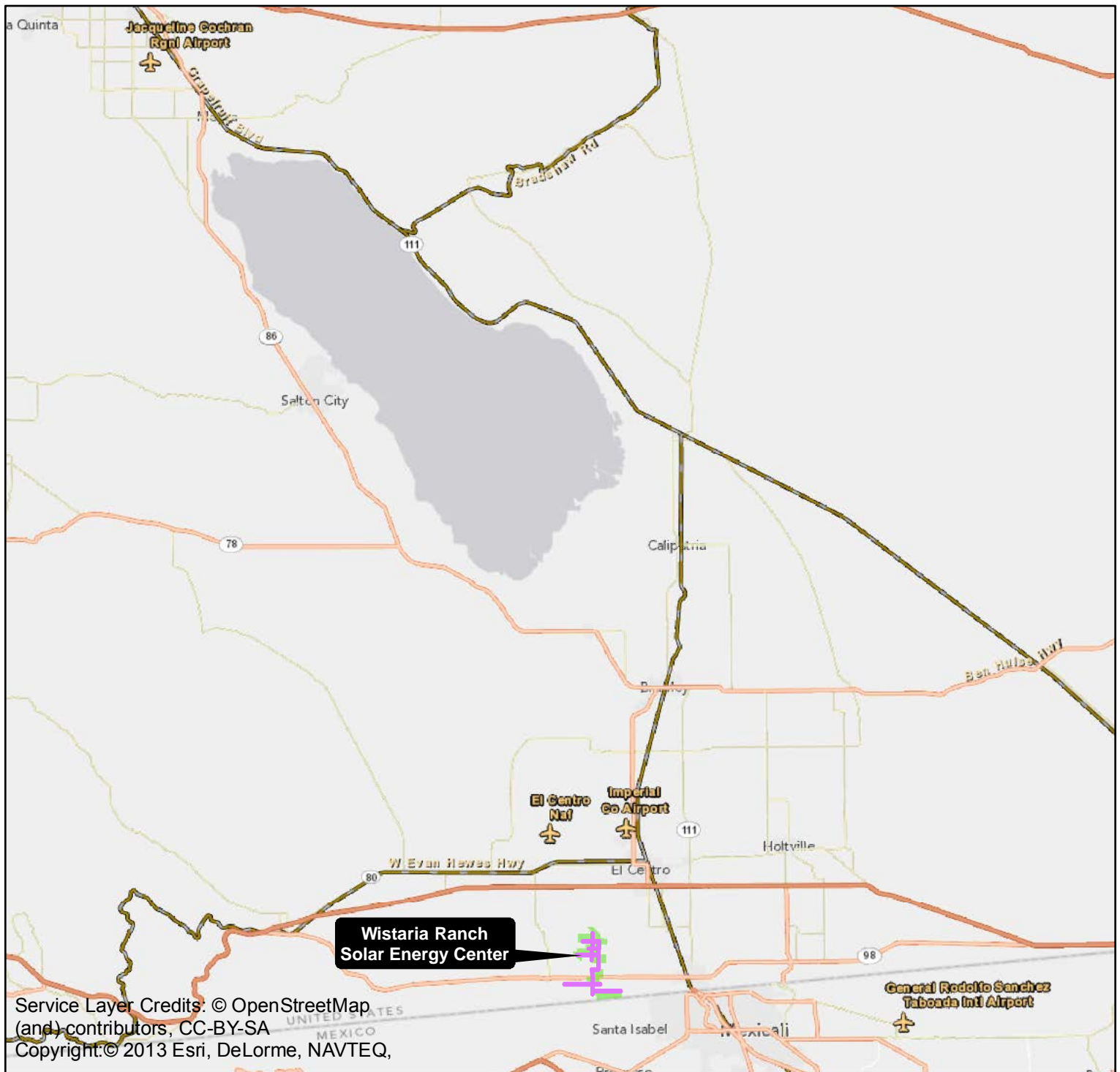
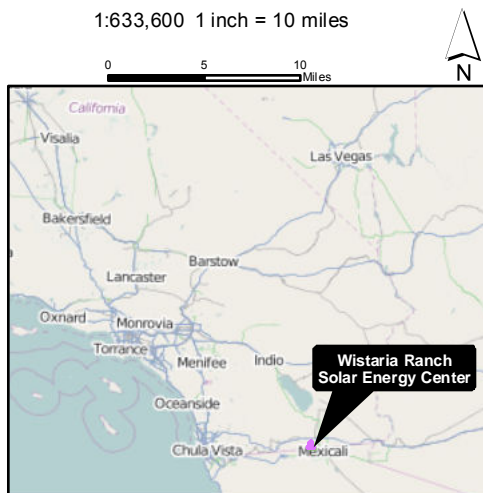


Figure No. 1



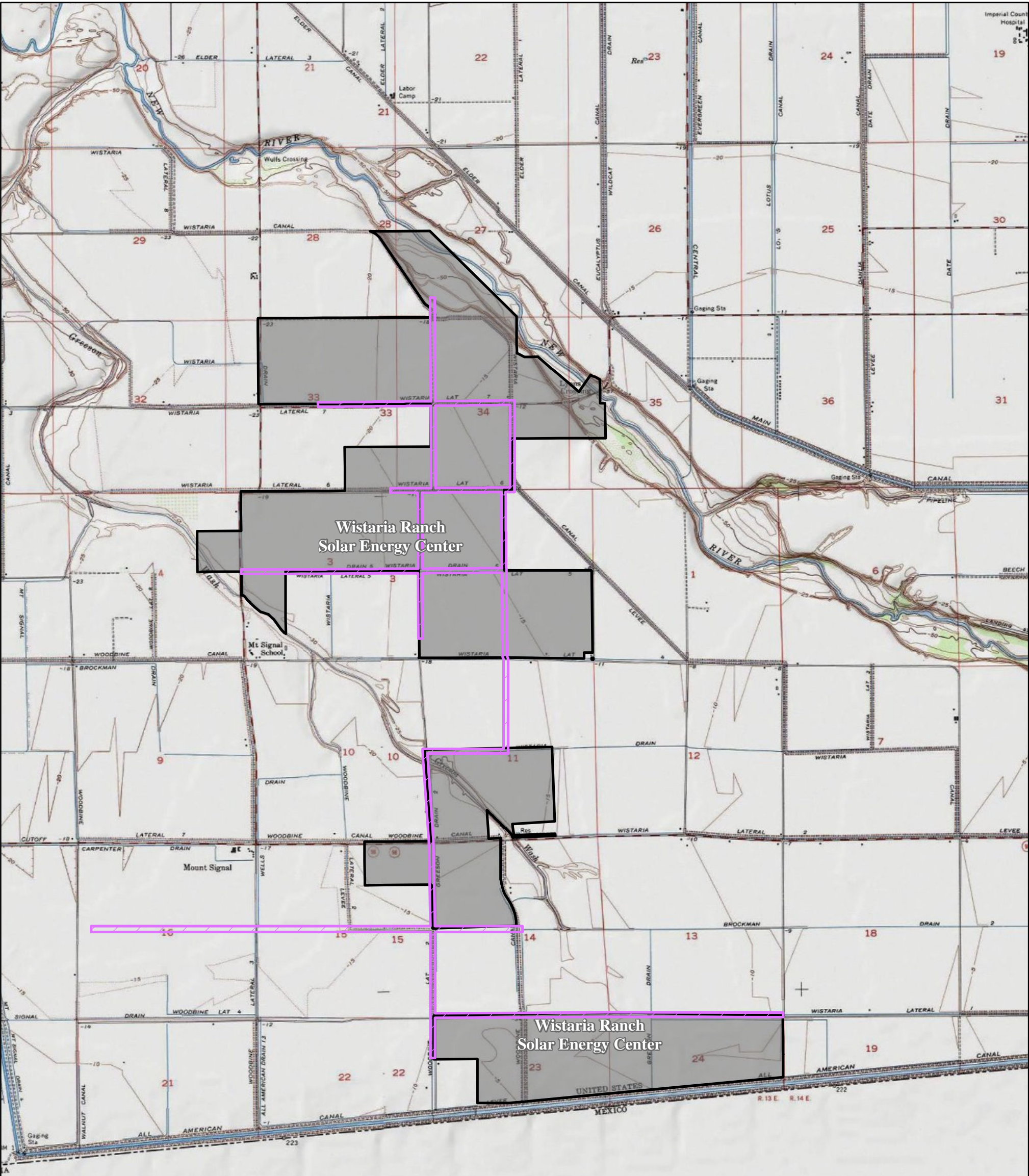
Legend:

- Project Site Boundary and Parcels
- Electric Collector Line Corridor

Wistaria Ranch Solar Energy Center
Biological Technical Report
Regional Location

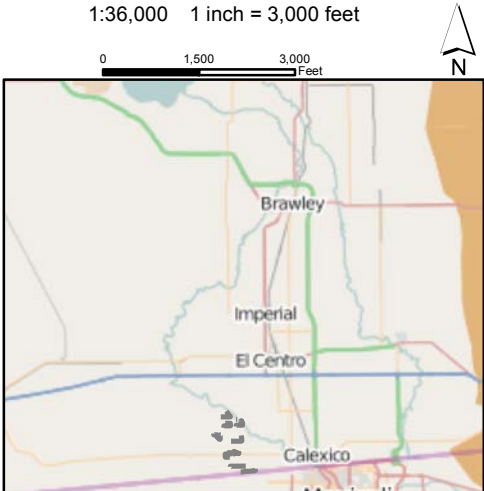
Project Number: 60250473 Date: 2/21/2014

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6



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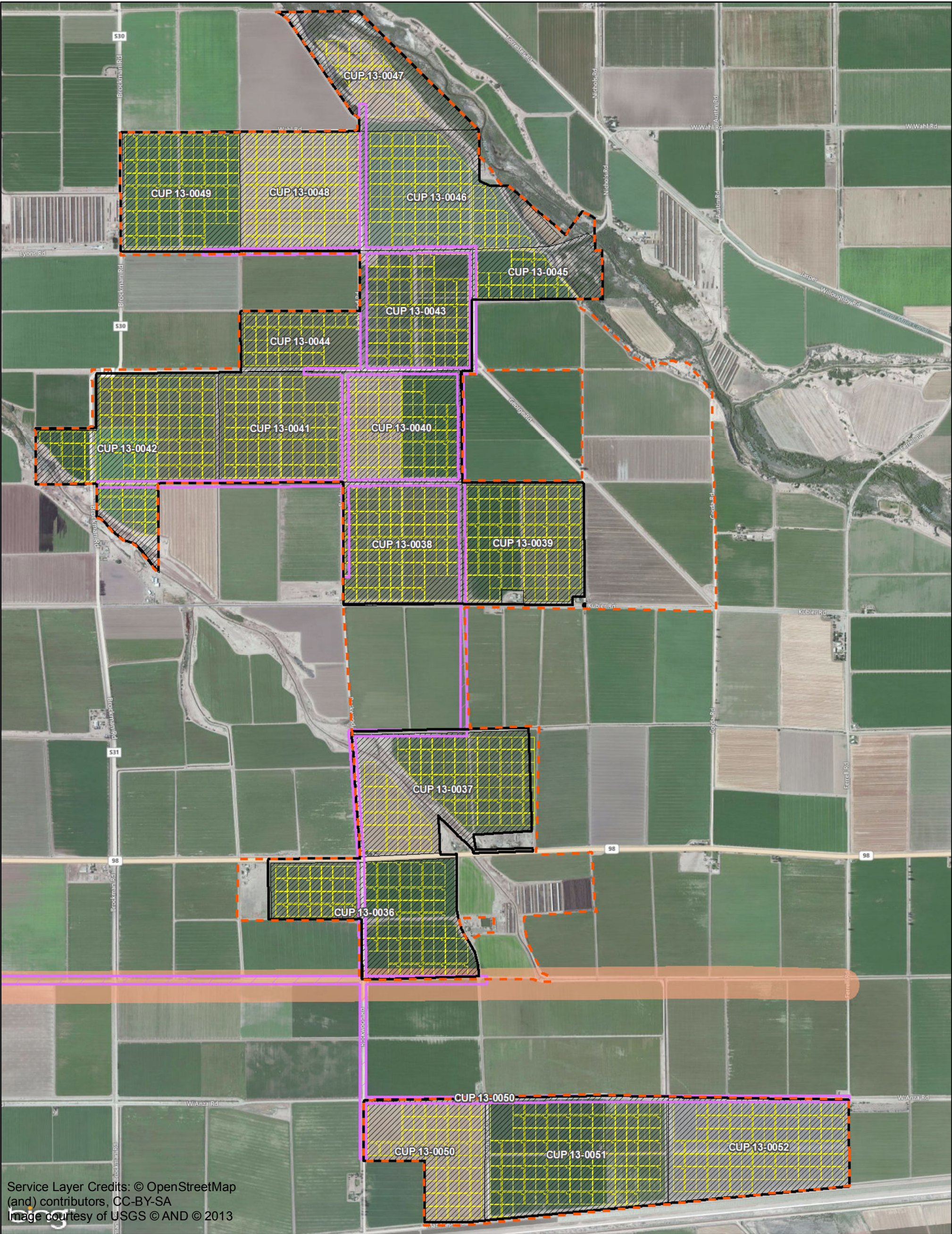
Figure No. 2



Legend:
Electric Collector Line Corridor
Project Site Boundary

Wistaria Ranch Solar Energy Center
Biological Technical Report
Project Vicinity

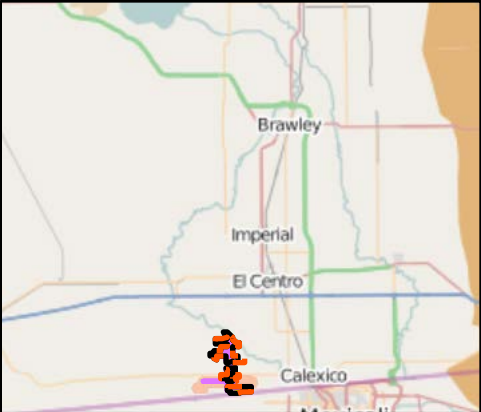
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1:24,000 1 inch = 2,000 feet

0 1,000 2,000 Feet



Project Number: 60250473 Date: 2/21/2014

Legend:

- Biological Study Area
- Project Site Boundary
- Electric Collector Line Corridor
- CUP Boundary
- Solar Array
- Mount Signal Solar Transmission Corridor

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

Wistaria Ranch Solar Energy Center
Biological Technical Report

Facility Layout

Figure No. 3

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All CUP areas are anticipated to use the existing transmission interconnection (or generation interconnection [gen-tie]) line corridor that has already been constructed for the Mount Signal Solar Project. The gen-tie corridor extends from the Project site parcels through the Mount Signal Solar Project to the ISECS switchyard. The Mount Signal gen-tie line was permitted and biological impacts were previously analyzed in the Final Environmental Impact Report for the Mount Signal and Calexico Solar Farm Projects (HDR 2012). Approximately eight additional poles would be added to the Mount Signal Solar Project segment of the gen-tie to accommodate collocation of the Project's lines with the Mount Signal Solar Gen-tie corridor.

A collector line corridor would collect the power from the various CUP areas to connect them to the Mount Signal Solar Gen-tie. There are 18 poles within the collector line corridor that would be located on parcels outside of the CUP areas. The CUP areas are anticipated to use the main Project switchyard; however, each CUP may independently construct a 230-kilovolt (kV) step-up transformer and switchyard.

In addition to the structures associated with the solar field, such as PV panels, inverters, transformers, and Power Conversion System (PCS) enclosures, the Project would include O&M building(s) and a type of energy storage facility that could accommodate a variety of evolving energy storage technologies. The Project would also include additional auxiliary facilities such as raw water/fire water storage, treated water storage, water filtration buildings and equipment, equipment control buildings, septic system(s), and parking. The Project would include electric line and vehicular crossings over IID facilities and County of Imperial facilities, which may include infrastructure improvements, such as a bridge widening. Electric line crossings would all be within the electric collector line corridor (Figure 3) and placed either overhead or underground; underground crossings may include either trenching or horizontal directional drilling to place the electric or water lines under existing IID and County facilities.

The Project is located on privately owned, agricultural land. The 32 parcels that comprise the Project in its entirety (as well as the area covering the 17 individual CUPs) are currently owned by 12 separate landowners/landowner groups. Offsite lands required for the offsite collector line corridor as well as the gen-tie corridor occur on land under the jurisdiction of the County of Imperial. No part of the proposed solar facility, collector line corridor, or gen-tie corridor would occur on federal land.

Land use on all CUPs consists of privately owned active and fallow agricultural fields, a dairy farm, dirt roads, single family homes, and Imperial Irrigation District (IID)-owned lateral canals and drains. The Project site is designated agricultural by the Imperial County Land Use Plan,¹ and the Project site parcels consist of lands zoned as A-3 (Agricultural, Heavy), A-2-R (General Agricultural Rural Zone), and A-2 (Agricultural, General).²

¹ Imperial County Planning and Development Services, Land Use Map, accessed from <http://www.icpds.com/CMS/Media/LANDUSE-Map.pdf> on May 30, 2012.

² Imperial County Planning and Development Services, Check Your Zoning, accessed from <http://www.icpds.com/?pid=614> on June 1, 2012 and Imperial County Planning and Development Services, Ordinances, Title 9, Division 5: Zoning Areas Established, accessed from http://www.icpds.com/CMS/Media/TITLE9Div5_2008.pdf on June 4, 2012.

The Transmission Line Corridor (gen-tie line) will begin at the southern border of CUP area 13-0036, be contained within the border of CUP area 13-0036, and travel west to the Imperial Solar Energy Center South (ISECS) switchyard approximately 2.5 miles (4 kilometers) west of the solar field component of the Project.

The following sections provide a more detailed description of each CUP area, the proposed solar energy center facility and transmission interconnection line components, and construction and operations activities, as well as preliminary site reclamation and decommissioning plans.

1.2.1 Conditional Use Permit Areas

As the entire Project may be constructed over 18 months or built out based on as many as 17 different CUP areas over approximately 10 years, a description of each CUP area is provided below for purposes of informing the public and decision-makers (Figure 3). The predominant land use on all CUPs consists of privately owned active and fallow agricultural fields and canal and/or drains for irrigating agricultural fields.

1.2.1.1 CUP Area 13-0036

The CUP area is bounded by the Woodbine Canal and State Route (SR) 98 on the north; the Greeson Drain and an unnamed dirt farm road on the south; the Woodbine Canal and Mandrapa Road on the east; and agricultural land on the west (Figure 3). Rockwood Road aligns north-south through the center of the CUP geographically separating the CUP into eastern and western parcels. Aside from the roads and canals, the CUP area is surrounded by agricultural land and land that has been permitted for the Centinela, Mt. Signal and Calxico Solar Farms. CUP area 13-0037 is proposed to the north of CUP area 13-0036. The electric collector line corridor is proposed to align north-south along the entire length of the western border of CUP area 13-0036 adjacent to Rockwood Road.

Two primary and secondary access points are proposed to CUP area 13-0036. One primary and secondary access would be off of SR 98 west of Rockwood Road; the other primary and secondary access points would be off of Rockwood Road. The existing Mount Signal Solar/Wistaria shared gen-tie borders the southernmost portion of the CUP area and extends west to the ISECS switchyard. CUP13-0036 area is the starting point of the gen-tie. The Project gen-tie would extend west from CUP area 13-0036 along the same alignment as the Mount Signal Solar gen-tie to connect to the ISECS switchyard. Substation and O&M facilities may be located in the southwest corner of the CUP area.

1.2.1.2 CUP Area 13-0037

The CUP area is bounded by the Wistaria Drain and an unnamed dirt farm road on the north; SR 98 on the south; agricultural land on the east; and Greeson Drain Number 2 on the west (Figure 3). The Greeson Drain also aligns diagonally from the northwest to the southeast through CUP area 13-0037. An area with several homes and structures borders the southern boundary of the CUP area adjacent to SR 98. Aside from roads and drains and the Centinela Solar project to the West, the entire CUP area is surrounded by agricultural land. CUP area 13-0036 is proposed to the south of CUP area 13-0037. The electric collector line corridor is proposed to align east-west along approximately two-thirds of the northern border then align north-south along the western boundary.

Two primary and secondary access points are proposed to CUP area 13-0037. Both primary access points are proposed off of Rockwood Road along the western boundary of the CUP area. One secondary access is proposed from the north off of the unnamed dirt farm road and the other is from the west off of Rockwood Road. The 3 access points off Rockwood Road would cross IID's Greeson Drain Number 2 at existing vehicular access locations. The secondary access off the unnamed dirt farm road would require a new crossing of IID's Wistaria Drain. The electric line associated with CUP area 13-0037 would extend south along Rockwood Road, over the Greeson Drain and SR 98 and through CUP area 13-0036 to deliver electricity to the gen-tie. Substation and O&M facilities may be located in the southwest corner of the CUP area.

1.2.1.3 CUP Area 13-0038

The CUP area is bounded by Wistaria Lateral 5 and an unnamed dirt farm road on the north; Wistaria Lateral 4 and Kubler Road on the south; and an unnamed farm road on the east and Rockwood Road on the west. Aside from the roads and laterals, the CUP area is also surrounded by farmland on all sides (Figure 3). CUP area 13-0039 is proposed to the west of CUP area 13-0038. The electric collector line corridor is proposed to extend east-west along the entire northern boundary as well as north-south along the western and eastern boundaries.

Two primary and one secondary access points are proposed to CUP area 13-0038. The two primary access roads are proposed off of the unnamed dirt farm roads on the east and Rockwood Road on the west of the CUP area. Both entrances are just off Kubler Road which is paved. The secondary access point is from Rockwood Road on the west. The electric line associated with CUP area 13-0038 would extend south along the unnamed dirt farm road along the eastern boundary of CUP 13-0038 and then south through APN 052-180-048 and then connect with the collector line corridor as described in CUP 13-0037 to connect to the gen-tie. The electric collector line corridor will cross over IID's Wistaria Lateral 4 and IID Energy facilities. Substation and O&M facilities may be located in the southeast corner of the CUP area.

1.2.1.4 CUP Area 13-0039

The CUP area is bounded by Wistaria Lateral 5 and an unnamed dirt farm road on the north; Wistaria Lateral 4 and Kubler Road on the south; George Road on the east; and an unnamed dirt farm road on the west (Figure 3). Two residences border the southern boundary: one residence is located at the southeast corner of the CUP area while the other is located centrally at the CUP's southern border. The CUP area is also surrounded by farmland on all sides. CUP area 13-0038 is proposed to the east of CUP area 13-0039. The electric collector line corridor aligns north-south along the entire length of the western boundary.

One primary and one secondary point of access are proposed to CUP area 13-0039. The primary access would be off of the unnamed dirt farm road to the west near the southwestern corner of the CUP area. There is an existing vehicular crossing over IID's Wistaria Lateral 4 near this entrance. The secondary access point would be from George Road near the northeast corner of the CUP area. There is an existing vehicular crossing at Wistaria Lateral 4 and George Road. The electric line associated with CUP area 13-0039 would extend south parallel to the unnamed dirt farm road along

the western boundary and then continue south through APN 052-180-048. It would then connect with the collector line corridor as described in CUP area 13-0037 (see Section 1.2.1.2) to connect to the gen-tie. The electric collector line corridor will cross over IID's Wistaria Lateral 4 and IID Energy facilities. Substation and O&M facilities may be located in the southwest corner of the CUP area.

1.2.1.5 CUP Area 13-0040

The CUP area is bounded by Wistaria Lateral 6 and Preston Road on the north; Wistaria Lateral 5 and an unnamed dirt road on the south; an unnamed dirt road on the east; and the Wistaria Drain 5 and Rockwood Road on the west (Figure 3). CUP area 13-0040 is also surrounded by agricultural land on all sides (Figure 3). Three CUP areas are proposed adjacent to CUP area 13-0040: CUP area 13-0041 is proposed to the west; CUP area 13-0043 is proposed to the north; and CUP area 13-0038 is proposed to the south. The electric collector line corridor is proposed along all four sides of the CUP area.

One primary and secondary point of access is proposed to CUP area 13-0040. Both would be from the north off of Preston Road. The electric line associated with CUP area 13-0040 would extend south along the unnamed dirt farm road and electricity would flow from this CUP through the electric line corridor for CUP area 13-0038 or 13-0039 and then south through the collector line corridor as described in CUP area 13-0038 or 13-0039 to connect to the gen-tie. The electric collector line corridor will cross over IID's Wistaria Lateral 5 and Drain 5 and IID Energy facilities. Substation and O&M facilities may be located in the northeast corner of the CUP area.

1.2.1.6 CUP Area 13-0041

The CUP area is bounded by Wistaria Lateral 6 and Preston Road on the north; Wistaria Drain 5 and an unnamed dirt farm road on the south; Rockwood Road and the Wistaria Drain 5 on the east; and an unnamed dirt farm road on the west (Figure 3). The CUP area is surrounded by agricultural land on all sides. Three CUP areas are proposed adjacent to CUP area 13-0041: CUP area 13-0042 is proposed to the west; CUP area 13-0040 is proposed to the east; and CUP area 13-0044 is proposed to the north. The electric collector line corridor is proposed to align east-west along approximately one-third of the eastern portion of the northern boundary of the CUP area adjacent to Preston Road as well as the entire length of the southern boundary. The Corridor also extends north-south along the entire length of the eastern boundary.

One primary and one secondary point of access are proposed to CUP area 13-0041. Both would be from the north off of Preston Road. The electric line associated with CUP area 13-0041 would extend east across Rockwood Road and through CUP area 13-0040 and CUP area 13-0038 or 13-0039 and then south through the collector line corridor as described in CUP area 13-0038 or 13-0039 to connect to the gen-tie. Substation and O&M facilities may be located in the northeast corner of the CUP area.

1.2.1.7 CUP Area 13-0042

The CUP area is bounded by Wistaria Lateral 6 and Preston Road on the north; Wistaria Lateral 5 and an unnamed dirt farm road on the south; an unnamed dirt farm road on the east; and IID operational discharge infrastructure, Brockman Road, and Wistaria Lateral 6A on the west (Figure 3). The CUP

area is also surrounded by farmland on all sides in addition to the Greeson Drain, which aligns from the northeast to the southwest through the westernmost portion of the CUP area. CUP area 13-0042 is proposed to the west of CUP area 13-0041. The electric collector line corridor is proposed to extend east-west along the majority of the southern border of the CUP area.

Three primary and three secondary access points are proposed to CUP area 13-0042. Two of the primary and secondary access points are proposed off of the unnamed dirt farm road that aligns east-west through the western portion of the CUP area. The access points would be to the north and south off of this road. In addition, a primary and secondary access would extend to the west off of Brockman Road into the westernmost portion of the CUP area west of Brockman Road. The solar field west of Brockman Road would require an electric line to cross Brockman Road and the IID energy facilities located along Brockman Road. The electric line associated with CUP area 13-0042 would extend east along the southern boundary adjacent to the unnamed dirt farm road. From this point, it would connect through CUP area 13-0041, then through CUP area 13-0040 and CUP area 13-0038 or 13-0039 and then south through the collector line corridor as described in CUP area 13-0038 or 13-0039 to connect to the gen-tie. Substation and O&M facilities may be located centrally within the CUP area near Brockman Road and the unnamed dirt farm road aligning east-west.

1.2.1.8 CUP Area 13-0043

The CUP area is bounded by Wistaria Canal and Lyons Road on the north; Wistaria Lateral 6 and Preston Road on the south; the Wistaria Canal and George Road on the east; and Rockwood Road and the Wistaria Canal on the west (Figure 3). Aside from the roads and canals, the CUP area is also surrounded by farmland on all sides. Two CUP areas are proposed on either side of CUP area 13-0043: CUP area 13-0044 is proposed to the west and CUP area 13-0045 is proposed to the east. The electric collector line corridor is proposed to extend the entire length of all four sides of the CUP area.

One primary and one secondary point of access are proposed to CUP area 13-0043 off of Lyons Road on the north. The electric line associated with CUP area 13-0043 would extend south along George Road on the eastern boundary of the CUP area and continue south across Preston Road, through CUP area 13-0040, 13-0038 or CUP area 13-0039, APN 052-180-048 and then connect with the collector line corridor as described in CUP area 13-0037 to connect to the gen-tie. The electric collector line corridor will cross over IID's Wistaria Lateral 6. Substation and O&M facilities may be located in the northeast corner of the CUP area.

1.2.1.9 CUP Area 13-0044

The CUP area is bounded by an unnamed dirt farm road to the north; Wistaria Lateral 6 and Preston Road on the south; Rockwood Road and the Wistaria Canal on the east; and an unnamed dirt farm road on the west (Figure 3). Aside from the roads, canals, and laterals, the CUP area is surrounded by agricultural land on all sides. Three CUP areas are proposed adjacent to CUP area 13-0044: CUP area 13-0043 is proposed to the east and CUP areas 13-0041 and 13-0040 are proposed to the south. The electric collector line corridor is proposed to align north-south along the length of the entire eastern boundary and east-west along approximately one-half of the southern boundary.

One primary and one secondary point of access are proposed to CUP area 13-004. Both would be from the east off of Rockwood Road. The electric line associated with CUP area 13-0042 would extend east along Preston Road and then south across Preston Road and IID's Wistaria Lateral 6 and follow the corridor as stated in CUP area 13-0040. Substation and O&M facilities may be located in the southeast corner of the CUP area.

1.2.1.10 CUP Area 13-0045

The CUP area is bounded by Lyons Road and the New River to the north; an unnamed dirt farm road on the south; New River on the east; and the Wistaria Canal and George Road on the west. The CUP area is surrounded by agricultural land on the north, south, and west; the northeastern corner and eastern boundary are adjacent to the New River (Figure 3). CUP area 13-0043 is proposed to the west of CUP area 13-0045. The electric collector line corridor is proposed to align north-south along the length of the entire western boundary of the CUP area.

One primary and one secondary point of access are proposed to CUP area 13-0045. Both would be from the north off of Lyons Road. The electric line associated with CUP area 13-0045 would cross George Road into CUP area 13-0043 and then follow the collector line corridor identified in CUP area 13-0043. Substation and O&M facilities may be located in the northwest corner of the CUP area.

1.2.1.11 CUP Area 13-0046

The CUP area is bounded by the New River on the north; the Wistaria Canal and Lyons Road on the south; an unnamed dirt farm road on the east and the New River to the northeast; and Wistaria Canal and Rockwood Road on the west (Figure 3). Agricultural land borders most of the north and east and all of the west and south sides of the CUP area. Four CUP areas are proposed adjacent to CUP area 13-0046: CUP area 13-0047 is proposed to the north; CUP area 13-0048 is proposed to the west; and, CUP areas 13-0043 and 13-0045 are proposed to the south. The electric collector line corridor is proposed to extend north-south along the western boundary of the CUP area as well as east-west along the southern boundary.

One primary and one secondary point of access are proposed to CUP area 13-0046. The primary access would be off of Rockwood Road on the west and the secondary point of access would be from Lyons Road on the south. The primary access point off Rockwood Road contains two existing crossings of IID's Wistaria Lateral 7. The electric line associated with CUP area 13-0046 would extend east along Lyons Road then turn south and cross Lyons Road and IID's Wistaria Lateral 7 and under SDG&E's Southwest Powerlink and extend south along George Road to follow the collector line corridor identified in CUP area 13-0043. Substation and O&M facilities may be located in the southwest corner of the CUP area.

1.2.1.12 CUP Area 13-0047

The CUP area is bounded by the New River on the north; Wahl Road on the south; New River on the east; and the Wistaria Canal on the west (Figure 3). Rockwood terminates at the southern border of the CUP. Agricultural land surrounds the CUP area on all sides. CUP area 13-0046 is proposed to the

south of CUP area 13-0047. The electric collector line corridor is proposed to extend north-south from the southern portion of CUP area 13-0047 along Rockwood Road.

One primary and one secondary point of access are proposed to CUP area 13-0047. Both would be from the south off of Wahl Road and require crossing over an existing crossing of IID's Wistaria Canal. The electric line associated with CUP area 13-0047 would extend south along Rockwood Road and follow the corridor outlined in CUP area 13-0046. Substation and O&M facilities may be located in the southwest corner of the CUP area.

1.2.1.13 CUP Area 13-0048

The CUP area is bounded by Wahl Road to the north; Wistaria Lateral 7 and Lyons Road on the south; the Wistaria Canal and Rockwood Road on the east; and an unnamed farm road on the west. The CUP area is surrounded by agricultural land on all sides (Figure 3). Two CUP areas are proposed on either side of CUP area 13-0048: CUP area 13-0049 is proposed to the west and CUP area 13-0046 is proposed to the east. The electric collector line corridor is proposed to align north-south along the length of the eastern boundary and east-west along the southern boundary of the CUP area.

One primary and one secondary point of access are proposed to CUP area 13-0048. The primary access would be off of Rockwood Road on the east which utilizes an existing crossing over IID's Wistaria Lateral 7 and the secondary access is proposed off of Wahl Road on the north. The electric line associated with CUP area 13-0048 would extend south along Rockwood Road and follow the corridor outlined in CUP area 13-0046. Substation and O&M facilities may be located in the southeast corner of the CUP area.

1.2.1.14 CUP Area 13-0049

The CUP area is bounded by Wahl Road on the north; Wistaria Drain 7 and Lyons Road on the south; an unnamed farm road on the east; and Brockman Road on the west (Figure 3). Agricultural land surrounds the CUP area on all sides. CUP area 13-0048 is proposed to the east of CUP area 13-0049. The electric collector line corridor is proposed to extend east-west along approximately one-third of the southern boundary adjacent to Lyons Road.

One primary and one secondary point of access are proposed to CUP area 13-0049. Both would be from the west off of Brockman Road and over a private drain easement. The electric line associated with CUP area 13-0049 would extend east along Lyons Road and follow the corridor outlined in CUP area 13-0048. Substation and O&M facilities may be located in the southeast corner of the CUP area.

1.2.1.15 CUP Area 13-0050

The CUP area is bounded by Anza Road to the north; the All American Canal (Drain Number 12) and the U.S.-Mexico Border on the south; the Woodbine Canal and Mandrapa Road on the east; and Rockwood Road on the west. The CUP area is surrounded by agricultural land on the north, east, and west. However, some of these lands have been permitted for solar energy generation as part of the Mount Signal and Calxico Solar projects. CUP area 13-0051 is proposed to the east of CUP area 13-0050. The electric collector line corridor is proposed to align north-south along approximately one-

half the length of the western boundary and east-west along the entire northern boundary of the CUP area.

One primary and one secondary point of access are proposed to CUP area 13-0050. The primary and secondary access locations would be from the north off of Anza Road. The electric line associated with CUP area 13-0050 would extend west along Anza Road then north crossing Anza Road and IID Energy facilities as it travels north along Rockwood Road to either the substation/switchyard located at CUP area 13-0036 or the gen-tie. Substation and O&M facilities may be located in the northwest corner of the CUP area.

1.2.1.16 CUP Area 13-0051

The CUP area is bounded by Anza Road to the north; the All American Canal (Drain Number 12) and the U.S.-Mexico Border on the south; the Greeson Drain on the east; and the Woodbine Canal and Mandrapa Road on the west (Figure 3). The CUP area is surrounded by agricultural land on the north, east, and west. However, some of the lands to the north have been permitted for solar energy generation as part of the Mount Signal and Calexico Solar projects. Two CUP areas are proposed on either side of CUP area 13-0051: CUP area 13-0050 is proposed to the west and CUP area 13-0052 is proposed to the east. The electric collector line corridor is proposed to align east-west along the entire northern boundary of the CUP area.

One primary and one secondary point of access are proposed to CUP area 13-0051. The primary and secondary access locations would be from the north off of Anza Road. The electric line associated with CUP area 13-0051 would extend west along Anza Road across Mandrapa Road, the Woodbine Canal, and IID Energy facilities and then follow the collector line corridor of CUP area 13-0050. Substation and O&M facilities may be located in the northwest corner of the CUP area.

1.2.1.17 CUP Area 13-0052

The CUP area is bounded by Wistaria Lateral 1 and Anza Road to the north; the All American Canal (Drain Number 11) and the U.S.-Mexico Border on the south; Ferrell Road on the east; and the Greeson Drain on the west (Figure 3). The CUP area is surrounded by agricultural land on the north, east, and west. However, some of the lands to the north have been permitted for solar energy generation as part of the Mount Signal and Calexico Solar projects. CUP area 13-0051 is proposed to the west. The electric collector line corridor is proposed to align east-west along the entire northern boundary of the CUP area.

One primary and one secondary point of access are proposed to CUP area 13-0052. The primary access would be from the north off of Anza Road. The electric line associated with CUP area 13-0052 would extend west along Anza Road across the Greeson Drain and IID Energy facilities and then follow the corridor described in CUP area 13-0051. Substation and O&M facilities may be located in the northwest corner of the CUP area.

1.2.2 Solar Energy Center Facilities

The Project, with buildout of all 17 CUP areas, consists of a solar PV energy-generating facility anticipated to generate a total of approximately 250 MW (Figure 3). Each component of this solar energy center is described in detail below. The components would be installed as part of construction, in use during operation, and removed and decommissioned at the end of the Project's operational life (approximately 30 years). Each CUP area would include the major components described below.

1.2.2.1 Photovoltaic Solar Modules

The Project would utilize conventional PV modules (either crystalline or thin-film) or concentrated photovoltaic (CPV) modules. The solar energy system operates only during daylight hours when the sun is shining. While the system operates at peak output when the sunlight is most intense, it can also produce power in low light conditions. CPV modules use Fresnel lenses and/or mirrors to concentrate sunlight and focus it onto small, highly efficient solar cells (typically III-V triple-junction solar cells) that convert the sunlight directly into electrical energy. Typical CPV modules are nonreflective. CPV modules do not use mirrors to redirect the sun as seen with trough systems or heliostats. Studies have shown that glare intensity and/or reflectivity of CPV modules is lower than that of water and similar to asphalt (Dudek 2014).

1.2.2.2 Fixed-Tilt and Tracker Structures

Depending on the selected manufacturer for the PV or CPV modules, the modules would be mounted on fixed-tilt, single- or dual-axis tracking structures. The modules would be grouped in nominal 1- to 2-MW AC arrays. Fixed-tilt arrays would be oriented in east-west rows and would face in a generally southern orientation with a tilt angle between 10 and 35 degrees to maximize the amount of incidental solar radiation absorbed over the year. Single-axis trackers typically rotate ± 45 degrees (0 degrees is horizontal) along a nominally north-south axis to track the sun's movement throughout the day. The maximum height of single-axis trackers is 14 feet (4 meters) when the panels are rotated towards the horizon in the early morning hours or late evening hours as the sun rises and sets. Structural support elements would be constructed of corrosion-resistant steel, aluminum, or equivalent members that are attached to circular piers or I-beam posts that would be driven into the prepared base grade of the site.

CPV trackers vary among technology providers. Currently, the leading CPV manufacturer's trackers range between 30 and 50 feet (9 and 15 meters) in height and 50 to 75 feet (15 and 23 meters) in width. While the maximum height would be 50 feet (15 meters) during the early morning and late evening hours, the panels rotate on a dual axis and are at a much lower effective height throughout most of the day as it rotates to track the sun. Inside each leading CPV manufacturer's modules are cells connected in a series providing a nominal power output of watts (W) per module and typically kilowatts (kW) per supermodule. Many CPV modules collectively form a supermodule. Many supermodules are mounted atop a two-axis elevation-overazimuth tracker that follows the sun's daily trajectory across the sky to provide the highest possible level of energy production – particularly in the high-energy demand afternoon hours.

The mast or post that holds up the panels would - be secured to a foundation below grade or vibratory driven into the ground, in which case, the mast would serve as the foundation and the supporting structure.

Collectively, all of the trackers are wired to a centralized inverter for reliable feed-in to the power grid.

1.2.2.3 Inverters and Pad-mounted Transformers

A (PCS) would be located within each array. A PCS consists of inverters that take the direct current (DC) power output from the solar array and convert it to alternating current (AC) power. The adjacent pad-mounted transformer steps the voltage up to a medium voltage level. The medium voltage outputs from each of the pad-mounted transformers are collected together in combining switchgear located at discrete locations on the 17 CUP areas. The medium voltage output from the combining switchgear would be connected to the Project substation(s) where it would then be stepped up to 230 kV for export to the grid.

1.2.2.4 Substation and Switchyard

An on-site substation/switchyard on each of the 17 CUP areas would step up the voltage from the collection level voltage to 230 kV. Breakers, buswork, protective relaying, Supervisory Control and Data Acquisition (SCADA), and associated substation equipment would be constructed on the 17 CUP areas. The communication system may include an above- or below-ground fiber-optic cable or microwave tower. The Project would be interconnected to the regional transmission system from the on-site substation/switchyard via the gen-tie interconnection. Solar facilities within all CUP areas are anticipated to utilize the gen-tie line extending from the CUP areas to the ISECS switchyard as well as the main Project switchyard located in CUP 13-0036. Alternatively, each CUP area may independently construct its own 230 kV (maximum) step-up transformer and switchyard.

During normal operation, each substation would “back feed” power to maintain “house” power. This would include O&M buildings, security systems, SCADA, communication systems, plant control systems, etc. Therefore, much of the electrical equipment would be in some stage of electrical operation 24 hours per day.

1.2.2.5 Transmission Interconnection (Gen-tie) Facilities and Collection Lines

Regardless of whether the Project is built per 17 individual CUP areas, a combination of several CUP areas, or a single project in its entirety, the use of collector lines to collect electricity from the array fields to the Project substation would remain similar. Skid-mounted enclosed switchgear would be used within panel fields to collect and transmit the electricity from the panel array fields to the Project substation(s). Substations/switchgear may be connected to one another through lines up to 230 kV that ultimately connect to the Mount Signal Solar gen-tie. These lines would remain within the collector line corridor, which is located primarily within CUP areas. The collector line corridor goes outside of CUP areas when it crosses APN 052-180-048, which is part of the Iris Solar Project, and when it crosses APN 052-210-015, which is part of the Callexico Solar Project. Approximately 18 poles would be located within off-site easements (i.e., outside of CUP areas) at full buildout. Of these 18 pole structures outside of the CUP areas, nine would be within agriculture along the electric collector line

corridor between CUP 13-0037 and CUP 13-0038 and nine would be within off-site easements along the electric collector line corridor between CUP 13-0036 and CUP 13-0050. These 18 poles would result in permanent disturbance of approximately 0.04 acres (0.02 hectare) and temporary disturbance of approximately 4.14 acres (1.68 hectares). These off-site easement areas are/were active agriculture fields that either were permitted for solar or are in the process of being permitted for solar energy generation.

The Mount Signal Solar gen-tie line was designed to be expanded to carry a second circuit. The Project Applicant would build out the facilities necessary to utilize the dual-circuit capabilities of the Mount Signal Solar gen-tie line. Construction would include adding arms, conductors, optical ground wire/shield wire, insulators, and other apparatuses to the existing Mount Signal Solar gen-tie structures, installing new structures (where necessary), and stringing new conductors to complete the second circuit. The Mount Signal Solar gen-tie line was designed with two-pole double dead-end structures; only the structures to support the initial circuit were constructed. The Project Applicant would upgrade the 19 existing tangent structures and construct up to eight dead-end structures to support the addition of a second circuit. The Applicant filed 17 variance requests (V 13-0002 through V-13-0018) to allow power poles to be up to 140 feet (43 meters) high.

The Mount Signal Solar transmission interconnection (also known as gen-tie) structures pass through and are adjacent to lands that have been permitted for solar energy projects (Figures 3 and 4). Some of these projects are under construction while others are completed. The Project may construct a 230-kV gen-tie or a lower voltage collector line that would involve construction of an approximately one-half mile (800 meters) line along Rockwood Road to the Mount Signal Solar gen-tie. This segment would require an encroachment permit from Caltrans to cross SR 98. From this point, the Project would build out the facilities necessary to utilize the dual-circuit capabilities of the gen-tie line previously constructed by Mount Signal Solar. From this point, the Project would hang its conductors on poles built by Mount Signal Solar for approximately 2 miles (3.2 kilometers) to the northeastern edge of the ISECS site. The gen-tie would then extend approximately one-half mile south, parallel to Pulliam Road, and then turn to the west for approximately one-half mile to connect to the ISECS switchyard. The Project would construct a new breaker bay within the existing ISECS switchyard to facilitate the interconnection. Construction of the new tangent structures, dead-end structures, and breaker bay with contingency would result in 10 acres (4 hectares) of temporary impact and 1 acre (0.4 hectare) of permanent impact. The future breaker bay to be constructed within ISECS is currently within a fenced facility with crushed rock as ground cover.

1.2.2.6 Operations and Maintenance Building Complex

Each CUP area may have its own O&M Building Complex. Each O&M Building Complex may contain administrative offices, parts storage, a maintenance shop, plant security systems, a site control center, and plant monitoring equipment. O&M building(s) would provide sanitary facilities for employees and visitors. A specific design for the building(s) has not yet been selected as the technology utilized in utility-scale solar energy production continues to improve dramatically at a rapid pace. The final layout would be based on the technology selected. The building(s) may have exterior lighting on motion sensors and would have fire and security alarms. The building(s) would be located on a graded area with adjacent worker parking. All access driveways, parking areas, and vehicular maneuvering areas

would be surfaced with a minimum of 3 inches (8 centimeters) of asphaltic concrete paving or higher quality material.

The Project would collect wastewater from sanitary facilities such as sinks and toilets in the O&M building(s). This waste stream would be sent to an on-site sanitary waste septic system and leach field to be installed in compliance with standards established by the County Environmental Health Department and Regional Water Quality Control Board. The Project's preliminary geotechnical review indicates that the near-surface soils are clay and have very low to low infiltration rates; therefore, final engineering may need to direct waste streams to an underground septic tank for storage until it is pumped out, on a periodic or as-needed basis, and transported for disposal at a licensed waste treatment facility. During periodic major maintenance events, portable restroom facilities may be provided to accommodate additional maintenance workers. Truck trips associated with major maintenance are within the estimated operational traffic assumed for the Project.

1.2.2.7 Energy Storage

Utilities have been encouraging the use of energy storage in conjunction with the generation of solar energy. Energy storage allows the generating facility to smooth its generation profile, which reduces the need for the utility to call upon other resources to support the intermittency of renewable resources. The Project may incorporate an energy storage component, and each CUP area may have its own energy storage component. The storage component for the Project is likely to be 50 MW with up to 6 hours of capacity, while the likely size for any specific CUP area is likely to be approximately 6 MW with up to 6 hours of capacity. The field of energy storage is rapidly advancing; thus, a single technology or provider has not been selected for this component of the Project. The storage component would utilize technologies that operate based upon the principles of potential energy (e.g., pumped storage), chemical energy (e.g., batteries), mechanical/kinetic energy (e.g., flywheel), or any combination thereof.

The energy storage system may be distributed throughout the Project adjacent to solar power conversion system buildings, or be centrally located adjacent to the Project's substation. Under the more likely scenario where the energy storage system is located adjacent to the Project's substation, a footprint of approximately 5 to 10 acres (2 to 4 hectares) is anticipated. Two potential locations are proposed: one is adjacent to the power conversion system structures throughout the site and the other is within the O&M building complex footprint. The storage component would be housed in a warehouse-type building or in smaller modular structures such as cargo shipping containers.

1.2.3 Solar Facility Construction

Construction is estimated to begin in June 2015. If the Project is built out at one time, construction is expected to take approximately 18 months (Table 1). If the individual CUP areas are constructed over time, each CUP area could take approximately 7 to 8 months. The equipment, materials, and labor involved in building the Project remain similar whether it is constructed as 17 individual CUP areas or a combination of several CUP areas over a period of 10 years or built over an 18-month period. However, the 18-month buildout of the entire Project would result in greater intensity of labor and equipment over a much shorter timeframe.

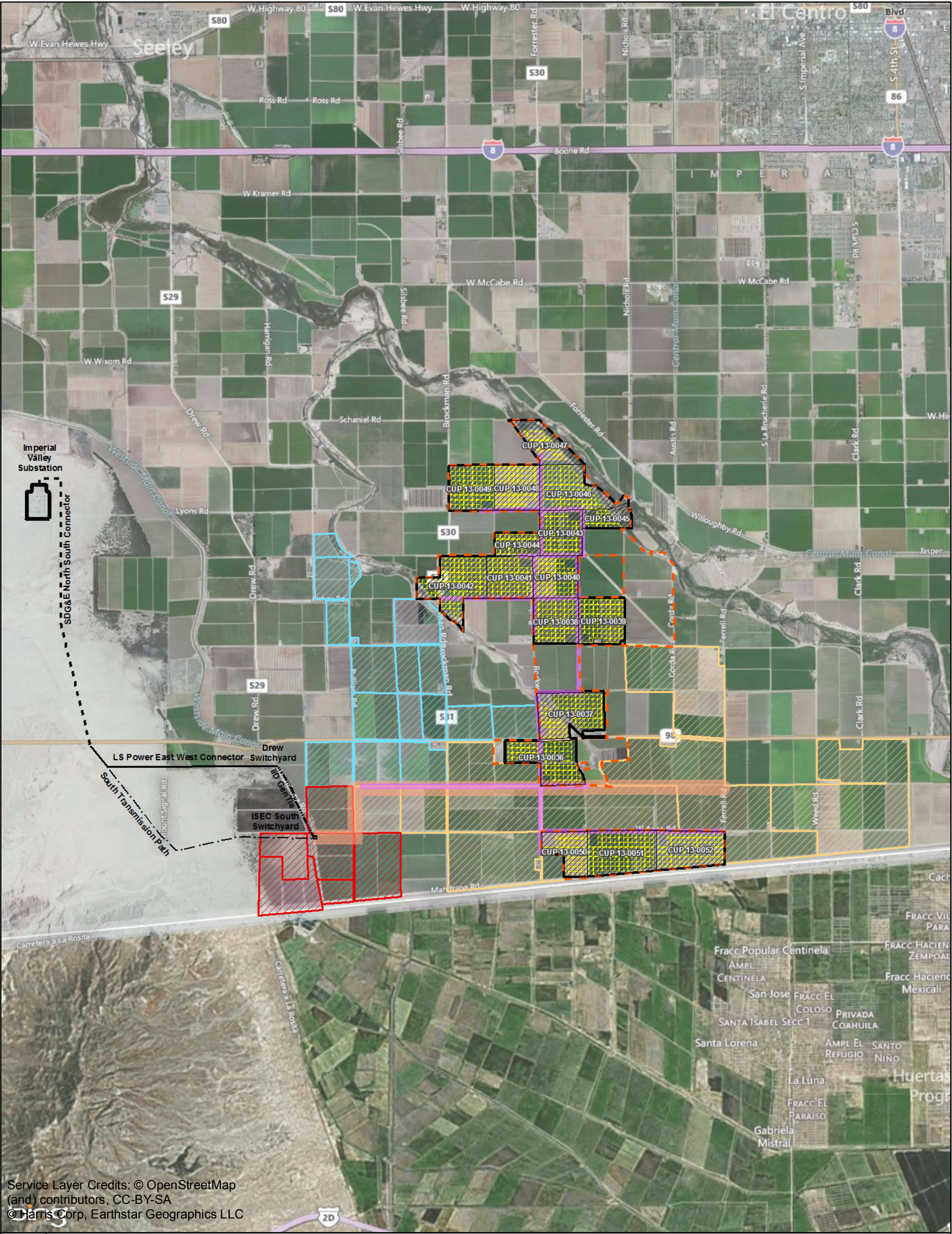
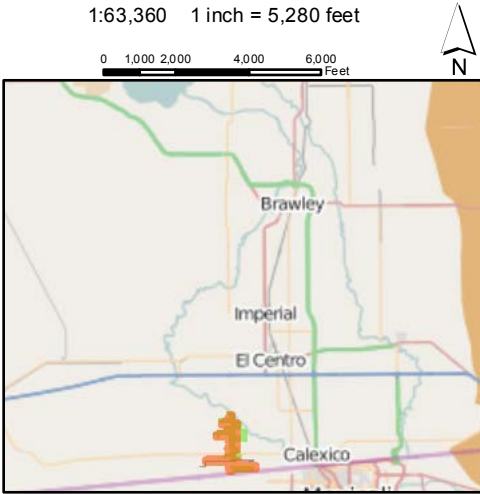


Figure No. 4



- 1:63,360 1 inch = 5,280 feet
- 0 1,000 2,000 4,000 6,000 Feet
- Legend:**
- Wistaria Project Site Boundary
 - Biological Study Area
 - CUP Boundary
 - Electric Collector Line Corridor
 - Solar Array
 - Mount Signal Solar Transmission Corridor
 - ISEC South Parcels
 - Mount Signal Solar Farm I, Calexico Solar Farm I & II
 - LS Power Centinela Solar

Wistaria Ranch Solar Energy Center
Biological Technical Report

**Proposed Project
Interconnection**

Project Number: 60250473 Date: 2/21/2014

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

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Table 1
Example Project Construction Schedule

Task Name	Duration	Start
Mobilization	1.5 months	6/30/15
PV Arrays	364 days	8/11/15
Site Preparation	9 months	8/11/15
Post-Installation	9 months	9/8/15
Below Grade Electrical	11 months	11/3/15
Above Grade Electrical	11 months	12/1/15
Module Installation	11 months	12/29/15
Commissioning	12 months	2/1/16
Energy Storage System	12 months	8/11/15
Gen-tie Line	7 months	10/6/15
O&M Building	3.5 months	1/12/16
COD	1 day	12/31/16

Typical construction work hours are expected to be from 6:00 a.m. to 5:00 p.m. Monday through Saturday. However, use of noise-generating and vibration-generating construction equipment would not begin before 7:00 am during weekdays or 9:00 AM on Saturday per the County of Imperial General Plan Noise Element. Project construction components are further discussed below.

1.2.3.1 Site Access / Traffic and Circulation

Many County maintained roads provide access throughout the Project site, including each CUP area. Access to the Project site would be via County Highway S30, Lyons Road, Rockwood Road, and SR 98, as well as other roads in the area. Access to components of the solar field would be controlled through security gates at several entrances. Multiple gate-restricted access points would be used during construction and operation.

Daily trip generation during Project construction would include delivery of equipment and supplies and construction workforce commute trips. The number of workers expected on-site would vary over the construction period and would likely average up to 250 workers per day for the full Project buildout of approximately 250 MW, with a possible peak of up to 350 daily workers. Worker and construction truck traffic combined is anticipated to be 664 average daily trips. If the Project is built out as individual CUP areas, then there would be approximately 75 workers per day building the 20-MW facility. As more of the Project is built at one time, the number of workers required per megawatt is reduced as there are economies of scale and efficiencies obtained from continuous construction of the larger Project. Deliveries of equipment and supplies to the site would also vary but have the potential to range from 5 to 40 daily trips, averaging approximately 10 daily trips during the construction period for the larger Project. If the Project were built out over time by individual CUP areas, then the traffic from equipment and supplies would be greatly reduced. It is likely that a typical 20-MW CUP area would average five daily trips for equipment and supplies.

Parking for Project-related vehicles would be provided on-site during construction. The parking lot may move to adjacent phases as new phases are constructed.

1.2.3.2 Staging Areas and Temporary Facilities

Temporary construction lay down, construction trailers, and parking areas would be provided within the Project site. Due to the size of the Project site, the solar field lay down areas would be relocated periodically within the solar field acreage as the solar field is built out.

During construction, temporary facilities would be developed on-site to facilitate the construction process. These facilities may include construction trailers, a temporary septic system or holding tank, parking areas, material receiving/storage areas, water storage ponds, construction power service, recycling/waste handling areas, and others. These facilities would be located at the construction areas designated on the final site plans.

1.2.3.3 Grading and Drainage

At full buildout, most of the CUP areas would be disturbed by construction. To the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement required. Compaction of the soil to support the building and traffic loads as well as the PV module supports may be required and is dependent on final engineering design of the Project.

The hydrology design would be given first priority to protect the Project's facilities and any adjacent facilities, including any IID/County facilities from large storm events. On-site drainage patterns would be maintained to the greatest extent possible. It may be necessary to remove, relocate, and/or fill in portions of the existing drainage ditches or delivery canals to accommodate the final Project panel layout. The final engineering designs for these facilities would be reviewed by IID and the County to ensure that the purpose for the facilities (if still needed) would be met. Construction of the Project would be covered under the General Permit for Discharges of Stormwater with Construction Activity. A detailed Stormwater Pollution Prevention Plan (SWPPP) would be prepared for the entire site that would identify the locations and implementation procedures for the best management practices (BMP) required by the General Permit. The SWPPP would be developed by a Qualified SWPPP Developer (QSD) and would be implemented by a Qualified SWPPP Practitioner (QSP).

1.2.3.4 Water Use and Sanitation

During construction of the Project, water would be required for a variety of construction activities, including dust suppression, earth compaction, the creation of engineered fill, and concrete preparation. Construction-phase water demand would be greatest during site grading. An estimated total of 1,200 acre-feet (148 hectare-meters) of water would be used for the on-site and off-site Project dust control and other construction activities regardless of whether the Project is built at one time or built in phases over time.

The Applicant would apply for a temporary construction water use permit from IID for construction water. The water would be delivered via the existing IID canal system. The Applicant would set

temporary water pumps within each CUP area. IID has been supplying solar energy facilities with water and WRS anticipates receiving water from IID.

At some point during construction, the point-of-entry water treatment system would be installed to provide water of potable quality, which would be connected to all plumbing fixtures in the O&M building. This system may be temporarily connected to the construction trailers as well. The point-of-entry system would not be used for human consumption. Bottled water would be trucked to the site for drinking water.

The construction trailer compound would develop a septic system for wastewater or utilize a temporary storage tank and transport the sewage water to the nearest wastewater treatment facility. The Project would also utilize portable toilets throughout the site.

1.2.3.5 IID and Caltrans Facility Crossings

The Project would need to collect electricity from the various CUP areas/phases through the collector line corridor. Electricity conveyed through the collector line corridor would eventually be transmitted through the Mount Signal Solar gen-tie. The collector line corridor and gen-tie would include electric line crossings of IID facilities and a crossing of California Department of Transportation (Caltrans) facilities at SR 98. The Project crossings would not interfere with the purpose of the IID or Caltrans facilities. For instance, where a drain flows, the Project crossing would still allow the drain to flow. There would not likely be a need to make improvements to these crossings; however, in an effort to provide the decision-makers and the Public with a conservative analysis, the Applicant is identifying these improvements to expand the crossings to 50 feet (15 meters) wide with culverts as potential impacts and the analysis of environmental impacts herein includes potential impacts associated with these potential improvements.

1.2.3.6 Off-Site Construction Activities

The Project gen-tie structures would be built within the CUP areas and installed within the existing Mount Signal Solar Corridor in order to connect the Project's solar generation fields to the ISECS switchyard. Although improvements to existing crossings are unlikely to be necessary, minor improvements are assumed for the purposes of the analysis of impacts herein. Wherever improvements are made, the Project would be required to comply with Imperial County Air Pollution Control District (ICAPCD) dust control standards, which may require watering of unpaved roads and other disturbed areas within the Project vicinity or applying and maintaining gravel, recrushed/recycled asphalt, or other material of low silt (<5 percent) content to a depth of 3 or more inches (8 or more centimeters).

1.2.4 Solar Facility Operations and Maintenance

1.2.4.1 Panel Washing

Solar modules may be washed on a periodic basis if determined to be beneficial to the Project. It is anticipated that CPV panels would be washed monthly while PV panels would be washed up to four times per year. Approximately 10 acre-feet (1.23 hectare-meters) of the 60 acre-feet (7.40 hectare-

meters) of water required for O&M would be used for CPV panel wash water. WRS plans to secure water rights from the IID under the IID's Interim Water Supply Policy for Non-Agricultural Projects for panel washing. The water would be delivered via the existing IID canal system. The Applicant would set water pumps within IID canals that are adjacent to the CUP areas and for the most part on the southern side of the CUP area since most of the land drains to the north. WRS would place a pipe in the canal and pump water out of the canal at the location of the existing delivery gates. IID has been supplying solar energy facilities with water and WRS anticipates receiving water from IID.

1.2.4.2 Dust Control

The Project site would be scarified and compacted and then water would be applied during construction for dust control. The compaction and wetting of the soil create a crust on the soil that limits fugitive dust. Additionally, the panels themselves act as ground cover and deflect the wind above the solar panels. Water would be available on the site during operations to wet the soil where necessary to prevent visible dust from exceeding 20 percent opacity. Additionally, dust-generating activities would be minimized during high wind events. The Applicant would submit a construction dust control plan to ICAPCD prior to grading activities. The Applicant would submit an operations dust control plan to the ICAPCD prior to obtaining the final certificate of occupancy for the facility. Both plans would be successful in achieving the performance standard of no exceedance of 20% opacity.

1.2.4.3 Weed and Vegetation Management

Invasive weed species listed by the California Invasive Plant Council (Cal-IPC 2014) and vegetation would be monitored and removed during operation of the facility. Weed treatment methods may include manual, mechanical, and chemical control. All chemical applications require oversight by a holder of a valid Qualified Applicator's License (QAL) issued by the California Department of Pesticide Regulation (CADPR). Recommendations for use of chemical products will be made in writing by a Pest Control Advisor (PCA) with a valid CADPR license.

Chemical products will be registered, non-restricted, general-use herbicides. Treatment applications will follow use and safety guidelines available on product labels. Typical active ingredients expected for chemical treatments are glyphosate and triclopyr. Glyphosate and triclopyr are found in broad-spectrum, systemic herbicides, and available in numerous products intended for control of post-emergent vegetation. Chemical treatment of vegetation in and around aquatic or wetland features requires products approved for use within such habitats, as described on product labels. A Weed Management Plan will be developed prior to the commencement of construction activities (see Section 5.2.1).

1.2.4.4 Landscape

Landscaping and an entry monument would be maintained at the entrance to the O&M building(s). In keeping with the agricultural nature of the area and the agricultural zoning, the Project would maintain the current rural agricultural character along the perimeter. However, at the entrance to the O&M building(s), the Project would create landscaping for 100 feet (30 meters) on either side of the access gate (where feasible). Landscaping would be present around the primary O&M building. The plant

palette would be designed to match typical desert landscaping. No invasive weed species listed by the California Invasive Plant Council (Cal-IPC 2014) would be used for in the plant palette for landscaping.

1.2.4.5 Water

Wistaria anticipates a requirement of up to approximately 60 acre-feet (7.40 hectare-meters) per year during operation of the solar energy center. Each CUP area would utilize approximately 3.5 acre-feet (0.43 hectare-meters) per year. The 60 acre-feet (7.40 hectare-meters) includes water required for dust control, panel washing, fire protection, potable domestic purposes, and human consumption. WRS plans to secure water rights from the IID under the IID's Interim Water Supply Policy for Non-Agricultural Projects. Water for fire protection would be stored in an on-site 10,000-gallon (37,854-liter) tank. The Project may also utilize an additional 10,000-gallon (37,854-liter) storage tank or tanks to store treated water for sanitary uses. An on-site water treatment facility may be constructed to provide the appropriate panel wash water or potable water requirements. Imperial County building code requires potable water to be connected to all plumbing fixtures; however, IID does not allow its water to be consumed by humans. Therefore, potable water would be connected to plumbing fixtures; however, bottled water would be provided for drinking. Truck trips associated with bottled water delivery are within the estimated operational traffic assumed for the Project.

1.2.4.6 Wastewater

The Project would collect wastewater from sanitary facilities such as sinks and toilets in the O&M building(s). This waste stream would be sent to an on-site sanitary waste septic system and leach field to be installed in compliance with standards established by the County Environmental Health Department and Regional Water Quality Control Board. The Project's preliminary geotechnical review indicates that the near-surface soils are clay and have very low to low infiltration rates; therefore, final engineering may need to direct waste streams to an underground tank for storage until it is pumped out, on a periodic or as-needed basis, and transported for disposal at a licensed waste treatment facility. During periodic major maintenance events, portable restroom facilities may be provided to accommodate additional maintenance workers.

1.2.4.7 Storm Water

The Project would require on-site storm water attenuation for peak flows of runoff. Storm water detention would be satisfied in one of three ways: (1) construction of shallow detention basins located outside of the solar arrays; (2) shallow ponded areas under the arrays; or (3) a combination of both. Ultimate locations and limits of detention basins would be determined at the time of final engineering but shall be designed and constructed to meet all applicable local, state and federal regulations and statutes. Local containment would be provided around the high-voltage transformers within the Project's substation to prevent any of the mineral oil contained within the transformers from leaving the site in the event of a leak.

1.2.4.8 Noise

If CPV tracking technology is implemented, the primary noise sources during operation of the Project are anticipated to be from inverter tracking motors and blowers (that are used to remove condensation

from solar panels). The tracking motors and blowers would be distributed throughout the facility. Previous noise analyses (AECOM 2011) show that tracking motors would generate an average of 44.4 A-weighted decibels (dBA) at 10 feet (3 meters) during operation, and blower units would generate average noise levels of 55.1 dBA at 10 feet (3 meters). Inverter fans would generate a noise level of 77 dBA at 5 feet (1.5 meters) and would attenuate to an approximate hourly average of 58 dBA at 50 feet (15 meters). The transformer would generate a noise level of 60 dBA at 5 feet (1.5 meters) and would be approximately 41 dBA at 50 feet (15 meters). These estimates are considered conservative, as they did not include the enclosure for the inverters, which would provide additional noise attenuation. The noise levels at 50 feet (15 meters) would not exceed the Imperial County land use compatibility threshold for agricultural use of 70 dBA which is considered “normally acceptable” in areas designated for agricultural land uses.

Additional noise may be generated by equipment within the substation; typically this includes switches, protection and control equipment, transformers, and the incoming high voltage lines. The noise generated by gen-tie lines and switches has previously been analyzed to be 25 dBA at 50 feet (15 meters). Transformers within the substation have been analyzed to generate noise levels of approximately 41 dBA L_{eq} at 50 feet (15 meters), while the inverters have been analyzed to generate an average noise level of 58 dBA L_{eq} at 50 feet (15 meters). Each energy storage facility would generate noise of approximately 61 dBA L_{eq} at 50 feet (15 meters). The potential combined operational noise levels of an inverter, a transformer, and an energy storage facility would be approximately 62.8 dBA L_{eq} at 50 feet (15 meters). Substation switches do not generate an audible noise, and circuit breakers (70 dBA at 65 feet [20 meters]) would not be a common noise source, as they would only operate for short periods of time during an emergency event in order to protect the switches and transformers within the substation.

1.2.4.9 Electric Service

It is anticipated that during normal operation, each substation would “back feed” power to maintain “house” power. This would include O&M buildings, security systems, SCADA, communication systems, plant control systems, etc. Therefore, much of the electrical equipment would be in some stage of electrical operation 24 hours per day. Propane or diesel emergency back-up generators may be utilized to move the solar panels in the event of an IID/San Diego Gas and Electric power failure.

1.2.4.10 Security

To ensure the safety of the public and the facility, the Project site parcels would be surrounded with an up to 7-foot (2.1-meter) chain-link fence with 3-strand barbed-wire placed at the top, extending to a total of up to 8 feet (2.4 meters). The fence would be monitored periodically to detect any intrusion into the property. Security lighting would be installed and warning signs would be posted. Access to the site would be controlled, and gates would be installed at the roads entering the property. Permanent access would be located adjacent to the O&M buildings

1.2.4.11 Lighting and Communications System

The lighting system would provide O&M personnel with illumination in both normal and emergency conditions. Lighting would be designed to provide the minimum illumination needed to achieve safety

and security objectives. Lights on Project components would be motion sensitive rather than steady burning and would be downcast and shielded to keep light within the boundary of the Project. The use of high-intensity lighting; steady-burning lights; or bright lights such as sodium vapor, quartz, halogen, or other bright spotlights would be minimized. The Project would utilize telephone and internet services that would be provided via overhead or underground lines, microwave tower, or via cellular service obtained from a local provider.

1.2.4.12 Fire Control

The PV modules and ancillary equipment are constructed of fire-resistant material. Additionally, routine weed abatement and landscape maintenance would occur. As such, the Project represents a negligible increase in fire potential. However, a Fire Prevention and Emergency Action Plan would be prepared in accordance with Imperial County Fire Department requirements for access. Access to nearby properties would not be hindered or restricted by the Project.

1.2.4.13 Traffic

Operation of the site would be expected to generate approximately 4 to 10 trips per day from maintenance and security personnel driving around the site. Operation of multiple CUP areas could result in a need for a few more on-site employees. The CUP areas may be supported by one staff which manages the entire Project. A likely number of employees would be 15 fulltime personnel. Based on this information, the operations and maintenance trip generation is estimated at 30 average daily trips.

1.2.5 Transmission Interconnection (Gen-tie) Line Construction

The existing transmission interconnection line extends through properties that have been permitted for solar energy production. Some of these parcels are under construction and some are actively producing solar energy. To minimize impacts to the environment, the Project would co-locate its gen-tie with neighboring solar projects. The Project would share 230-kV transmission structures with the Mount Signal Solar Project to connect to the ISECS switchyard (Figure 4). The Project would construct a new breaker bay within the existing switchyard of the ISECS project to facilitate the interconnection. From the ISECS switchyard, electricity from the Project would flow along the ISECS interconnection path to the Imperial Valley Substation (Figure 4). The ISECS interconnection path is already constructed and part of the existing condition. The Project does not include new work along the ISECS interconnection path.

Mount Signal Solar constructed a 230-kV single-circuit gen-tie line designed to be expanded to carry a second circuit. The Project would be using the second circuit and would install arms, insulators, conductor, optical ground wire/shield wire, and other apparatus as necessary. The Mount Signal Solar gen-tie line was designed with two-pole double dead-end structures and only the structures to support the initial circuit were constructed. As a result, the Project would have to construct a new structure at each of those locations as well as the new structures necessary to connect to the Mount Signal Solar gen-tie line. In the event that CUP areas are constructed individually, subsequent CUP areas would be connected to the initial Project switchyard in order to utilize the Mount Signal Solar gen-tie.

The temporary suspension structure work areas would be 100 feet (30 meters) by 100 feet (30 meters) (i.e., 10,000 square feet [929 square meters] or approximately 0.23 acre [0.09 hectare]) and the double dead-end structure work areas would be 140 feet (42 meters) by 140 feet (42 meters) (i.e., 19,600 square feet [1,820 square meters] or approximately 0.45 acre [0.18 hectare]). There would be up to eight double dead-end structures requiring new construction and 19 existing tangent structures that would be upgraded to carry the Project's circuit for a total of 8 acres (3.15 hectares) of disturbance or 10 acres (4 hectares) with contingency. The Project's circuit is the portion of the transmission interconnection line or gen-tie that conducts electricity.

Construction of the gen-tie line would be concurrent with construction of the solar panel fields. It is anticipated that construction of the gen-tie line would take approximately 1 year.

1.2.5.1 Access and Staging

Vehicles and equipment would be required at each structure location and several pull sites along the gen-tie corridor. Vehicles would use County roads to enter the corridor and access temporary structure work areas and pull sites. The Applicant would work with IID to confirm whether work can be performed under the existing encroachment permit or if a new encroachment permit would be required. Temporary staging areas for the construction of the gen-tie line would be located within the CUP area boundary.

1.2.5.2 Vegetation Clearing and Excavation

Vegetation would be cleared from the gen-tie line ROW to accommodate construction purposes. Each new monopole structure would be anchored to a new drilled pier foundation. Typical drilled pier foundation installation requires that reinforcing and concrete be placed in excavations that are created by a drill rig with an auger. Foundation diameters would range from approximately 6 feet (1.8 meters) to 12 feet (3.7 meters) and would vary in depth from 25 feet (8 meters) to approximately 50 feet (15 meters) depending on the structure loading. Once the excavation is completed, a crane would set the steel reinforcing cage, and a concrete pump truck would be used to place the concrete in the excavation. Use of the crane and pump truck would provide flexibility in location of work vehicles, such as to avoid environmentally sensitive areas. The excavated soil would be spread at the structure site.

1.2.5.3 Water Use

Water use for the construction of the gen-tie line would be required for dust suppression and other construction activities. The total volume of water required would depend on the final engineering design and has not been estimated at this time. However, the total water use for the entire Project is not expected to exceed the 1,200 acre-feet (148 hectare-meters) indicated in Section 1.2.3.4.

1.2.5.4 Assembling and Erecting Structures

Structure erection requires that the drilled pier foundations are complete and that they have cured sufficiently to support the structure without the conductors attached. Structures would be erected using a crane to lift and place the segments of the monopole structures.

1.2.5.5 Stringing Conductors and Ground Wires

The electrical circuit consists of three phases with a bundled or single conductor making up each phase. An optical ground wire/shield wire would be located at the top of each structure to provide system protection as well as communications and monitoring capabilities. Conductors and the optical ground wire would be strung for the entire length of the gen-tie. Workers may guide the rope through each structure using bucket trucks. The rope would then be used to pull the conductor through each of the structures using truck-mounted cable-pulling and tensioning equipment.

1.2.5.6 Clean-up and Restoration of Temporarily Disturbed Areas

Upon completion of construction, the temporary erosion control facilities would be removed from the work areas and the work areas would be graded back to their previous condition.

1.2.6 Gen-tie Line Operations and Maintenance

1.2.6.1 Noise

The permanent noise sources that would occur within the Project area are limited to the corona effect of the gen-tie line and routine inspection and maintenance of the line and substation. Audible power line noise is generated from corona discharge, which is usually experienced as a random crackling or hissing sound. The potential for noise from corona discharge is greatest with high voltage lines during wet weather or near inconsistencies or cuts in the metal surface of the line itself. For example, the highest noise level generated by the 230-kV line during fair weather conditions would be around 15 dBA.

1.2.6.2 Fire Control

The risk of fire would be managed through following all applicable laws and regulations for fire safety during the gen-tie operation and maintenance period. All personnel would be advised on their responsibilities under the applicable fire laws and regulations, including taking practical measures to report and suppress fires. In addition, vegetation management practices described below would be implemented. The transmission interconnection line would be inspected semiannually, and weeds and vegetation would be mechanically removed or treated with herbicides that are approved by the Imperial County Planning and Development Services or the Agricultural Commissioner's office.

1.2.7 Site Reclamation

The decommissioning process for the transmission interconnection line is estimated to disturb approximately 10 acres (4 hectares) of land. The disturbance area would be the within the same area that was temporarily disturbed during the construction of the transmission interconnection line. The process of decommissioning varies based on the component being removed. Only the gen-tie facilities installed by WRS would be removed during decommissioning of the gen-tie so as to not impact operations of the Mount Signal Solar Project.

The removal of the conductor would involve "de-stringing" the conductor. Line crews would reset the conductor in wheel blocks and would pull the conductor back to a pulling site and rewind the

conductor on wire reels for recycling. A pulling rope would follow the conductor back through the wheel blocks to keep the end of the conductor from creating any more disturbance than necessary. Conductor from the duct banks would be pulled from one of the sites adjacent to the dead end structures and rolled onto wire reels for recycling.

The steel monopoles would be lowered off the foundations using a crane large enough to handle picking up and careful placing of the towers. The insulators and spacing arms would then be removed from the poles. The poles would be segmented into manageable sections for haul out.

The foundations supporting the monopoles would be broken out by a track hoe-mounted jack hammer down to a depth of 4 feet (1.2 meters) below grade. The remaining foundation below 4 feet (1.2 meters) would be left in place and covered with soil material. Rebar would be cut off and the concrete removed for recycling. Any concrete slurry used in the setting of the duct banks at each of the dead end structures would be removed along with duct material to a depth of 4 feet (1.2 meters). Holes where materials were removed would be filled and contoured from soils in the immediate primary disturbance area. All material removed from the installed Project would be hauled from the site and recycled.

1.2.8 Decommissioning Plan

The planned operational life of the facility is 30 years. The owner/operator would hire a licensed contractor or engineer to create a decommissioning plan that would be implemented at the end of the Project's life, and would adhere to Imperial County's decommissioning requirements, including, but not limited to:

- Description of the proposed decommissioning measures for the facility and for all appurtenances constructed as part of the facility.
- Description of the activities necessary to restore the site to its previous condition which includes restoring the site to its existing stories index rating.
- Presentation of the costs associated with the proposed decommissioning measures. Discussion of conformance with applicable regulations and with local and regional plans.

If solar facilities are built independently in each CUP area, then CUP areas may be decommissioned individually. This means that some CUP areas may still be operating while others are decommissioned. All facilities related to the decommissioned CUP area would be removed unless they are being utilized by an operating CUP area. For instance, the gen-tie line would likely be used by an operating CUP area while individual CUP areas may be decommissioned. Additionally, some collector lines may be utilized by operating CUP areas while CUP areas that formerly shared the line have ceased to operate.

1.3 REGULATORY FRAMEWORK

This section discusses the laws, ordinances, and regulations (LORS) related to biological resources within the Project's disturbance area.

1.3.1 Compliance with Laws, Ordinances, Regulations and Standards

The Project would comply with applicable federal, state, and local LORS throughout Project construction and operation. Potentially applicable LORS are summarized in Table 2 and discussed in the Sections 1.4.2 through 1.4.4.

Table 2
LORS Applicable to the Project

LORDS	Applicability
Federal	
Endangered Species Act of 1973, 16 U.S. Code (USC) Section 1531 et seq., and implementing regulations, Title 50 Code of Federal Regulations (CFR) Section 17.1 et seq.	Designates and protects federal threatened and endangered plants and animals and their critical habitat. Requires federal agency consultation with the U.S. Fish and Wildlife Service (USFWS) and issuance of Biological Opinion and incidental take authorization for listed species.
Migratory Bird Treaty Act, 16 USC Sections 703–712	Prohibits take of protected migratory birds.
Bald and Golden Eagle Protection Act, 16 USC 668–668d	Prohibits take of the bald eagle (<i>Haliaeetus leucocephalus</i>) and golden eagle (<i>Aquila chrysaetos</i>)
Clean Water Act, 33 USC Section 1251 et seq.	Restores and maintains the chemical, physical, and biological integrity of the nation's waters and regulates the discharge of pollutants and dredged or fill material to the navigable waters of the U.S.
State	
California Environmental Quality Act (CEQA) (Public Resources Code Section 15000 et seq.)	CEQA requires identification of significant environmental effects of proposed projects (including impacts on biological resources) and avoidance (where feasible) or mitigation of the significant effects. CEQA applies to "projects" proposed to be undertaken or requiring approval by state and/or local governmental agencies. "Projects" are activities with the potential to have a physical impact on the environment.
California Endangered Species Act of 1984, California Fish and Game Code (CFGF) Sections 2050–2098	Protects California's endangered and threatened species, including species designated as candidates for listing.
CFGF Fully Protected Species: Sections 3503, 3503.5, 3511: Fully protected birds Section 4700: Fully protected mammals Section 5050: Fully protected reptiles and amphibians Section 5515: Fully protected fishes	Prohibits the taking of listed animals that are classified as "Fully Protected" in California.
Title 14 California Code of Regulations Sections 670.2 and 670.5	Listings of plants and animals of California declared to be threatened or endangered.
Native Plant Protection Act of 1977, CFGF Section 1900 et seq.	Provides specific protection measures for identified populations of state rare and endangered plants.

LORDS	Applicability
CFGF Section 1600 et seq., Streambed Alteration Agreement	Requires California Department of Fish and Wildlife to review project impacts to waters of the state (bed, banks, channel, or associated riparian areas of a river, stream, or lake), including impacts to wildlife and vegetation from sediments, diversions, and other disturbances.
The 1969 Porter-Cologne Water Quality Control Act California Water Code Section 13000 et seq.	Regulates discharges of waste and fill material to waters of the state, including “isolated” waters and wetlands.
Local	
Imperial County General Plan	Analyzes the consistency of the proposed project with the applicable policies relating to biological resources from the Imperial County General Plan

1.3.2 Federal LORS

Federal LORS that are applicable to the Project are discussed below.

1.3.2.1 Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (16 U.S. Code [USC] §§ 1531 et seq.) directs the U.S. Fish and Wildlife Service (USFWS) to identify and protect endangered and threatened species and their critical habitat, and to provide a means to conserve their ecosystems. Section 9 of the ESA makes it unlawful for a person to “take” a listed animal without a permit. “Take” is defined by the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct” (16 USC 1532[19]). Section 7 of the ESA directs USFWS (and the National Oceanic and Atmospheric Administration, when applicable) to use its existing authority to conserve threatened and endangered species and, in consultation with federal agencies, ensure that any action authorized, funded, or carried out by such agency does not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Section 7 applies to management of federal lands and to other federal actions that may affect listed species, such as federal approval of private activities through the issuance of federal permits, licenses, grants, or other actions.

1.3.2.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 Code of Federal Regulations (CFR) 10.13. The regulatory definition of “migratory bird” is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the federal ESA. The MBTA, which is enforced by USFWS, makes it unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter,

or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

1.3.2.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668–668d) prohibits take of the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), unless take is pursuant to its implementing regulations. BGEPA defines take of an eagle to include a broad range of actions, including to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The term “disturb” is defined in 50 CFR 22.3 to include agitation or bothering a bald or golden eagle to a degree that it causes, or is likely to cause, injury to an eagle; a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior, based on the best scientific information available.

1.3.2.4 Clean Water Act

Section 404 of the Clean Water Act (CWA) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into “waters of the U.S.,” including wetlands. Waters of the U.S. include navigable waters of the U.S., interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries (33 CFR 328.3(a)). Many surface waters and wetlands in California meet the criteria for waters of the U.S. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate Regional Water Quality Control Board (RWQCB) indicating that the project not violate California water quality standards.

1.3.3 State LORS

The following are state LORS that are applicable to the Project.

1.3.3.1 California Environmental Quality Act

The California Environmental Quality Act of 1970 (CEQA), Public Resources Code 21100 et seq., requires lead agencies to evaluate the environmental impact associated with a proposed project. CEQA requires that a local agency prepare an environmental impact report (EIR) on any project it proposes to approve that may have a significant effect on the environment. The purpose of an EIR is to provide decision-makers, public agencies, and the general public with an objective document that fully discloses the potential environmental effects of a proposed project. The EIR process is specifically designed to objectively evaluate and disclose potentially significant direct, indirect, and cumulative impacts of a proposed project; to identify alternatives that may reduce or eliminate a project's significant effects; and to identify feasible measures that mitigate significant effects of a project. In addition, CEQA requires that an EIR identify those adverse impacts that remain significant after mitigation.

1.3.3.2 California Endangered Species Act

This California Endangered Species Act (CESA) (California Fish and Game Code [CFGF] Section 2050 et seq.) prohibits the “take” (defined as “to hunt, pursue, catch, capture, or kill”) of state-listed species except as otherwise provided in state law. The CESA, administered by California Department of Fish and Wildlife (CDFW), is similar to the federal ESA, although unlike the federal law, the CESA applies incidental take prohibitions to species currently petitioned for state-listing status (i.e., candidate species). State lead agencies are required to consult with CDFW to ensure that their authorized actions are not likely to jeopardize the continued existence of any state-listed species or result in the degradation of occupied habitat.

Under Section 2081, CDFW authorizes “take” of state-listed endangered, threatened, or candidate species through incidental take permits or memoranda of understanding if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in questions, and (4) the applicant ensures suitable funding to implement the measures required by CDFW.

1.3.3.3 California Fish and Game Code Section 3503 and 3503.5 Protection of Birds, Nests, and Raptors

CFGF Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

1.3.3.4 Fully Protected Species under the California Fish and Game Code

Protection of fully protected species is described in CFGF Sections 3511, 4700, 5050, and 5515. These species include fish, amphibians and reptiles, birds, and mammals. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take of fully protected species.

1.3.3.5 California Fish and Game Code 3513

This code protects California’s migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.

1.3.3.6 Title 14, California Code of Regulations Sections 670.2 and 670.5

This Code lists plant and animal species designated as threatened and endangered in California. California Species of Special Concern (SSC) is a category applied by CDFW to those species that are indicators of regional habitat changes or are considered potential future protected species. Californian SSC do not have any special legal status but are intended by CDFW for use as a management tool to

take these species into special consideration when decisions are made concerning the future of any land parcel.

1.3.3.7 Native Plant Protection Act

The Native Plant Protection Act (NPPA) (CFGF Section 1900 et seq.) includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for “rare and endangered” are different from those contained in the CESA, although CESA-listed rare and endangered species are included in the list of species protected under the NPPA.

1.3.3.8 California Fish and Game Code Section 1600 et seq.

Pursuant to these sections, CDFW regulates all changes to the natural flow, bed, or bank of any river, stream, or lake that supports fish or wildlife resources. A stream is defined broadly as a body of water that flows at least periodically, or intermittently, through a channel that has banks and that supports fish or other aquatic biota. Such areas are formally referred to as “waters of the state.” Impacts to vegetation and wildlife from sediment, diversions, and other disturbances are included in the review.

Project proponents must provide CDFW with written notification before activities begin that will do the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake.

The Fish and Game Commission defines “stream” as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. In practice, CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider. Riparian habitats do not always have identifiable hydric soils, or clear evidence of wetland hydrology as defined by USACE. Therefore, CDFW wetland boundaries often include, but extend beyond, USACE wetland boundaries. Jurisdictional boundaries under CFGF Sections 1600–1616 (CDFW’s Lake and Streambed Alteration Program) may encompass an area greater than that under the jurisdiction of CWA Section 404. Therefore, jurisdictional waters of the state include jurisdictional waters of the U.S. Federal and state jurisdictions do overlap but would remain distinct for regulatory administration and permitting purposes. A CDFW Streambed Alteration Agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

1.3.3.9 1969 Porter Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), waters of the state fall under the jurisdiction of the appropriate RWQCB. RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters of the state may require waste discharge requirements from RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

1.3.4 Local LORS

1.3.4.1 County of Imperial General Plan

Relevant County of Imperial General Plan policies related to biological resources are provided below.

- **Open Space Conservation Policy:** The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County. The County is required to notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.
- **Land Use Element Policy:** The General Plan covers the unincorporated area of the County and is not site specific, however, a majority of the privately owned land is located in the area identified by the General Plan as "Agriculture," which is also the predominate area where burrowing owls create habitats, typically in the brims and banks of agricultural fields. Prior to approval of development of existing agricultural land either in form of one parcel or a numerous adjoining parcels equally a size of 10 acres or more shall prepare a Biological survey and mitigate the potential impacts. The survey must be prepared in accordance with the USFWS and CDFW regulations, or as amended.

2.0 Methodology

The purpose of biological surveys was to evaluate biological resources found or with the potential to occur within the Biological Study Area (BSA). The BSA was initially created based on preliminary solar development designs. Subsequent to the completion of surveys in 2012, the Project footprint changed in size due to design modifications for several of the Project components and to avoid impacts to sensitive biological resources. Thus, the BSA is generally defined as the Project footprint within which all components of the Project (e.g., solar field arrays, gen-tie facilities, O&M building, substation, switchyard, and access roads) would be located, plus additional areas surveyed during 2012 outside of the Project footprint. The BSA is approximately 3,678 acres (1,488 hectares) (Figures 3 and 4).

Biological studies were not conducted within portions of the Project footprint located within the Mount Signal Solar gen-tie line corridor. Biological studies were completed and impacts were analyzed in the Final Environmental Impact Report for the Mount Signal and Calexico Solar Farm Projects (HDR 2012). Appendix E (biological resources) of the Final Environmental Impact Report for the Mount Signal and Calexico Solar Farm Projects is referenced to discuss biological resources that exist within the Mount Signal Solar gen-tie line corridor (RECON 2011). For purposes of the Wistaria Ranch Solar Energy Center Project BTR, the discussion of the Mount Signal gen-tie line corridor applies only to those components being specifically added by the Project (i.e., eight double dead-end structures would require new construction and 19 existing tangent structures would be upgraded),

Prior to beginning field surveys, AECOM biologists consulted the CDFW California Natural Diversity Database (CNDDDB) (RareFind Version 3.1.0; CDFW 2013), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2013), and the Natural Resources Conservation Service Web Soil Survey (USDA 2013). The BSA lies along the border of the Mount Signal and Heber U.S. Geological Survey 7.5-minute quadrangles (quads) and lies within both quads. A 6-quad (i.e., Calexico, El Centro, Heber, Holtville West, Mount Signal, and Seeley) search area was used to search records in the databases noted above. The Plaster City and Yuha Basin quads to the west of the BSA occur almost entirely within native desert habitat and were not searched because special-status species information within these quads is not relevant to the BSA given its location within an active agricultural landscape. Historical data were not available south of the U.S./Mexico border. These resources were consulted to determine historical occurrence of special-status plant and wildlife species and other natural resources within the BSA. Species were considered to have special status if they met at least one of the following criteria:

- Listed or proposed for listing (including candidate species³) under the federal ESA and CESA) (CDFW 2013);
- CDFW SSC (CDFW 2013);

³ Candidate species are those petitioned species that are actively being considered for listing under the ESA, as well as those species for which USFWS has initiated an ESA status review, as announced in the Federal Register. Proposed species are those candidate species that were found to warrant listing and have been officially proposed for listing in the Federal Register. Under CESA, candidate species are those species currently petitioned for state-listing status.

- CDFW fully protected species (CDFW 2013);
- CDFW watch list species (CDFW 2013);
- Covered as a state protected furbearing mammal (PFM) (Title 14 California Code of Regulations [CCR] Section 460);
- Listed by CNPS as California Rare Plant Ranks (CRPR) 1A (presumed extinct in California and rare/extinct elsewhere), 1B (rare, threatened, and endangered in California and elsewhere), 2A (presumed extinct in California, but more common elsewhere), or 2B (rare, threatened, or endangered in California, but more common elsewhere) (CNPS 2013). CRPR 1A, 1B, 2A, and 2B species are considered special-status plant species if they fall within any of these categories as defined in the NNPA, CFGC Section 1901, or the CESA, CFGC Sections 2050 through 2098.
- CRPR 3: (plants for which more information is needed [a review list]), or 4 (plants of limited distribution [watch list]) (CNPS 2013).

AECOM conducted vegetation mapping; a rare plant habitat assessment; general wildlife surveys and habitat assessment; and focused protocol surveys for the western burrowing owl (BUOW; *Athene cunicularia hypugaea*) in spring and summer 2012. RECON conducted a jurisdictional waters and wetlands delineation in fall 2012 (RECON 2013).

Per the Project Applicant's direction, CUP area 13-0047 was added to the Project and AECOM added portions of parcels along the New River to the BSA subsequent to the completion of vegetation mapping, rare plant assessments, and BUOW surveys in 2012. Vegetation and habitat assessments were completed via desktop analysis in these areas. A field jurisdictional waters and wetlands delineation was also conducted for CUP area 13-0047 (RECON 2013). No other field surveys have yet been conducted on these newly added areas. The following sections describe the method for each biological resource survey completed.

2.1.1 Vegetation Mapping

Land use within the BSA was dominated by agriculture activities and relic native habitat consisted of small, fragmented patches. Vegetation mapping was conducted within the BSA primarily via driving surveys (Figure 5). Meandering transects were walked on foot through native habitat. Driving surveys were conducted on April 25 and 26, 2012, by AECOM botanist Lance Woolley. Vegetation mapping was completed for CUP area 13-0047 and portions of parcels along the New River via desktop analysis using aerial photographs and data sheets from RECON's (2013) jurisdictional waters and wetlands delineation. Vegetation communities were classified based on Holland (1986). The CDFW (2010) vegetation classification system was also used to provide additional detail when needed, such as denoting special-status vegetation communities that are either known or believed to be of high priority for inventory in CNDDB due to significance or rarity. Botanists used 200-foot scale ortho-topo maps vegetation mapping in the field. The minimum mapping unit for vegetation mapping was 1 acre (0.40 hectare) for upland vegetation communities and 0.50 acre (0.20 hectare) for wetland and

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riparian vegetation communities. A smaller minimum mapping unit was used in riparian areas to accommodate the greater diversity of vegetation types that can occur per unit area as opposed to uplands.

Dominant plant species for the various riparian and upland vegetation communities were recorded according to the 50/20 dominance rule (USACE 1992). According to this rule, dominant plant species are defined as those that, when ranked in order of abundance, collectively make up 50 percent relative cover. Each dominant species individually makes up at least 20 percent relative cover, or is needed to surpass the 50 percent relative cover threshold. Once the dominant plant species were identified according to this method, they were grouped according to relative cover: species below 20 percent, species ranging from 20 to 50 percent cover, and species exceeding 50 percent cover.

An observation number was recorded on the map and keyed to field notes for representative locations. A description of the vegetation community was written in field notes and included disturbance, special soils, potential jurisdictional waters, and habitat suitability for sensitive species.

2.1.2 Jurisdictional Waters and Wetlands

RECON conducted field delineation for jurisdictional waters and wetlands within the survey area (Figure 6) between September 8 and 9, 2012. Detailed survey methods and results of the delineation are presented in the RECON delineation report titled *Jurisdictional Waters Delineation Report for the Wistaria Ranch Solar Energy Center Project* and included as Appendix A. Prior to field surveys, RECON conducted a pre-survey investigation to obtain contextual information relevant to the site to be surveyed. RECON examined aerial photographs and U.S. Geological Survey topographic maps of the site to gain a better understanding of the physical and hydrologic setting of the site.

The wetland delineation followed the guidelines set forth by Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region, Version 2.0 (Environmental Laboratory 2008a), and A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (Environmental Laboratory 2008b) to determine the potential presence of federal and state jurisdictional areas and the extent of jurisdictional waters. Pursuant to Section 404 of the CWA, USACE is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which include those waters listed in 33 CFR 328.3 (Definitions). The fundamental rationale of Section 404 of the CWA is that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to aquatic resources or if significant degradation would occur to waters of the U.S. (including wetlands).

Areas meeting criteria for jurisdiction under the CDFW and Colorado River RWQCB were also evaluated and mapped. CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., desert wash scrub) associated with arid watercourses. Jurisdictional waters of the state are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. The Fish and Game Commission has

defined “stream” in Title 14 CCR Section 1.72 as follows: “[A] body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” In addition, Title 14 CCR Section 1.56 states “includes natural lakes or man-made reservoirs.”

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes all waters of the U.S. as mandated by the federal CWA. If it is determined that an activity proposed within jurisdictional waters requires a permit pursuant to Section 404 of the CWA, then pursuant to Section 401 of the CWA the RWQCB must certify that the discharge will comply with state water-quality standards, or waive the certification requirement. In addition, RWQCB also regulates under Porter-Cologne, which generally includes all waters subject to the jurisdiction of USACE and CDFW as well as certain isolated waters that may be excluded from USACE jurisdiction.

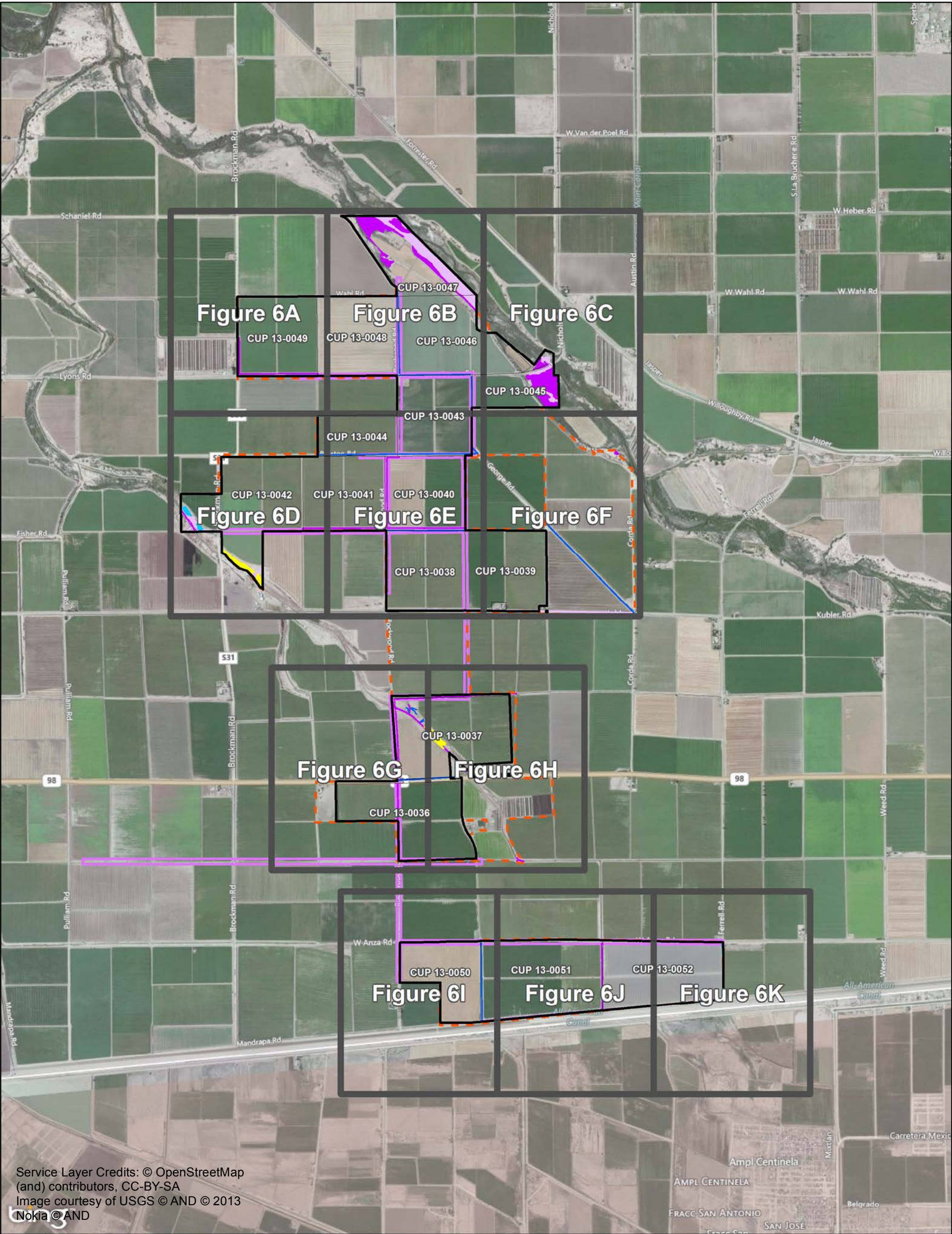
2.1.3 Rare Plant Habitat Assessment

A rare plant habitat assessment was conducted concurrently with vegetation mapping on April 25 and 26, 2012 to assess the need for rare plant surveys within the BSA. The BSA primarily consists of agriculture fields and irrigation canal and drains. Little native habitat is present due to agricultural activities and O&M activities at irrigation canals and drains. Relic native habitat occurs along the western bank of the New River but is very fragmented. Botanists walked meandering transects spaced approximately 50 feet (15 meter) apart in areas where native habitat occurred. All observable and readily identifiable vascular plant species encountered during the field surveys were identified and recorded to a taxonomic level to determine rarity. All sensitive plant species encountered during the field surveys were identified, recorded, and mapped with a GPS unit. Plant species were identified using plant field and taxonomical guides, such as the Jepson Manual.

CUP area 13-0047 and portions of parcels along the New River were added to the BSA subsequent to the completion of the field rare plant assessment. The potential for these areas to support rare plant habitat was evaluated by reviewing data sheets from the RECON Jurisdictional Waters Delineation Report (RECON 2013) and data collected in adjacent habitat. Prior to the onset of construction within CUP area 13-0047, a field rare plant habitat assessment would be conducted to assess the need for focused rare plant surveys within this CUP area (see Section 5.2.2.2).

2.1.4 General Habitat Assessment and Wildlife Surveys

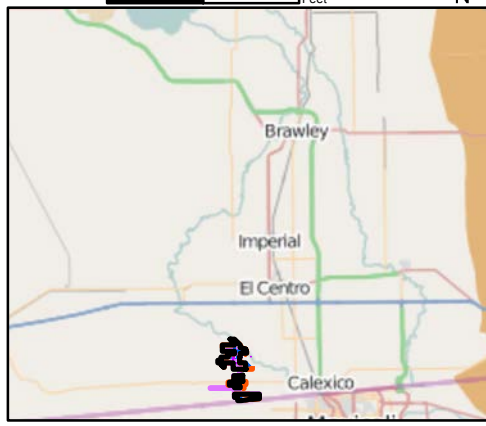
A wildlife habitat assessment was conducted on April 4, 2012, by AECOM biologists Rocky Brown and Shelly Dayman. The BSA, excluding CUP area 13-0047, was evaluated for the presence of habitat suitable for special-status wildlife species. When areas could not be accessed directly due to trespassing issues, these areas were evaluated with the use of binoculars or a spotting scope from adjacent areas. Any special-status species or sign observed during the wildlife habitat assessment was recorded and marked using a Global Positioning System (GPS). The purpose of the wildlife habitat assessment was to determine whether further surveys for special-status wildlife species identified during database research and literature reviews would be warranted. CUP area 13-0047



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Figure No. 6

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- Legend:**
- Detail Map Extent
 - Project Site Boundary
 - CUP Boundary
 - Biological Survey Area
 - Electric Collector Line Corridor

- Waters of the U.S. and State (USACE, CDFW, RWQCB)**
- Nonwetland Water, Streambed
 - Wetland, Riparian
 - Wetland, Streambed
- Waters of the State (CDFW)**
- Floodplain
 - Riparian
 - Streambed

Wistaria Ranch Solar Energy Center
Biological Technical Report

Potential Jurisdictional Waters
of the U.S. and State

Project Number: 60250473 Date: 3/12/2014

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

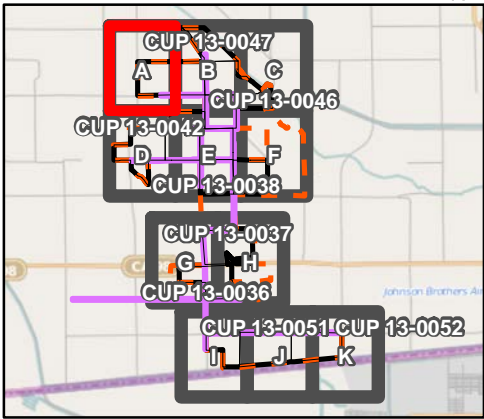
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Figure No. 6A

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- Legend:**
- Detail Map Extent
 - Project Site Boundary
 - CUP Boundary
 - Biological Study Area
 - Electric Collector Line Corridor

Waters of the U.S. and State (USACE, CDFW, RWQCB)

- Nonwetland Water, Streambed
- Wetland, Riparian
- Wetland, Streambed

Waters of the State (CDFW)

- Floodplain
- Riparian
- Streambed

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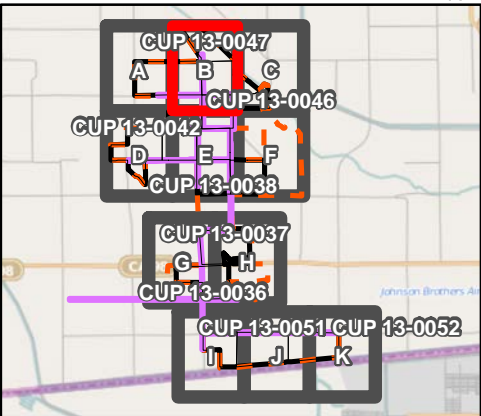
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Figure No. 6B

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- Detail Map Extent
 - Project Site Boundary
 - CUP Boundary
 - Biological Study Area
 - Electric Collector Line Corridor

- Waters of the U.S. and State (USACE, CDFW, RWQCB)**
- Nonwetland Water, Streambed
 - Wetland, Riparian
 - Wetland, Streambed
- Waters of the State (CDFW)**
- Floodplain
 - Riparian
 - Streambed

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

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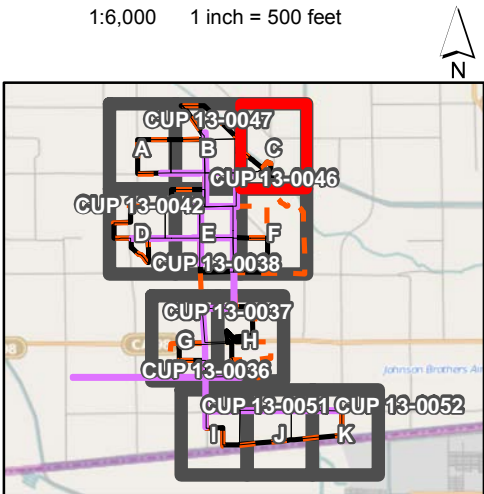
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of the U.S. and State**

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Figure No. 6C



Project Number: 60250473 Date: 3/12/2014

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

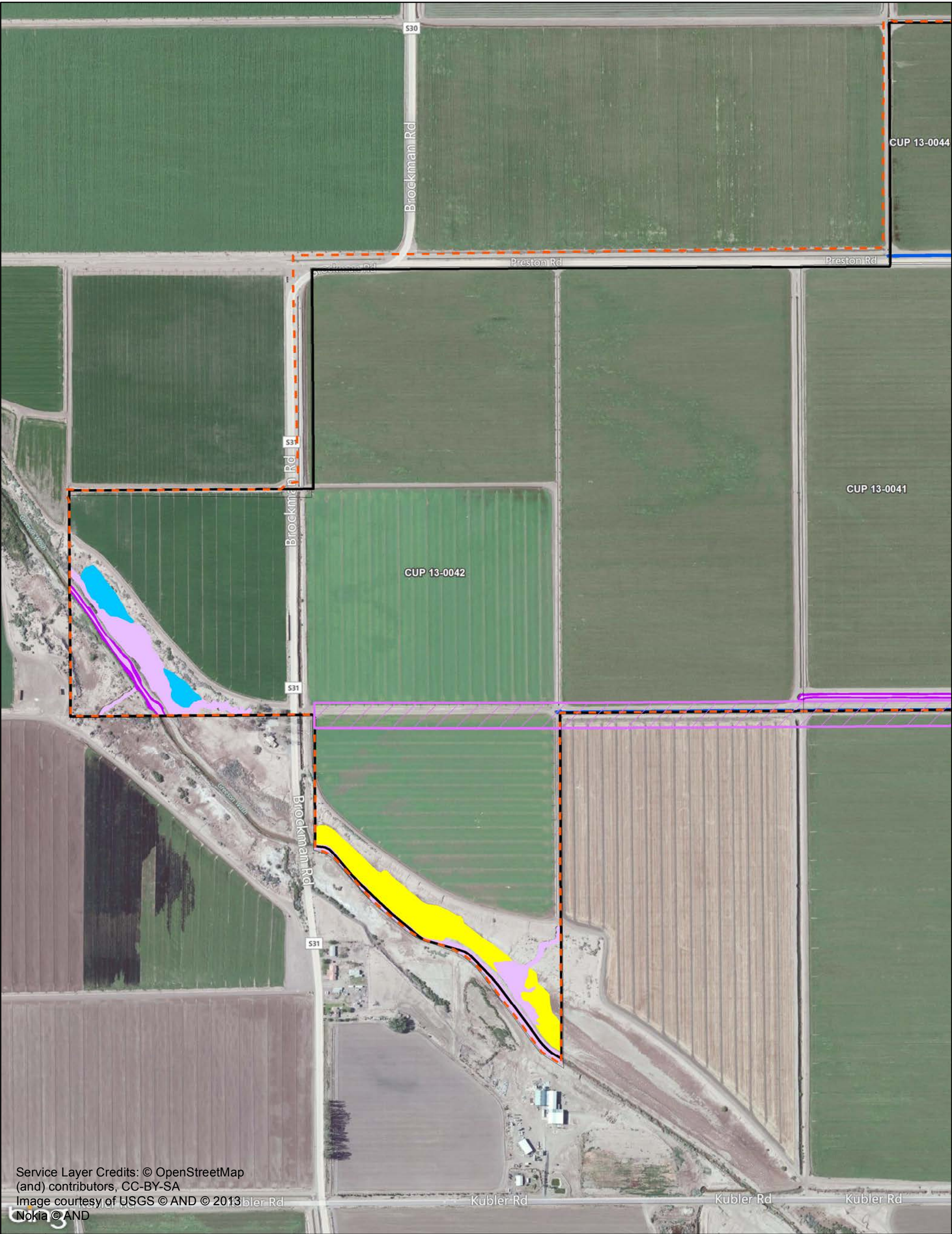
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 - CUP Boundary
 - Biological Study Area
 - Electric Collector Line Corridor

- Waters of the U.S. and State (USACE, CDFW, RWQCB)**
- Nonwetland Water, Streambed
 - Wetland, Riparian
 - Wetland, Streambed
- Waters of the State (CDFW)**
- Floodplain
 - Riparian
 - Streambed

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of the U.S. and State**

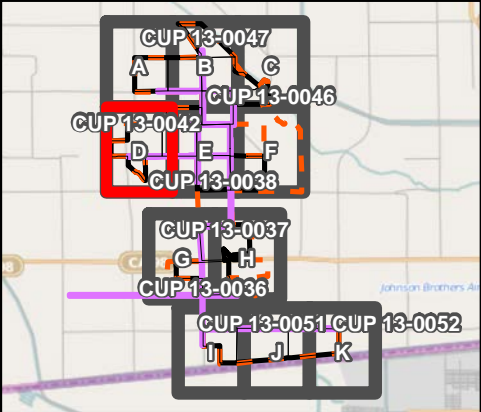
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Figure No. 6D

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Project Number: 60250473 Date: 3/12/2014

Legend:

- Detail Map Extent
- Project Site Boundary
- CUP Boundary
- Biological Study Area
- Electric Collector Line Corridor

Waters of the U.S. and State (USACE, CDFW, RWQCB)

- Nonwetland Water, Streambed
- Wetland, Riparian
- Wetland, Streambed

Waters of the State (CDFW)

- Floodplain
- Riparian
- Streambed

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

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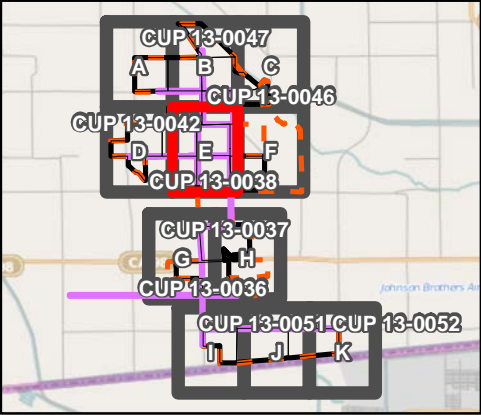
Potential Jurisdictional Waters
of the U.S. and State

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 - Electric Collector Line Corridor

Waters of the U.S. and State (USACE, CDFW, RWQCB)

- Nonwetland Water, Streambed
- Wetland, Riparian
- Wetland, Streambed

Waters of the State (CDFW)

- Floodplain
- Riparian
- Streambed

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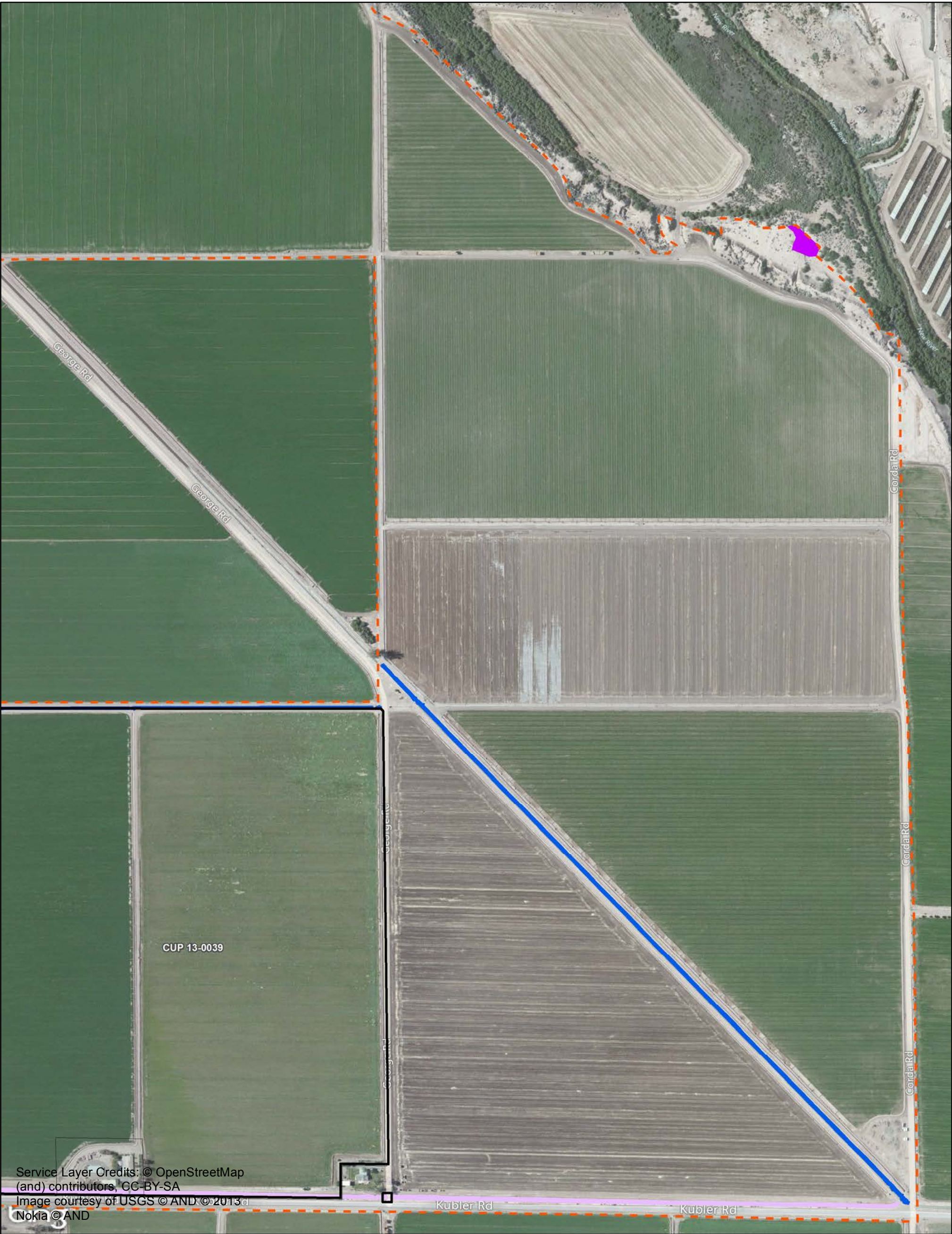
**Potential Jurisdictional Waters
of the U.S. and State**

Project Number: 60250473 Date: 3/12/2014

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

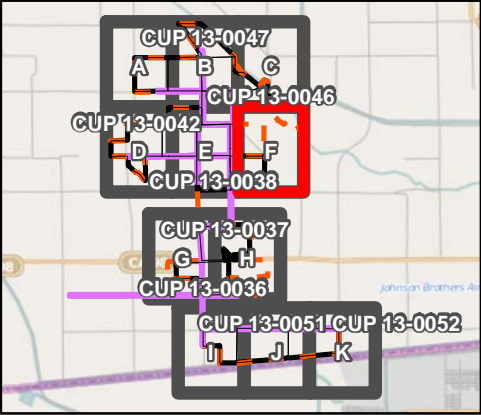
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Waters of the State (CDFW)

- Floodplain
- Riparian
- Streambed

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of the U.S. and State**

Project Number: 60250473 Date: 3/12/2014

Project Name: Wistaria Solar Ranch
Projection: NAD 83 CA State Plane Zone 6

Figure No. 6F

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