poly-crystalline silicon housing the inverters will have a precast concrete base. Final concrete specifications will be determined during detailed design engineering in accordance with applicable building codes.

Table 2-1. Example Construction Equipment

Equipment	Use
1-ton crew trucks	Transport construction personnel
2-ton flatbed trucks; flatbed boom trucks	Haul and unload materials
Mechanic truck	Service and repair equipment
Aerial bucket trucks	Access poles, string conductor, and other uses
Shop vans	Store tools
Bulldozers	Grade pole sites; reclamation
Truck-mounted diggers or backhoes	Excavate
Small mobile cranes (12 tons)	Load and unload materials
Large mobile cranes (75 tons)	Erect structures
Transport	Haul poles and equipment
Drill rigs with augers	Excavate and install fences
Semi tractor-trailers	Haul structures and equipment
Splice trailers	Store splicing supplies
Air compressor	Operate air tools
Air tampers	Compact soil around structure foundations
Concrete trucks	Pour concrete
Dump trucks	Haul excavated materials/import backfill
Fuel and equipment fluid trucks	Refuel and maintain vehicles
Water trucks	Suppress dust and fire

2.4.4 Site Preparation

Project construction would include the renovation of existing dirt roads to all-weather surfaces (to meet the County standards) from Wilkins Road just south of the orchard, and a new road would be graded west from Gas Line Road and a new road graded north from the southwest corner of the parcel off Wilkins Road. Construction of the proposed project would begin with clearing of existing brush and installation of fencing around the project boundary. A 20 foot road of engineering-approved aggregate will surround the site within the fencing.

Material and equipment staging areas would be established on-site within an approximate 4-acre area. The staging area would include an air-conditioned temporary construction office, a first-aid station and other temporary facilities including, but not limited to, sanitary facilities, worker parking, truck loading and unloading, and a designated area for assembling the support structures for the placement of PV modules. The location of the staging area would change as construction progresses throughout the project site. The project construction contractor would then survey, clear and grade road corridors in order to bring equipment, materials, and workers to the various areas under construction within the project site. Road corridors, buried electrical lines, PV array locations and locations of other facilities

may be flagged and staked in order to guide construction activities. In addition, water truck reloading stations would be established for dust control.

2.4.5 Start-up

PV system installation would include earthwork, grading and erosion control, as well as erection of the PV modules, mounting posts and associated electrical equipment. The PV modules require a moderately flat surface for installation and therefore some earthwork, including grading, fill, compaction and erosion control, may be required to accommodate the placement of PV arrays, concrete for foundations, access roads and/or drainage features.

Construction of the PV arrays would be expected to take place at a rate of approximately 0.10 MW per day. Construction of the PV arrays would include installation of the mounting posts, module assemblies, PV modules, inverters, transformers and buried electrical conductors.

The module assemblies would then be cut off at the appropriate heights since the center posts must be completely level. Field welding would be required to attach the module assemblies to the top of the mounting posts.

Finally, the PV panels would be attached to the module assemblies. Heavy equipment lifters (e.g., forklift) would be required to place the module assemblies in position, while welding and cutting equipment would be necessary to cut off the posts at the appropriate height.

2.4.6 Construction Water Requirements

The proposed project is anticipated to take approximately 6-9 months from the commencement of the construction process to complete. Construction water (non-potable) needs would be limited to earthwork, soil conditioning, dust suppression, and compaction efforts. During construction, on-site groundwater is proposed to be utilized. Approximately 900,000 gallons (2.76 acre-feet [af]) of water (40,909 gallons per work day) would be required during the first phase of construction for site preparation and grading and would be obtained from the proposed on-site groundwater well. The second phase of construction (PV system installation and testing) would take approximately 6 months and require approximately 2,130,000 gallons (6.54 af) of water (16,136 gallons per work day) and also be derived from the proposed on-site groundwater well. Water usage would then be reduced to approximately 300,000 gallons (0.92 af) (13,636 gallons per workday) of water required during the last phase of the construction (clean-up and restoration). Therefore, the proposed project would require a total of 3,330,000 gallons (10.22 af) of water during the construction period.

2.4.7 Dust Suppression

The project would comply with all applicable air pollution and dust control regulations. During the construction phase of the project, standard dust control measures would be used to mitigate emissions of fugitive dust. These may include watering or applying dust reducers with low environmental toxicity to suppress dust during construction.

2.4.8 Clean-up and Demobilization

After construction is complete, all existing County and private roads utilized would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted.

Waste materials and debris from construction areas would be collected, hauled away, and disposed of at approved landfill sites. Cleared vegetation would be shredded and distributed over the disturbed site as mulch and erosion control or disposed of offsite, depending on agency agreements. Rocks removed during foundation excavation would be redistributed over the disturbed site to resemble adjacent site conditions. Interim reclamation would include re-contouring of impacted areas to match the surrounding terrain, and cleaning trash out of gullies. Equipment used could include a blader, front-end loader, tractor, and a dozer with a ripper.

A covered portable dumpster would be kept on site during the construction period to contain any trash that can be blown away. After completion of the proposed project, the project engineer would complete a final walk-through and note any waste material left on site and any ruts or terrain damage or vegetation disturbance that has not been repaired.

2.5 Operations and Maintenance

Once fully constructed, the proposed project would be operated on an unstaffed basis and be monitored remotely, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and employees would only be on-site four times per year to wash the panels.

As the project's PV arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Any required planned maintenance activities would generally consist of equipment inspection and replacement and would be scheduled to avoid peak load periods. Any unplanned maintenance would be responded to as needed, depending on the event.

Estimated annual water consumption for operation and maintenance of the proposed project, including periodic PV module washing, would be approximately 0.81 acre-feet per year (afy). As discussed previously, the project will utilize groundwater from a proposed on-site groundwater well.

2.6 Facility Decommissioning

Solar equipment has a lifespan of approximately 20 to 25 years. At the end of the project's operation term, the applicant may determine that the project should be decommissioned and deconstructed. Should the project be decommissioned, concrete footings, foundations, and pads would be removed using heavy equipment and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured.

2.7 Required Project Approvals

2.7.1 Imperial County

The following are the primary discretionary approvals required for implementation of the project:

1. **Approval of CUP – Solar Energy Facility.** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility project. The project site is located on one privately-owned legal parcel zoned Open Space/Preservation with a Geothermal Overlay (S-2-G). Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County: *Major facilities relating to the generation and transmission of electrical energy provide[d] such facilities are not under State or Federal law, to [be] approved*

exclusively by an agency, or agencies of the State or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters. Such uses shall include but be limited to the following:

- *Electrical generation plants*
- *Facilities for the transmission of electrical energy (100-200 kV)*
- *Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)*
- *Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*

2. **Approval of CUP – Groundwater Well.** Pursuant to Title 9 Division 21: Water Well Regulations, §92102.00, the Applicant will be required to obtain a CUP for the proposed on-site groundwater well. As required by §92102.00, no person shall (1) drill a new well, (2) activate a previously drilled but unused well, (unused shall mean a well or wells that have not been used for a 12 month) period by installing pumps, motors, pressure tanks, piping, or other equipment necessary or intended to make the well operational, (3) increase the pumping capacity of a well, or (4) change the use of a well, without first obtaining a CUP through the County Planning & Development Services Department.
3. **General Plan Amendment.** An amendment to the County's General Plan, Renewable Energy and Transmission Element is required to implement the proposed project. CUP applications proposed for specific renewable energy projects not located in the Renewable Energy (RE) Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. APN No. 003-240-001 (in which the solar energy facility will be located), is immediately adjacent to, but outside of the RE Overlay Zone; therefore, the applicant is requesting a General Plan Amendment to include/classify APN No. 003-240-001 into the RE Overlay Zone. The underlying "Recreation" General Plan designation would remain.
4. **Zone Change.** The project site (APN No. 003-240-001) is located immediately adjacent to, but outside of the RE Overlay Zone; therefore, the applicant is requesting a zone change to include/classify APN No. 003-240-001 (which includes the solar energy facility) into the RE Overlay Zone.
5. **Variance.** A Variance is required to exceed the height limit for transmission towers within the S-2 zone. The existing S-2 zone allows a maximum height limit of 40 feet, whereas implementation of the project may involve the construction of transmission towers of up to 70 feet in height. Therefore, a Variance for any structure exceeding the existing maximum height limit of 40 feet would be required.
6. **Certification of the EIR.** After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and Board of Supervisors prior to making a decision on approval or denial of the project.

Subsequent ministerial approvals may include, but are not limited to:

- Grading and clearing permits
- Building permits
- Reclamation plan
- Encroachment permits
- Transportation permit(s)

2.7.2 Discretionary Actions and Approvals by Other Agencies

Responsible Agencies are those agencies that have discretionary approval over one or more actions involved with development of the project. Trustee Agencies are state agencies that have discretionary approval or jurisdiction by law over natural resources affected by a project. These agencies may include, but are not limited to the following:

- California RWQCB – Notice of Intent for General Construction Permit, CWA 401 Water Quality Certification
- ICAPCD – Fugitive Dust Control Plan, Rule 801 Compliance
- CDFW (Trustee Agency) – ESA Compliance, Section 1600 Streambed Alteration Agreement
- USFWS – ESA Compliance
- USACE – Section 404 of the CWA Permit

2.7.3 Potential Actions/Approvals by Other Agencies

The proposed fiber optic cable may require actions or approvals by the following agency:

- IID – for any approvals related to the fiber optic cable

3 Environmental Analysis, Impacts, and Mitigation

3.1 Introduction to Environmental Analysis

This section provides an overview of the environmental analysis and presents the format for the environmental analysis in each topical section.

3.1.1 Organization of Issue Areas

Chapter 3 provides an analysis of impacts for those environmental topics that the County determined could result in "significant impacts," based on preparation of an Initial Study and review by the County's Environmental Evaluation Committee and responses received during the scoping process, including the NOP review period and public scoping meeting. Sections 3.1 through 3.11 discuss the environmental impacts that may result with approval and implementation of the project, and where impacts are identified, recommends mitigation measures that, when implemented, would reduce significant impacts to a level less than significant. Each environmental issue area in Chapter 3 contains a description of the following:

- The environmental setting as it relates to the specific issue
- The regulatory framework governing that issue
- The threshold of significance (from Appendix G of the CEQA Guidelines)
- The methodology used in identifying and considering the issues
- An evaluation of the project-specific impacts and identification of mitigation measures
- A determination of the level of significance after mitigation measures are implemented
- The identification of any residual significant impacts following mitigation

3.1.2 Format of the Impact Analysis

This analysis presents the potential impacts that could occur under the project along with any supporting mitigation requirements. Each section identifies the resulting level of significance of the impact using the terminology described below following the application of the proposed mitigation. The section includes an explanation of how the mitigation measure(s) reduces the impact in relation to the applied threshold of significance. If the impact remains significant (i.e., at or above the threshold of significance), additional discussion is provided to disclose the implications of the residual impact and indicate why no mitigation is available or why the applied mitigation does not reduce the impact to a less than significant level.

Changes that would result from the project were evaluated relative to existing environmental conditions within the project site as defined in Chapter 2 and illustrated on Figure 2-2 (Chapter 2). Existing environmental conditions are based on the time at which the NOP was published on November 6, 2019. In evaluating the significance of these changes, this EIR applies thresholds of significance that have been developed using: (1) criteria discussed in the CEQA Guidelines; (2) criteria based on factual

or scientific information; and (3) criteria based on regulatory standards of local, state, and/or federal agencies. Mechanisms that could cause impacts are discussed for each issue area.

This EIR uses the following terminology to denote the significance of environmental impacts of the project:

- *No impact* indicates that the construction, operation, and maintenance of the project would not have any direct or indirect effects on the environment. It means no change from existing conditions. This impact level does not need mitigation.
- A *less than significant impact* is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.
- A *significant impact* is defined by CEQA Section 21068 as one that would cause "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the project must be provided, where feasible, to reduce the magnitude of significant impacts.
- An *unmitigable significant impact* is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be reduced to a less than significant level even with any feasible mitigation. Under CEQA, a project with significant and unmitigable impacts could proceed, but the lead agency would be required to prepare a "statement of overriding considerations" in accordance with State CEQA Guidelines California Code of Regulations (CCR) Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.

3.2 Aesthetics and Visual Resources

This section provides a description of the existing visual and aesthetic resources within the project area and relevant state and local plans and policies regarding the protection of scenic resources. Effects to the existing visual character of the project area as a result of project-related facilities are considered and mitigation is proposed based on the anticipated level of significance. The information provided in this section is summarized from the Visual Resources Technical Report (Appendix B of this EIR) and Glare Hazard Analysis Report (Appendix C of this EIR) prepared by Stantec.

3.2.1 Existing Conditions

The project site is located north-northeast of the intersection of Wilkins Road and an unnamed county road, about 3 miles north of the unincorporated town of Niland. Niland is the northernmost community within the agricultural portion of the Imperial Valley, which extends from the southeastern portion of the Salton Sea to the United States and Mexico border. The 45-mile-long and 20-mile-wide Salton Sea defines the landscape to the west of the project site. Elevations within the project site range from nearly 50 feet below sea level to 30 feet above mean sea level (amsl). With elevations extending to 277 feet below sea level, the Salton Sea sits comparatively lower in the landscape than the project site, as does much of the agricultural land to the immediate west and lands to the south. To the north and east of the project site are the Chocolate Mountains, which extend to heights of more than 2,000 feet amsl.

Because of this gradual downward slope from east to west within the project site and its surroundings, areas to the north and east of the project site would be more likely to have views of the project where views are not impeded by natural or built features. Viewers in this area are associated with land uses. Thus, potential viewers include workers traveling north/south on Gas Line Road, which extends north from Niland Avenue – near IID facilities and an existing solar power facility – to a facility northeast of the project site. Further away, to the southeast and just slightly higher in elevation than the project site, are Slab City and Salvation Mountain. Slab City is a former military facility that now serves as the site of an informal community for artists, travelers, and winter-time recreational vehicle (RV) campers. Salvation Mountain is an outdoor art project at the western entrance to Slab City. Both attract tourists and sight-seers. However, topography, intervening structures, and distance limit and obscure visibility of the project site in direct views from publicly accessible portions of these areas.

Land uses to the west and south include agricultural production and dispersed rural residences, and desert lands. The closest residences are aligned along Wilkins Road and an unnamed private road. The segments of these roads closest to the southwest corner of the project site are generally lower in altitude than the project site by approximately 20 feet, which reduces visibility of the project site. Areas further away – including the aforementioned IID facilities approximately 2 miles to the south, Niland and the State Route (SR) 111 corridor approximately 3 miles to the southwest, and the Wister Waterfowl Management Area approximately 3 miles to the west beyond the SR 111 corridor – are also lower in elevation, and thus do not afford direct views of the project site from public vantage points.

Views in this area are expansive and are generally characterized by sparse development framed by topographical features. Low-profile, weedy plants, such as salt cedar and russian thistle, typical of this portion of the Colorado Desert, are widespread on undeveloped and unfarmed lands, and ruderal vegetation is found along waterways associated with IID canals. Individual residences, transmission lines, transportation corridors (including roads and railroads), and agricultural equipment are discernable in the foreground (within 0.25 mile) and middleground (0.25 to 3-5 miles away) views

throughout the area. Geothermal plants in the vicinity of the Salton Sea are visible in most views to the west. They are identifiable by their vapor plumes. These views to the west from the project site are backdropped by the Santa Rosa Mountains and Vallecito Mountains. Views to the east are backdropped by the Chocolate Mountains.

Scenic Vista

Scenic vistas are typically expansive views from elevated areas. They may or may not be part of a designated scenic overlook or other area providing a static vista view of a landscape. The project site is located in a rural portion of Imperial County and is not located within an area containing a scenic vista designated by the State or the County's General Plan.

Scenic Highways

According to the Conservation and Open Space Element, no State scenic highways have been designated in Imperial County (County of Imperial 2016). The project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site. The nearest road segment considered eligible for a State scenic highway designation is the portion of SR 111 from Bombay Beach to the County line. The project site is located approximately 14 miles southeast of Bombay Beach and so would not be visible from this location.

Visual Character

Aerial imagery was reviewed to identify where the project would potentially be visible from visually sensitive areas and selected preliminary viewpoints for site photography. Field surveys were conducted to photo-document existing visual conditions and views toward the project site. A representative subset of photographed viewpoints was selected as Key Observation Points (KOP). Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area. The locations of the two KOPs in relation to the project site are presented on Figure 3.2-1.

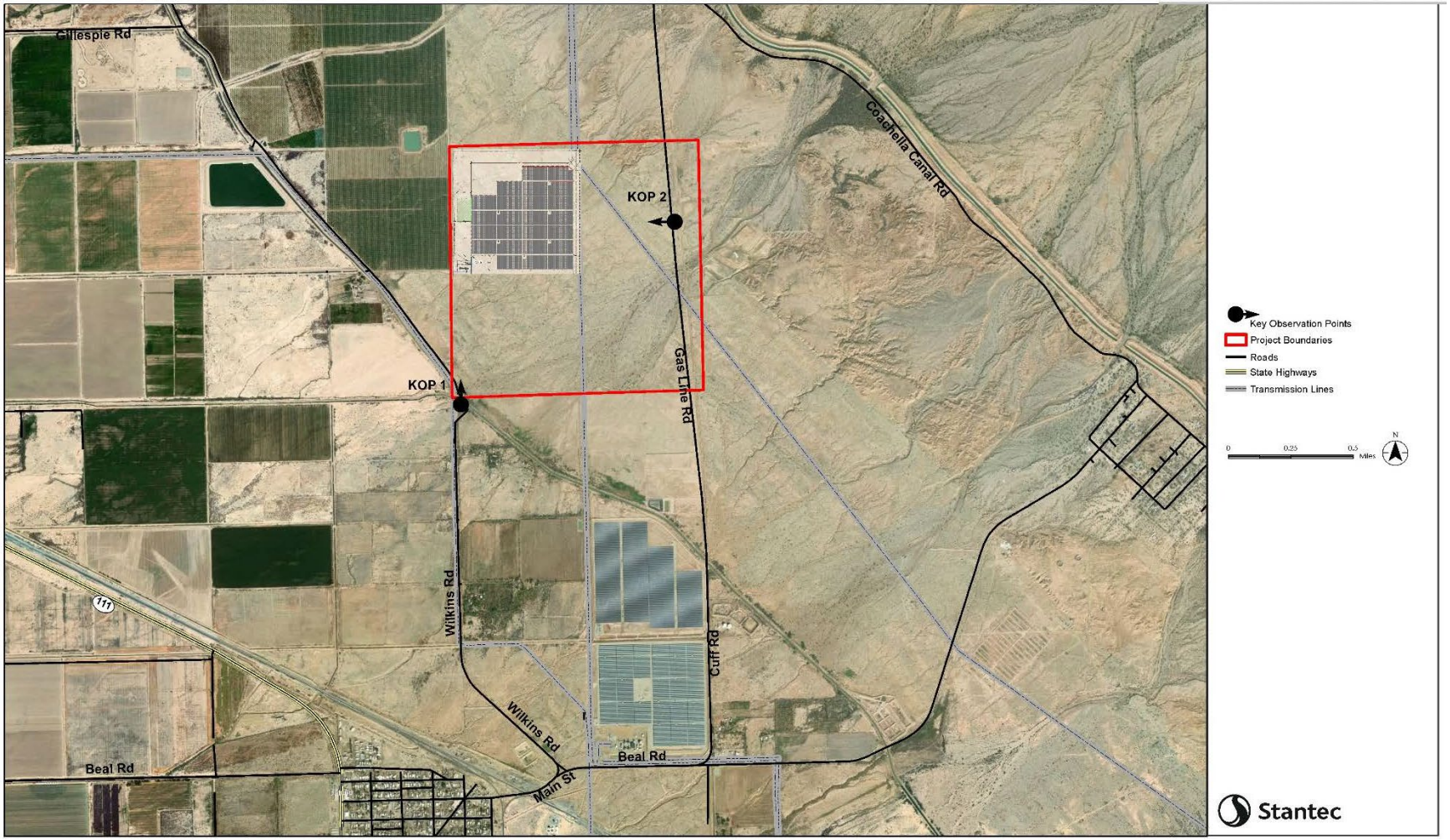
KEY OBSERVATION POINT 1

KOP 1 is located along Wilkins Road, at its intersection with an unnamed private road, adjacent to the southwest corner of the project site. The view from KOP 1 is to the north, toward the proposed project's solar arrays and substation (Figure 3.2-2).

This viewpoint represents views from an identifiable point along the most proximate roadway, where topography allows visibility of the project site. This view is characterized by the contrast between the vegetated and relatively flat area in the foreground and middleground of the view and Chocolate Mountains backdrop, which appears multi-colored and defines the skyline with its jagged and irregular form.

The tree in the center of the view, as well as other vegetation, partially blocks views toward the project site. A utility tie-in pole is visible on the far side of Wilkins Road in the left half of the view.

Figure 3.2-1. Key Observation Points



Source: Appendix B of this EIR

This page is intentionally blank.

Figure 3.2-2. Existing View at Key Observation Point 1

Source: Appendix B of this EIR

This page is intentionally blank.

KEY OBSERVATION POINT 2

KOP 2 is located along Gas Line Road, 2.2 miles north of Beal Road and just under 0.5 mile east of the project site. Multiple transmission lines are visible extending across the view, with a tubular-steel pole in the immediate foreground and the H-frame towers appearing in front of the project site (Figure 3.2-3).

This viewpoint represents views from workers and travelers along the north-south oriented Gas Line Road as well and from the broader, slightly uphill area to the east. The view is characterized by the visible striations, or the layered qualities of what appear in view as linear elements. Beyond the project site is another transmission line, an orchard that appears linear in form from this vantage point, and the railroad and SR 111 corridor, which is not discernible in this view.

The Salton Sea appears here as a strip of royal blue hue across the middleground of most of the view, beyond which are the Santa Rosa and Vallecito Mountains. While jagged and uneven, the distant mountain skyline's linear qualities are accentuated in this view due to the layer of snow visible along numerous peaks and upper extents of the mountain. The gradual downward slope of the project site is apparent only by reference to further, observably lower elements in the view.

Light, Glare, and Glint

Glare is considered a continuous source of brightness, relative to diffused light, whereas glint is a direct redirection of the sun beam in the surface of a PV solar module. Glint is highly directional, since its origin is purely reflective, whereas glare is the reflection of diffuse irradiance; it is not a direct reflection of the sun.

The project site is currently vacant and does not generate any light or glare. The majority of the light and glare in the project vicinity is a result of motor vehicles traveling on surrounding roadways, airplanes, and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces.

The Chocolate Mountains are located to the north and east of the project site. The Chocolate Mountain Aerial Gunnery Range is used by the United States Marine Corps (USMC) for training purposes.

This page is intentionally blank.

Figure 3.2-3. Existing View at Key Observation Point 2

Source: Appendix B of this EIR

This page is intentionally blank.

3.2.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

State

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Caltrans manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the scenic corridor.

Local

IMPERIAL COUNTY GENERAL PLAN

The Imperial County General Plan contains policies for the protection and conservation of scenic resources and open spaces within the County. These policies also provide guidance for the design of new development. The Conservation and Open Space Element of the General Plan provides specific goals and objectives for maintaining and protecting the aesthetic character of the region. Table 3.2-1 provides an analysis of the project's consistency with the Conservation and Open Space Element Goal 5. Additionally, the Circulation and Scenic Highways Element of the General Plan provides policies for protecting and enhancing scenic resources within highway corridors in Imperial County, consistent with the Caltrans State Scenic Highway Program.

COUNTY OF IMPERIAL LAND USE ORDINANCE, TITLE 9

The County's Land Use Ordinance Code provides specific direction for lighting requirements.

Division 17: Renewable Energy Resources, Section 91702.00 – Specific Standards for All Renewable Energy Projects

(R) Lights should be directed or shielded to confine direct rays to the Project site and muted to the maximum extent consistent with safety and operational necessity.

Table 3.2-1. Consistency with Applicable General Plan Conservation and Open Space Policies

General Plan Policies	Consistency with General Plan	Analysis
Goal 5: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Consistent	As described in Section 3.2.3, in close views, the proposed project would be visible and identifiable, resulting in some changes to the existing visual character of the project site. However, such views of the proposed project would be limited in both duration and availability. The majority of the portion of the Imperial Valley where the project site is located is dedicated to agricultural production and power production and transmission. Desert lands are generally located north and east of the East Highline Canal. The project site is located on the eastern edge of active agricultural lands with desert lands located immediately to the east and beyond. The proposed project would not substantially degrade the existing visual character or quality of views as the limited views available to the project site would appear absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and existing utility-scale solar facilities. The proposed project would not result in a significant deterioration in the visual character of the project site or surrounding area.
Objective 5.1: Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.	Consistent	The project site is located on the eastern edge of active agricultural lands with desert lands located immediately to the north and east and beyond. The solar arrays (up to 15 feet high at maximum rotation angle) would not create a permanent visual obstruction for the background views of the desert or Chocolate Mountains. The solar arrays would be relatively low profile in the context of the mountains in the background. The proposed project would be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and existing utility-scale solar facilities. With their relatively low profile, and in the context of topographical conditions, the project would not obstruct views of desert or mountain areas to the north and east of the project site.

Source: County of Imperial 2016

3.2.3 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to aesthetics are considered significant if any of the following occur:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Methodology

VISUAL CHANGE

A comparison of the project site's existing conditions and the change to the visual character of the landscape with implementation of the project is based on the production of visual simulations. As a part of this process, aerial imagery was reviewed to identify where the project would potentially be visible from visually sensitive areas and selected preliminary viewpoints for site photography. Field surveys were conducted to photo-document existing visual conditions and views toward the project site. A representative subset of photographed viewpoints was selected as KOPs, which collectively serve as the basis for this assessment. Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area. The locations of the two KOPs in relation to the project site are presented on Figure 3.2-1.

The site photos were used to generate a rendering of the existing conditions and a proposed visualization of the proposed project. The visual simulations provide clear before-and-after images of the location, scale, and visual appearance of the features affected by and associated with the project. Design data — consisting of engineering drawings, elevations, site and topographical contour plans, concept diagrams, and reference pictures — were used as a platform from which digital models were created. In cases where detailed design data were unavailable, more general descriptions about alternative facilities and their locations were used to prepare the digital models.

GLARE/GLINT

The web-based ForgeSolar Pro glare hazard analysis program was utilized to perform the glare/glint analysis of the proposed project. ForgeSolar provides a quantified assessment of (1) when and where glare will occur throughout the year for a prescribed solar installation, (2) potential effects on the human eye at locations where glare occurs, (3) a general map showing where glare is coming from within an array, and (4) the annual energy production from the PV array so that alternative designs can be compared to maximize energy production while mitigating the impacts of glare. ForgeSolar employs an interactive Google Map for site location, mapping the proposed PV array(s), and specifying

observer locations or flight paths. Latitude, longitude, and elevation are automatically recorded through the Google Interface, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the PV panels, reflectance, environment, and ocular factors are entered by the user.

Flight Path Analysis. The glare study analyzed the flight path provided by the USMC (Figure 3.2-4) and two observation points at ground level. If glare is found, the tool calculates the retinal irradiance and subtended angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary after-image to retinal burn.

Adjacent Roadways. Two observation points (Figure 3.2-1) were analyzed for vehicles travelling along adjacent roads:

- Intersection of Wilkins and an unnamed county road
- Gas Line Road

Potential glare to drivers was evaluated for both passenger vehicles and semi-trucks, where the passenger vehicles were assumed to have a maximum viewing height of 5 feet while the viewing height for drivers of semi-trucks was assumed to be a maximum of 9 feet.

Figure 3.2-4. Flight Path Analysis

Source: Appendix C of this EIR

This page is intentionally blank.

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.2-1 Would the project have a substantial adverse effect on a scenic vista?

There are no designated scenic vistas in the project vicinity. The proposed project would involve the use of standard construction equipment including, but limited to, trucks, cranes, and tractors. The presence of this equipment within the project area during construction would alter views of the area from undeveloped land to a construction site. However, the views of construction activity from the surrounding vicinity would be temporary and would not involve any designated scenic vistas. Therefore, impacts to a scenic vista are considered less than significant during construction.

Views to the west from elevated areas near the project site, including views from Gas Line Road (KOP 2), could be considered scenic vistas given the expansiveness of the views and distance one can see under favorable conditions. However, as described under Impact 3.2-3, the project would not have a substantial adverse effect on such views. The proposed project would not be a prominent visual presence in the context of the surrounding development, as it would largely be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and an existing utility-scale solar facility 0.5 mile to the south. Also, the project's low profile in the context of topographical conditions would not obscure or degrade views of the desert lands and mountains north and east of the site. Therefore, impacts to a scenic vista would be less than significant during project operation.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.2-2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site. The nearest road segment considered eligible for a State Scenic Highway designation is the portion of SR 111 from Bombay Beach to the County line. The project site is located approximately 14 miles south of Bombay Beach. Therefore, no impacts to scenic resources within a designated state scenic highway would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.2-3 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Short-term visual impacts would occur in association with construction activities, including introducing heavy equipment (e.g., cranes), staging and materials storage areas and potential dust and exhaust to the project area. While construction equipment and activity may present a visual nuisance, it is temporary (approximately 6-9 months) and does not represent a permanent change in views.

Therefore, impacts associated with degrading the existing visual character or quality of the project site during construction are considered less than significant.

Figure 3.2-5 and Figure 3.2-6 illustrates the visual changes from KOP 1 and KOP 2 with the proposed project.

KEY OBSERVATION POINT 1

Figure 3.2-5 shows the view from KOP 1 with the proposed project simulated. As simulated, the gen-tie structures, which would extend from the project site approximately 2,500 feet toward the KOP, would be the most prominently visible portion of the project from this location. As conceptually shown in the simulation, the gen-tie structures would be visible in the center of the view and the southernmost structure would connect to the existing IID line in the left edge of the view, replacing the current interconnection to the parcel. The photosimulation illustrates that while appearing as new and highly visible features, the transmission structures would be comparable in size and appearance to other existing structures and would blend with the numerous lines visible throughout the landscape, including the existing line to which the project would interconnect. They would also occupy a relatively narrow portion of the view to the north from KOP 1.

The substation for the proposed project has not yet been designed. However, the facility shown on Figure 3.2-5 is an approximation based on representative examples of substations of similar size and in similar environments. The proposed substation would be low-profile and would be approximately 300 feet by 175 feet. As simulated, the substation would be partially visible in views from KOP 1, alongside the solar arrays, which would appear as a comparatively dark, horizontal bar across a portion of the view's middle ground. Aside from the relatively narrow gen-tie structures, no project component would substantially obscure or appear above the mountain skyline from this vantage point.

KEY OBSERVATION POINT 2

Figure 3.2-6 shows the view from KOP 2 with the proposed project simulated. The proposed project appears within the front portion of the view's middleground, within the layered landscape described for the existing view. From 0.5 mile away and at a slightly higher elevation, the project would appear as a generally uniform line across the view, with solar arrays broken up by internal roads. The substation would be detectable beyond the arrays in the southern portion of the project site, and the gen-tie structures would be visible extending to the south from the project site. The land east of the Salton Sea would serve as backdrop to the substation, which the gen-tie poles would appear against the water body, itself.

Portions of the landscape beyond the project, including the orchard, would be obscured by the project. The blue-toned color of the arrays under conditions simulated here (morning light, mostly sunny skies) would be similar to that of the Salton Sea, the southeastern shoreline of which would remain visible beyond the project. This would distinguish the project from the Salton Sea in this view, reinforcing their respective scales. With this definition, the size of the proposed project relative to the broader landscape, and its visual similarity to – but physical distinction from – a body of water, would be observable by workers and travelers along the north-south oriented Gas Line Road as well and from the broader, slightly uphill area to the east. The overall effect, shown in Figure 3.2-6, is the relatively small degree of contrast that the project would have with its broader surroundings, as seen in the expansive, slightly uphill views from the east.

CONCLUSION

In the close-up, unobstructed views of the project, the existing visual character of the site and the quality of views in terms of visibility beyond the site would be substantially altered. However, such immediate views of the project site are not readily available to the general public from a publicly accessible vantage point.

In the view from KOP 1, new transmission structures that would be part of the project's interconnection and would appear large in scale; however, the new transmission structure would be comparable in size and appearance to other structures visible throughout the surrounding landscape with multiple existing transmission lines. The view from KOP 1 affords a direct line-of-sight from the nearest public roadway into the project site. Any view from other nearby publicly accessible viewpoints, including from points further north or south along Wilkins Road or east along Wiest Road, would be partially to fully obscured by roadside vegetation or berms. Like the view from KOP 1, such views would likely be of short duration given the probability of the viewers being in moving vehicles.

The view from KOP 2 represents elevated views from the nearest roadway to the east. The project would not substantially degrade the existing visual character or quality of views from this distance; rather, it would appear as a similar element within the existing context of the broader landscape that already includes agricultural development, electricity transmission poles and lines, geothermal power plants, IID facilities and infrastructure, and an existing utility-scale solar facility 0.5 mile to the south. Therefore, the project elements would not constitute a substantial degradation of the existing visual character from both KOP 1 and KOP 2, and impacts to visual character would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

This page is intentionally blank.

Figure 3.2-5. Project View Simulation at Key Observation Point 1

Source: Appendix B of this EIR

This page is intentionally blank.

Figure 3.2-6. Project View Simulation at Key Observation Point 2

Source: Appendix B of this EIR

This page is intentionally blank.

Impact 3.2-4 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As described in Chapter 2, Project Description, the project would include new sources of nighttime lighting. In addition, given the nature of the project (e.g., solar facility), this discussion also considers potential glare- and glint-related impacts generated by the proposed solar arrays. This discussion considers each issue under the associated headings below.

NIGHTTIME LIGHTING

Minimal lighting would be required for project operation and would be limited to safety and security functions. All lighting would be directed downward and shielded to confine direct rays to the project site and muted to the maximum extent consistent with safety and operational necessity (Title 9, Division 17, Chapter 2: Specific Standards for all Renewable Energy Projects, of the County's Zoning Ordinance).

If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. Based on these considerations, and the distance to potential viewers, the project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the project area, and the impact is considered less than significant.

GLARE AND GLINT

A glare hazard analysis was prepared to analyze the project's potential glare/glint impacts on USMC's training operations and adjacent roadway travelers. The complete report is provided as Appendix C of this EIR.

Flight Path Analysis. The glare study analyzed the flight path provided by the USMC (Figure 3.2-4) and two observation points at ground level. Based on the glare analysis (Appendix C of this EIR), glare is not expected for the flight path provided by the USMC. Therefore, the proposed project would not result in ocular hazards to USMC flight operations.

Adjacent Roadways. Two observation points (Figure 3.2-1) were analyzed for vehicles travelling along adjacent roads:

- Intersection of Wilkins and an unnamed county road
- Gas Line Road

Based on the glare analysis (Appendix C of this EIR), glare is not predicted for drivers of vehicles at the two observation points (Intersection of Wilkins and an unnamed county road, and Gas Line Road) adjacent to the project site at either 5 feet (cars and small trucks) or 9 feet (semi-trucks) viewing heights. Therefore, the proposed project would not result in a significant glare impact to motorists driving on roadways adjacent to the project site.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. No new transmission structures would be required to install the fiberoptic cable. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. The additional cable would be comparable in material and appearance to the existing cables on the transmission poles. The proposed fiber optic cable would result in a less than significant impact on a scenic vista, state scenic highway, degrade the existing visual character or quality of the site and its surroundings, or create a new source of light or glare.

3.2.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. The project site is relatively flat and primarily characterized by a level elevation. Therefore, no grading or significant land form modifications would be required during decommissioning activities upon site restoration in the future. Although the project site would be visually disrupted in the short-term during decommissioning activities, because extensive grading is not required and these activities would be temporary, the visual character of the project site would not be substantially degraded in the short-term and related impacts would be less than significant.

Residual

Impacts related to glare and glint impacts to roadway travelers and USMC flight operations would be less than significant and no additional mitigation measures are required. Changes to visual character of the project area would be less than significant and would be transitioned back to their prior (pre-solar project) conditions following site decommissioning. Based on these conclusions, implementation of the project would not result in residual significant unmitigable impacts to the visual character of the project area or add substantial amounts of light and glare.

3.3 Air Quality

This section includes an overview of the existing air quality within the project area and identifies applicable local, state, and federal policies related to air quality. The impact assessment provides an evaluation of potential adverse effects on air quality based on criteria derived from the CEQA Guidelines and Imperial County Air Pollution Control District's (ICAPCD) Air Quality Handbook in conjunction with actions proposed in Chapter 2, Project Description. Stantec prepared an *Air Quality Technical Study* that assesses the potential air quality and climate change impacts of the Wister Solar Energy Facility Project. This report is included in Appendix D of this EIR.

3.3.1 Existing Conditions

Regional Setting

The project is located in Imperial County within the Salton Sea Air Basin (SSAB). The SSAB consists of all of Imperial County and a portion of Riverside County. Both the Imperial County Air Pollution Control District (ICAPCD) and South Coast Air Quality Management District (SCAQMD) have jurisdiction within the SSAB. The ICAPCD has full jurisdiction within all Imperial County and SCAQMD only has jurisdiction within Riverside County. As an arid desert region, the SSAB's climate is largely governed by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. When the fringes of mid-latitude storms pass through the Imperial Valley in winter, the coastal mountains create a strong "rain shadow" effect that makes Imperial Valley the second driest location in the U.S.

The lack of clouds and atmospheric moisture creates strong diurnal and seasonal temperature variations ranging from an average summer maximum of 108 degrees (°) Fahrenheit down to a winter morning minimum of 38° Fahrenheit. The most pleasant weather occurs from about mid-October to early May when daily highs are in the 70s and 80s with very infrequent cloudiness or rainfall. Imperial County experiences significant rainfall an average of only four times per year. The rainy period of the year lasts for 3.4 months, from December 4 to March 16, with a sliding 31-day rainfall of at least 0.5 inch. The rainless period of the year lasts for over 8 months, from March to early December.

Temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms. During periods of strong solar heating and intense convection, turbulent motion creates good mixing and low levels of air pollution. The SSAB experiences surface inversions almost every day of the year. These inversions often last for long periods of time, which allows for air stagnation and buildup of pollutants, including ozone.

Winds in the area are driven by a complex pattern of local, regional, and global forces, but primarily reflect the temperature difference between the cool ocean to the west and the heated interior of the entire desert southwest. For much of the year, winds flow predominantly from the west to the east. In summer, intense solar heating in the Imperial Valley creates a more localized wind pattern, as air comes up from the southeast via the Gulf of California.

Imperial County is predominately agricultural land, which is a factor in the cumulative air quality of the SSAB. Agricultural production generates dust and small particulate matter through the use of agricultural equipment on unpaved roads, land preparation, and harvest practices. Imperial County experiences unhealthful air quality from photochemical smog and from dust because of extensive surface disturbance and the very arid climate.

Major Air Pollutants

Criteria Pollutants

Air quality is defined by ambient air concentrations of specific pollutants determined by the U.S. Environmental Protection Agency (U.S. EPA) to be of concern with respect to the health and welfare of the general public. Seven major pollutants of concern, called criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM) which is broken down for regulatory purposes into PM_{10}, $PM_{2.5}$, and lead (Pb). The California Air Resources Board (CARB) also identifies sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles as criteria pollutants. Table 3.3-1 describes the health effect of these criteria pollutants.

Table 3.3-1. Health Effects of Criteria Air Pollutants

Air Pollutant	Health Effects
CO	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
SO_2	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits
NO_2	• Lung irritation • Enhanced allergic responses
O_3	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue
PM_{10} and $PM_{2.5}$	• Premature death • Hospitalization for worsening of respiratory disease • Asthma-related emergency room visits
Pb	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage
Sulfates	• Worsening of asthma and other lung diseases
Hydrogen Sulfide	• At high concentrations: headache and breathing difficulties
Vinyl Chloride	• Central nervous effects, such as dizziness, drowsiness, and headaches • Long-term exposure: liver damage and liver cancer

Table 3.3-1. Health Effects of Criteria Air Pollutants

Air Pollutant	Health Effects
Visibility Reducing Particles	• Premature death • Hospitalization for worsening of respiratory disease • Asthma-related emergency room visits

Source: CARB 2020
Notes:
CO – carbon monoxide; NO_2 – nitrogen dioxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter;
PM_{10} - particulate matter less than 10 microns in diameter; SO_2 – sulfur dioxide

Toxic Air Contaminants

Toxic air contaminants (TAC) are substances that have the potential to be emitted into the ambient air that have been determined to present some level of acute or chronic health risk (cancer or non-cancer) to the general public. These pollutants may be emitted in trace amounts from various types of sources, including combustion sources. There are almost 200 compounds that have been designated as TACs in California. The 10 TACs posing the greatest known health risk in California, based primarily on ambient air quality data, are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, formaldehyde, methylene chloride, para-dichlorobenzene, perchloroethylene, and diesel particulate matter.

Attainment Status

As shown in Table 3.3-2, Imperial County is currently designated as nonattainment for O_3 and PM_{10} under state standards. Under federal standards, the County is in marginal nonattainment for O_3, serious nonattainment for PM_{10}, and moderate nonattainment for $PM_{2.5}$. The area is currently in attainment or unclassified status for all other ambient air quality standards.

Table 3.3-2. Attainment Status of Imperial County

Pollutant	Federal Designation	State Designation
O_3 [1]	Marginal Nonattainment	Nonattainment
PM_{10}	Serious Nonattainment	Nonattainment
$PM_{2.5}$	Moderate Nonattainment – partial[2]	Attainment
CO	Unclassified/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Unclassified/Attainment	Attainment
H_2S	—	Unclassified
Sulfates	—	Attainment

Table 3.3-2. Attainment Status of Imperial County

Pollutant	Federal Designation	State Designation
Visibility Reducing Particles	—	Unclassified

Source: Appendix D of this EIR

Notes: = Not Identified/No Status

[1] The SSAB is marginal nonattainment for the 2015 ozone standard and moderate attainment for the 2008 standard.

[2] Only the Imperial Valley portion of the County is nonattainment for $PM_{2.5}$ NAAQS

CO – carbon monoxide; NO_2 – nitrogen dioxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; SO_2 – sulfur dioxide

Local Ambient Air Quality

Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County) and from Mexicali, Mexico substantially contribute to the non-attainment conditions in the SSAB.

The closest most representative air quality monitoring station to the project site is the Niland Monitoring Station located at 7711 English Road, Niland, CA 92257, approximately 4.5 miles southwest from the project site. However, the Niland Monitoring Station only monitors ozone and PM_{10}. Thus, monitoring data collected for $PM_{2.5}$ is from the Brawley Monitoring Station located at 220 Main Street, Brawley, CA 92227, approximately 20 miles south of the project site.

Table 3.3-3 shows pollutant levels, the state and federal standards, and the number of exceedances recorded at these stations from 2013 to 2017. As shown in Table 3.3-3, the state 1-hour O_3 standard was exceeded in 2013, and the 8-hour O_3 standard was exceeded from 2013-2015. The national 24-hour PM_{10} standard was exceeded from 2014-2017, and the state 24-hour $PM_{2.5}$ standard was exceeded from 2016-2017.

Table 3.3-3. Criteria Air Pollutants – Ambient Data Summary

Pollutant	Averaging Time	Standard	Maximum Concentration				
			2013	2014	2015	2016	2017
O_3	1-Hour	Maximum Concentration (ppm)	0.102	0.081	0.091	0.079	0.072
		Days > CAAQS (0.09 ppm)	1	0	0	0	0
	8-Hour	Maximum Concentration (ppm)[a]	0.083	0.075	0.074	0.066	0.061
		Days > NAAQS (0.07 ppm)	5	2	5	0	0

Table 3.3-3. Criteria Air Pollutants – Ambient Data Summary

Pollutant	Averaging Time	Standard	Maximum Concentration				
			2013	2014	2015	2016	2017
PM_{10}	24-Hour	Maximum concentration ($\mu g/m^3$) – National	144	173	250	226	345
		Maximum concentration ($\mu g/m^3$) – State	333	276	260	231	*
		Days > NAAQS (150 $\mu g/m^3$)	0	6	6	6	4
		Days > CAAQS (50 $\mu g/m^3$)	145	124	104	87	*
	Annual	State Annual Average (20 $\mu g/m^3$)	51.5	50.6	46.11	40.7	n/a
$PM_{2.5}$[c]	24-Hour	Maximum concentration ($\mu g/m^3$)	23.1	24.3	29.5	57.9	46.1
		Days > NAAQS (35 $\mu g/m^3$)	0	0	0	6	3
		National Std. 98th Percentile [b]	17	20	12	32	27
	Annual	National Annual (12.0 $\mu g/m^3$)	7.2	7.3	6.6	11.3	9.4

Source: Appendix D of this EIR

Notes:

Ambient data for CO, NO_2, SO_2 and airborne lead are not included in this table since the entire Imperial County is currently in compliance with state and federal standards for these pollutants.

*The estimated number of measured concentrations above national standards are shown in **bold**.*

[a] *The 8-hour ozone standard is attained when the fourth highest concentration in a year, averaged over 3 years, is less than or equal to the new national standard of 0.07 ppm. (Values listed in table represent midnight-to-midnight 24-hour averaged and exclude exceptional events.)*

[b] *Attainment condition for $PM_{2.5}$ is that the 3-year average of the 98th percentile of 24-hour concentrations at each monitor within an area must not exceed the standard.*

[c] *O_3 and PM_{10} data are from the Niland Monitoring Station. $PM_{2.5}$ concentrations are not measured at Niland station; the listed data are from the Brawley Monitoring Station.*

AAM – Annual Arithmetic Mean; CAAQS – California Ambient Air Quality Standards; $\mu g/m^3$ – micrograms per cubic meter; NAAQS – National Ambient Air Quality Standards; ppm – parts per million; n/a – sufficient data not available to determine the value; O_3 – ozone; PM_{10} - particulate matter less than 10 microns in diameter; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter

Sensitive Receptors

High concentrations of air pollutants pose health hazards for the general population, but particularly for the young, the elderly, and the sick. Typical health problems attributed to smog include respiratory ailments, eye and throat irritations, headaches, coughing, and chest discomfort. Certain land uses are considered to be more sensitive to the effects of air pollution. Schools, hospitals, residences, and other facilities where people congregate, especially children, the elderly and infirm, are considered particularly sensitive to air pollutants.

The project site is in a generally rural area and surrounded by relatively undisturbed desert lands. Agricultural fields are located to the west of the site. Sensitive receptors located within one mile of the project site consist of a few scattered rural homes west of the site. There are no sensitive receptors within 1,500 feet of the project site boundary.

3.3.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Clean Air Act

The Federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, is the primary federal law that governs air quality. The Federal CAA delegates primary responsibility for clean air to the U.S. EPA. The U.S. EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the U.S. EPA has established the National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. O_3, CO, NO_2, SO_2, Pb, PM_{10}, and $PM_{2.5}$ are the six criteria air pollutants. Ozone is a secondary pollutant, Nitrogen oxides (NOx) and volatile organic compounds (VOCs) are of particular interest as they are precursors to ozone formation. In addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision.

The Federal CAA requires EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table 3.3-4.

State

California Clean Air Act

The California Clean Air Act (CCAA) was adopted by the California Air Resources Board (CARB) in 1988. The CCAA is responsible for meeting the state requirements of the Federal CAA and for establishing the California Ambient Air Quality Standards (CAAQS). CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The CCAA, as amended in 1992, requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. As shown in Table 3.3-4, the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California State Implementation Plan

The CAA mandates that the state submit and implement a State Implementation Plan (SIP) for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP.

Table 3.3-4. Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
O_3	1-hour 8-hour	0.09 ppm 0.070 ppm	-- 0.070 ppm
PM_{10}	24-hour Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 --
$PM_{2.5}$	24-hour Mean	-- 12 µg/m^3	35 µg/m^3 12.0 µg/m^3
CO	1-hour 8-hour	20 ppm 9.0 ppm	35 ppm 9 ppm
NO_2	1-hour Mean	0.18 ppm 0.030 ppm	100 ppb 0.053 ppm
SO_2	1-hour 24-hour	0.25 ppm 0.04 ppm	75 ppb --
Pb	30-day Rolling 3-month	1.5 µg/m^3	-- 0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	No federal standard
Hydrogen sulfide	1-hour	0.03 ppm	
Vinyl chloride	24-hour	0.01 ppm	
Visibility-reducing particles	8-hour	Extinction coefficient of 0.23 per kilometer, visibility of 10 miles or more because of particles when relative humidity is less than 70 percent	

Source: Appendix D of this EIR

CO – carbon monoxide; mean – annual arithmetic mean; NO_2 – nitrogen dioxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; ppb – parts per billion; ppm - parts per million; $S0_2$ – sulfur dioxide; µg/m^3 – micrograms per cubic meter

Toxic Air Contaminants Regulation

TAC sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. The TACs that are relevant to the implementation include diesel particulate matter (DPM) and airborne asbestos.

In August 1998, ARB identified diesel particulate matter (DPM) emissions from diesel-fueled engines as a TAC. In September 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel fueled engines and vehicles. The goal of the plan is to reduce diesel PM_{10} (inhalable particulate matter) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.).

Regional

Imperial County Air Pollution Control District

The Imperial County Air Pollution Control District (ICAPCD) is the agency responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. ICAPCD is responsible for regulating stationary sources of air emissions in Imperial County. Stationary sources that have the potential to emit air pollutants into the ambient air are subject to the Rules and Regulations adopted by ICAPCD. ICAPCD is responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases. Monitoring of ambient air quality in Imperial County began in 1976. Since that time, monitoring has been performed by ICAPCD, CARB, and by private industry. There are six monitoring sites in Imperial County from Niland to Calexico. The ICAPCD has developed the following plans to achieve attainment for air quality ambient standards.

- **2017 Imperial County Plan for 2008 8-hour Ozone Standard.** Because of Imperial County's "moderate" nonattainment status for 2008 federal 8-hour O_3 standards, ICAPCD was required to develop an 8-hour Attainment Plan for Ozone (ICAPCD 2017b).
- **2009 Imperial County Plan for PM10**. Imperial Valley is classified as nonattainment for federal and state PM_{10} standards. As a result, ICAPCD was required to develop a PM_{10} Attainment Plan. The final plan was adopted by ICAPCD on August 11, 2009 (ICAPCD 2009).
- **2013 Imperial County Plan for 2006 24-hour PM2.5 for Moderate Nonattainment Area.** U.S. EPA designated Imperial County as nonattainment for the 2006 24-hr $PM_{2.5}$ standard, effective December 14, 2009. The 2013 $PM_{2.5}$ SIP demonstrates attainment of the 2006 $PM_{2.5}$ NAAQS "but-for" transport of international emissions from Mexicali, Mexico. The City of Calexico, California shares a border with the City of Mexicali. Effective July 1, 2014, the City of Calexico was designated nonattainment, while the rest of the SSAB was designated attainment (ICAPCD 2014).

Imperial County Air Pollution Control District Rules and Regulations

ICAPCD has the authority to adopt and enforce regulations dealing with controls for specific types of sources, emissions or hazardous air pollutants, and New Source Review. The ICAPCD Rules and Regulations are part of the SIP and are separately enforceable by the EPA.

Rule 106 – Abatement. The Board may, after notice and a hearing, issue, or provide for the issuance by the Hearing Board, of an order for abatement whenever the District finds that any person is in violation of the rules and regulations limiting the discharge of air contaminants into the atmosphere.

Rule 107 – Land Use. The purpose of this rule is to provide ICAPCD the duty to review and advise the appropriate planning authorities within the District on all new construction or changes in land use which the Air Pollution Control Officer believes could become a source of air pollution problems.

Rule 201 – Permits Required. The construction, installation, modification, replacement, and operation of any equipment which may emit or control Air Contaminants require ICAPCD permits.

Rule 207 – New and Modified Stationary Source Review. Establishes preconstruction review requirements for new and modified stationary sources to ensure the operations of equipment does not interfere with attainment or maintenance of ambient air quality standards.

Rule 208 – Permit to Operate. The ICAPCD would inspect and evaluate the facility to ensure the facility has been constructed or installed and will operate to comply with the provisions of the Authority to Construct permit and comply with all applicable laws, rules, standards, and guidelines.

Rule 310 – Operational Development Fee. THE purpose of this rule is to provide ICAPCD with a sound method for mitigating the emissions produced from the operation of new commercial and residential development projects throughout the County of Imperial and incorporated cities. All project proponents have the option to either provide: off-site mitigation, pay the operational development fee, or do a combination of both. This rule will assist ICAPCD in attaining the state and federal ambient air quality standards for PM_{10} and O_3.

Rule 401 – Opacity of Emissions. Sets limits for release or discharge of emissions into the atmosphere, other than uncombined water vapor, that are dark or darker in shade as designated as No.1 on the Ringelmann Chart or obscure an observer's view to a degree equal to or greater than smoke does as compared to No.1 on the Ringelmann Chart, for a period or aggregated period of more than three minutes in any hour.

Rule 403 – General Limitations on the Discharge of Air Contaminants. Rule 403 sets forth limitations on emissions of pollutants, including particulate matter, from individual sources.

Rule 407 – Nuisance. Rule 407 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Regulation VIII – Fugitive Dust Rules. Regulation VIII sets forth rules regarding the control of fugitive dust, including fugitive dust from construction activities. The regulation requires implementation of fugitive dust control measures to reduce emissions from earthmoving, unpaved roads, handling of bulk materials, and control of track-out/carry-out dust from active construction sites. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area
- Application of water or chemical stabilizers to disturbed soils
- Construction and maintenance of wind barriers

- Use of a track-out control device or wash down system at access points to paved roads.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size; however, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the Air District is required 10 days prior to the commencement of any construction activity. Furthermore, any use of engine(s) and/or generator(s) of 50 horsepower or greater may require a permit through ICAPCD.

Southern California Association of Governments - 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse," collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies.

On April 7, 2016, SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the NAAQS as set forth by the federal CAA. The following SCAG goal is applicable to the project:

- Protect the environment and health of our residents by improving air quality and encouraging active transportation.

As a solar generation facility, the proposed project would improve air quality by reducing the use of fossil fuels in energy production. Construction of the proposed project would not exceed any ICAPCD thresholds or result in significant impacts to air quality. Although no significant air quality impact would occur during construction, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. PM_{10} emissions associated with construction of the project would be reduced through compliance with ICAPCD Regulation VIII. Operation of the proposed project would not exceed any ICAPCD thresholds or result in significant impacts to air quality. Therefore, the proposed project would be consistent with this SCAG goal.

Imperial County General Plan

The Imperial County General Plan serves as the overall guiding policy for the County. The Conservation and Open Space Element includes objectives for helping the County achieve the goal of improving and maintaining the quality of air in the region. Table 3.3-5 summarizes the project's consistency with the applicable air quality goal and objectives from the Conservation and Open Space Element. While this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 3.3-5. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Conservation and Open Space Element		
Protection of Air Quality and Addressing Climate Change Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility. Therefore, the proposed Project is consistent with this goal.
Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-2). Therefore, the proposed project is consistent with this objective.
Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-2). Therefore, the proposed project is consistent with this objective.

Source: Imperial County General Plan, as amended

3.3.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to air quality, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to air quality are considered significant if any of the following occur:

- Conflict with or obstruct implementation of the applicable air quality plan
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O3 precursors)
- Expose sensitive receptors to substantial pollutant concentrations

- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Imperial County Air Pollution Control District

ICAPCD amended the Air Quality Handbook: Guidelines for the Implementation of CEQA on December 12, 2017. ICAPCD established significance thresholds based on the state CEQA thresholds. The handbook was used to determine the proper level of analysis for the project.

OPERATIONS

Air quality analyses should compare all operational emissions of a project, including motor vehicle, area source, and stationary or point sources to the thresholds in Table 3.3-6. Projects can be classified as either Tier 1 or Tier 2 projects, depending on the project's operational emissions. As shown in Table 3.3-6, Tier 1 projects are projects that emit less than 137 pounds per day of nitrogen oxide (NO_x) or reactive organic gases (ROGs); less than 150 pounds per day of PM_{10} or SO_x; or less than 550 pounds per day of CO or $PM_{2.5}$. Tier 1 projects are not required to develop a Comprehensive Air Quality Analysis Report or an EIR, and require the implementation of all feasible mitigation measures listed in Section 7.2 of the ICAPCD's *Air Quality Handbook*.

Alternatively, Tier 2 projects are projects that emit 137 pounds per day of NO_x or ROG or greater; 150 pounds per day of PM_{10} or SO_x or greater; or 550 pounds per day of CO or $PM_{2.5}$ or greater. Tier 2 projects are required to develop a Comprehensive Air Quality Analysis Report at a minimum, and are required to implement all standard mitigation measures as well as all feasible discretionary mitigation measures listed in Sections 7.2 and 7.3 of the ICAPCD's *Air Quality Handbook*.

Table 3.3-6. Imperial County Air Pollution Control District Significance Thresholds for Operation

Criteria Pollutant	Tier 1	Tier 2
NO_x and ROG	Less than 137 pounds per day	137 pounds per day and greater
PM_{10} and SO_x	Less than 150 pounds per day	150 pounds per day and greater
CO and $PM_{2.5}$	Less than 550 pounds per day	550 pounds per day and greater
Level of Significance	Less than Significant	Significant Impact

Source: ICAPCD 2017

CO – carbon monoxide; NO_x – nitrogen oxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; ROG - reactive organic gas; S0x – sulfur oxide

CONSTRUCTION

For construction projects, the Air Quality Handbook indicates that the significance threshold for NO_x is 100 pounds per day and for ROG is 75 pounds per day. As discussed in the ICAPCD's handbook, the approach to evaluating construction emissions should be qualitative rather than quantitative. In any case, regardless of the size of the project, the standard mitigation measures for construction equipment and fugitive PM_{10} must be implemented at all construction sites. The implementation of discretionary mitigation measures, as listed in Section 7.1 of the ICAPCD's Air Quality Handbook, apply to those construction sites that are 5 acres or more for non-residential developments or 10 acres or more in size for residential developments. The mitigation measures found in Section 7.1

of the ICAPCD's handbook are intended as a guide of feasible mitigation measures and are not intended to be an all-inclusive comprehensive list of all mitigation measures. Table 3.3-7 presents the construction emission thresholds that are identified by ICAPCD.

Table 3.3-7. Imperial County Air Pollution Control District Significance Thresholds for Construction Activities

Pollutant	Threshold
PM_{10}	150 pounds per day
ROG	75 pounds per day
NO_X	100 pounds per day
CO	550 pounds per day

Source: ICAPCD 2017

CO – carbon monoxide; NO_x – nitrogen oxide; PM_{10} - particulate matter less than 10 microns in diameter; ROG - reactive organic gas

Diesel Toxic Risk Thresholds

There are inherent uncertainties in risk assessment with regard to the identification of compounds as causing cancer or other health effects in humans, the cancer potencies and reference exposure levels of compounds, and the exposure that individuals receive. It is common practice to use conservative (health protective) assumptions with respect to uncertain parameters. The uncertainties and conservative assumptions must be considered when evaluating the results of risk assessments.

There is debate as to the appropriate levels of risk assigned to diesel particulates. The EPA has not yet declared diesel particulates as a toxic air contaminant. Using the CARB threshold, a risk concentration of one in one million (1:1,000,000) per micrograms per cubic meter ($\mu g/m^3$) of continuous 70-year exposure is considered less than significant.

Methodology

The analysis criteria for air quality impacts are based on the approach and methods discussed in the ICAPCD's Air Quality Handbook. The proposed project would result in both short-term and long-term emissions of air pollutants associated with construction and operations of the proposed project.

Construction emissions would include exhaust from the operation of conventional construction equipment, on-road emissions from employee vehicle trips and haul truck trips, fugitive dust as a result of grading and vehicle travel on paved and unpaved surfaces.

Operational emissions would include four vehicle trips per day of full-time employees to commute to and from the project site, to control the site operation and equipment and perform limited maintenance of equipment.

The handbook establishes aggregate emission calculations for determining the potential significance of a project. In the event that the emissions exceed the established thresholds (Table 3.3-6 and Table 3.3-7), air dispersion modeling may be conducted to assess whether the project results in an exceedance of an air quality standard. Emissions of criteria air pollutants were estimated using existing

conditions information, project construction details, and project operations information, as well as a combination of emission factors from the following sources.

- California Emissions Estimator Model (CalEEMod), version 2016.3.2
- Emission estimates and default data from sources such as USEPA AP-42 emission factors, CARB vehicle emission models, and studies from California agencies such as the California Energy Commission (CEC)
- Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) provided by the various California air districts to account for local requirements and conditions.

An air quality technical report was prepared by Stantec (Appendix D of this EIR). This report was used in the evaluation of construction and operational air quality impacts. Associated emissions calculations and assumptions are included in Appendix D of this EIR.

The air quality impacts are mainly attributable to construction phases of the project, including site preparation, facility installation, and gen-tie and site restoration. Operational impacts include inspection and maintenance operations, which includes washing of the solar panels.

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.3-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The air quality attainment plan (AQAP) for the SSAB, through the implementation of the AQMP (previously AQAP) and SIP for PM_{10}, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, meeting the land use designation set forth in the local General Plan, and comparing assumed emissions in the AQMP to proposed emissions.

The project must demonstrate compliance with all ICAPCD applicable rules and regulations, as well as local land use plans and population projections. As the project does not contain a residential component, the project would not result in an increase in the regional population. While the project would contribute to energy supply, which is one factor of population growth, the proposed project would not significantly increase employment or growth within the region. Moreover, development of the proposed project would increase the amount of renewable energy and help California meet its Renewable Portfolio Standard (RPS). As shown in Table 3.3-5, the project is consistent with the applicable air quality goal and objectives from the Conservation and Open Space Element of the General Plan. The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility.

Furthermore, the thresholds of significance, adopted by the air district (ICAPCD), determine compliance with the goals of the attainment plans in the region. As such, emissions below the ICAPCD regional mass daily emissions thresholds presented in Table 3.3-6 and Table 3.3-7 would not conflict

with or obstruct implementation of the applicable air quality plans. The following analysis is broken out by a discussion of potential impacts during construction of the project followed by a discussion of potential impacts during operation of the project.

Construction Emissions. Air emissions are generated during construction through activities. Emissions modeled include emissions associated with site preparation, grading, trenching, construction of roads, transmission lines, and installation of electrical infrastructure, substations and solar array modules. Diesel exhaust emissions are generated through the use of heavy equipment, such as dozers, loaders, scrapers, and vehicles, such as dump/haul trucks. During site clearing and grading, PM_{10} is released as a result of soil disturbance. Construction emissions vary from day-to-day depending on the number of workers, number, and types of active heavy-duty vehicles and equipment, level of activity, the prevailing meteorological conditions, and the length over which these activities occur.

The proposed project is anticipated to take approximately 6-9 months from the commencement of the construction process to complete. Construction of the proposed project would occur in multiple phases: (1) Site Preparation; (2) Facility Installation; and (3) Gen-Tie and Site Restoration. The construction emissions associated with each of these phases was based on the construction schedule. The construction emissions for each phase were calculated using the equipment list, the construction schedule, and EPA emission rates. Refer to Chapter 2, Project Description, for a discussion of construction equipment and construction workforce.

The total exhaust emissions generated within each of the construction phases are shown in Table 3.3-8. As shown in Table 3.3-8, the project's daily construction emissions would not exceed the ICAPCD thresholds for CO, ROG, NOx, and PM_{10}. Although no significant air quality impact would occur during construction, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Implementation of Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to further improve air quality and ensure that this potential impact would remain less than significant.

Operational Emissions. The proposed project requires minimal operations and maintenance activities and would not require presence of fulltime employees. However, for estimation of operational emissions, it is conservatively assumed that for day-to-day inspection and minor maintenance, some employees would commute to the site. The annual operations are assumed to be as follows:

- For site inspection and minor repairs, up to 4 one-way worker trips per day would be generated
- Routine maintenance activities would include panel washing, which is expected to occur four times annually over a total of 20 days. Panel washing activities are estimated to require additional daily trips of 4 workers and 6 haul trucks for transport of water during each event. Panel washing was assumed to require the use of two pressure washers operating 8 hours/day, and 5 days/week. The default model generated trip lengths were used for workers commute and haul trucks.

As shown in Table 3.3-9, the project's operational emissions would not exceed the ICAPCD thresholds for CO, ROG, NOx, PM_{10} and $PM_{2.5}$. Although no significant air quality impact would occur during operation, the project applicant is required to submit a Dust Suppression Management Plan for both construction and operations to reduce fugitive dust emissions. Implementation of Mitigation Measures AQ-3, AQ-4, and AQ-5 would ensure that this potential impact would remain less than significant.

As described above, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections and comparing assumed emissions in the AQMP to proposed emissions. Because the proposed project complies with local land use plans and population projections and would not exceed ICAPCD's regional mass daily emissions thresholds during construction and operations, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. This is considered a less than significant impact.

Table 3.3-8. Estimated Construction Emissions by Phase

Construction Phase Activity	Pollutant Emission (pounds per day)					
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$	SO_2
Site Preparation	4.10	~~39.6~~ 39.72	25.73	~~27.8~~ 63.87	7.9	0.06
Facility Installation	~~3.43.~~3.38	~~30.4~~ 30.38	25.03	~~27.6~~ 86.38	4.0	0.06
Gen-Tie, Site Restoration	~~2.0~~ 1.97	17.95	14.83	~~14.2~~ 43.36	2.2	0.03
Peak Daily Emission	4.10	~~39.6~~ 39.72	25.73	~~27.8~~ 86.38	7.9	0.06
ICAPCD Significance Thresholds	75	100	550	150	--	--
Exceed Threshold?	No	No	No	No	--	--

Source: Appendix D of this EIR

Notes:

-ICAPCD significance thresholds are based on maximum daily emissions.

-Emission were quantified using CalEEMod, version 2016.3.2 using "general light industry" land use category and modifying default values, where applicable.

-Model results and assumptions are provided in Appendix D of this EIR.

ICAPCD – Imperial County Air Pollution Control District; N/A – not applicable CO – carbon monoxide; NOx – nitrogen oxide; O3 – ozone; Pb – lead; PM2.5 – particulate matter less than 2.5 microns in diameter; PM10 - particulate matter less than 10 microns in diameter; ROG - reactive organic gas; S0x – sulfur dioxide

Table 3.3-9. Estimated Operational Emissions Summary

Operational Activities	Pollutant Emission (pounds per day)				
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Panel Washing	0.14	~~1.68~~ 1.61	~~0.86~~ 0.84	~~2.14~~ 23.48	~~0.26~~ 2.38
Normal Maintenance	~~0.02~~ 0.03	0.02	0.24	~~0.63~~ 9.38	~~0.07~~ 0.94
Peak Daily Emission (Total Operational)	~~0.16~~ 0.17	~~1.70~~ 1.64	~~1.09~~ 1.08	~~2.77~~ 32.86	~~0.33~~ 3.32
ICAPCD Significance Thresholds	137	137	550	150	550
Exceed Threshold?	No	No	No	No	No

Source: Appendix D of this EIR

Notes:

-ICAPCD significance thresholds are based on maximum daily emissions.

-Emission were quantified using CalEEMod, version 2016.3.2 using "user defined industrial" category and modifying default values using project-specific data/assumptions, where available.

-The data for PM_{10} and $PM_{2.5}$ emissions, include the standard mitigation for fugitive dust that is required for all projects in Imperial County.

-Model results and assumptions are provided in Appendix D of this EIR.

ICAPCD – Imperial County Air Pollution Control District; N/A – not applicable CO – carbon monoxide; NOx – nitrogen oxide; O3 – ozone; Pb – lead; PM2.5 – particulate matter less than 2.5 microns in diameter; PM10 - particulate matter less than 10 microns in diameter; ROG - reactive organic gas

Mitigation Measure(s)

AQ-1 **Construction Equipment.** Construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at each of the projects by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. The equipment list shall be submitted periodically to ICAPCD to perform a NOx analysis. ICAPCD shall utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds. The Planning and Development Services Department and ICAPCD shall verify implementation of this measure.

AQ-2 **Fugitive Dust Control.** Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. ICAPCD will verify implementation and compliance with these measures as part of the grading permit review/approval process.

ICAPCD Standard Measures for Fugitive Dust (PM_{10}) Control

- All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative ground cover.
- All on-site and offsite unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.
- All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line.
- The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants, and/or watering.

ICAPCD "Discretionary" Measures for Fugitive Dust (PM_{10}) Control

- Water exposed soil only in those areas where active grading and vehicle movement occurs with adequate frequency to control dust.
- Replace ground cover in disturbed areas as quickly as possible.
- Automatic sprinkler system installed on all soil piles.
- Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site.
- Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees.
- Implement a shuttle service to and from retail services and food establishments during lunch hours.

Standard Mitigation Measures for Construction Combustion Equipment

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Enhanced Mitigation Measures for Construction Equipment

To help provide a greater degree of reduction of PM emissions from construction combustion equipment, ICAPCD recommends the following enhanced measures.

- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g., rescheduling activities to reduce short-term impacts).

AQ-3 **Dust Suppression.** The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved entrance and parking area, and Fire Department access/emergency entry/exit points as approved by Fire/Office of Emergency Services [OES] Department).

AQ-4 **Dust Suppression Management Plan.** Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain ICAPCD and Imperial County Planning and Development Services Department (ICPDS) approval.

AQ-5 **Operational Dust Control Plan.** Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval.

ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed project, ICAPCD shall review the project to determine if Rule 310 fees are applicable to the project.

Significance After Mitigation

Although the proposed project would not exceed ICAPCD's significance thresholds, Mitigation Measures AQ-1 through AQ-5 would provide additional reduction strategies to further improve air quality and reductions in criteria pollutants (O_3 precursors) and ensure that this potential impact would remain less than significant impact. The proposed project would not conflict with implementation of applicable air quality plans, and impacts would be less than significant impact.

Impact 3.3-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O3 precursors)?

As shown in Table 3.3-2, the criteria pollutants for which the project area is in non-attainment under applicable air quality standards are O_3 and PM_{10}. The ICAPCD's application of thresholds of significance for criteria air pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As discussed above in Impact 3.3-1, the unmitigated emissions of criteria pollutants from project construction and operation activities are below the ICAPCD thresholds of significance. Furthermore, implementation of Mitigation Measures AQ-1 and AQ-2 will ensure compliance with ICAPCD rules and regulations and applicable air quality plan control measures. Therefore, the project's potential to result in a cumulatively considerable net increase of any criteria pollutant is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.3-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

The project site is in a generally rural area and surrounded by relatively undisturbed desert lands. Agricultural fields are located to the west of the site. Sensitive receptors located within one mile of the project site consist of a few scattered rural homes, there are no sensitive receptors within 1,500 feet of the project site boundary. Sensitive receptors located within one mile of the project site consist of a few scattered rural homes, the nearest of which is located approximately 2,000 feet southwest of the project site boundary.

Operation of the proposed project would not result in long-term emission sources that would adversely affect nearby sensitive receptors. Short-term construction activities (over a period of approximately 6 to 9 months) could result in temporary increases in pollutant concentrations, as provided in Table 3.3-8. However, emissions of all criteria pollutants are below the ICAPCD thresholds and would not have any significant impact. During construction and operations activities, the proposed project would implement dust control measures (Mitigation Measure AQ-1), including an operational dust control plan (Mitigation Measure AQ-5), to ensure receptors in the project vicinity would not be impacted by the project's long-term dust emissions during operations. The project's emissions of toxic air pollutants would be minimal and would consist of DPM (diesel particulate matter) emissions during construction activities. Employees commuting to the site during project construction or operation would use gasoline-fueled vehicles. As there would be minimal and temporary emissions of DPM during project construction, and the nearest sensitive receptor is approximately 2,000 feet southwest of the project site, implementation of the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.3-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

An odor impact depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

Among possible physical harms is inhalation of volatile organic compounds (VOC) that cause smell sensations in humans. These odors can affect human health in four primary ways:

- The VOCs can produce toxicological effects
- The odorant compounds can cause irritations in the eye, nose, and throat
- The VOCs can stimulate sensory nerves that can cause potentially harmful health effects
- The exposure to perceived unpleasant odors can stimulate negative cognitive and emotional responses based on previous experiences with such odors

Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and concentrated agricultural feeding operations and dairies. The construction and operation of a solar farm is not an odor producer.

The nearest sensitive receptor is scattered rural homes approximately 2,000 feet southwest of the project site. Odors from construction equipment would not affect these sensitive receptors, as no odors could affect them at such a distance. Operational activities of the project, including panel washing and routine maintenance, do not have the potential to generate odorous emissions that could affect a substantial number of people. No impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. No new transmission structures would be required to install the fiberoptic cable.

The installation of the fiberoptic cable would result in short-term construction emissions from the operation of construction equipment and vehicle travel on paved and unpaved surfaces. However, construction emissions are not anticipated to exceed ICAPCD thresholds because the installation of the fiberoptic cable would not require grading or the use of a substantial number of heavy construction equipment. Furthermore, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control

emissions of fugitive dust and combustion exhaust. The proposed fiber optic cable would result in a less than significant air quality impact.

3.3.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Similar to construction activities, decommissioning and restoration of the project site would generate air emissions. A summary of the daily construction emissions for the project is provided in Table 3.3-8. Solar equipment has a lifespan of approximately 20 to 25 years. The emissions from on- and off-road equipment during decommissioning are expected to be significantly lower than project construction emissions, as the overall activity would be anticipated to be lower than project construction activity. No significant air quality impacts are anticipated during decommissioning and restoration of the project site. However, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 through AQ-5 would provide additional reduction strategies to further improve air quality. Therefore, a less than significant impact is identified during decommissioning and site restoration of the project site.

Residual

The proposed project would not result in short-term significant air quality impacts during construction. Implementation of Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to reduce ROG, NOx, PM_{10}, and CO emissions during construction. Operation of the project, subject to the approval of a CUP, would be consistent with applicable federal, state, regional, and local plans and policies. Implementation of Mitigation Measures AQ-3, AQ-4, and AQ-5 would ensure that fugitive dust emissions would be reduced during construction and operations. The project would not result in any residual operational significant and unavoidable impacts with regards to air quality.

3.4 Biological Resources

This section identifies the biological resources that may be impacted by the proposed project. The following identifies the existing biological resources on the project site, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project.

The existing biological resources information for this section is summarized from the following technical reports:

- *Biological Resources Technical Report* (BRTR) prepared by Stantec *(*Appendix E of this EIR)
- *Flat-Tailed Horned Lizard Survey* prepared by Barrett's Biological Surveys (Appendix F of this EIR)
- *Preliminary Jurisdictional Waters/Wetlands Delineation Report* prepared by Stantec (Appendix G of this EIR)

3.4.1 Existing Conditions

The 122.5-acre Project footprint includes the solar field, substation, control room, gen-tie line, proposed groundwater well, main access road, emergency access roads, drainage, security fencing, parking, retention basins, and temporary staging area. The project site is located within the Imperial Valley approximately 2 miles northeast of Niland, 5 miles east of the Salton Sea, and 1.5 miles west of the active Chocolate Mountain Aerial Gunnery Range (Figure 3.4-1). The biological study area (BSA) includes the Project footprint plus a 300-foot buffer (Figure 3.4-1).

The BSA is situated within the Sonoran Desert region of southern California, which has an average annual temperature ranging from 42 degrees Fahrenheit in December to 107 degrees Fahrenheit in July and an average annual precipitation of 2.87 inches (US Climate Data 2018). The BSA slopes gently from northeast to southwest, with elevations ranging from approximately 20 feet above mean sea level (MSL) to approximately 30 feet below MSL. It is bordered largely by undeveloped land to the north, east, and south, with existing orchard occurring to the west and northwest. The unpaved Gas Line Road is roughly parallel to the eastern boundary of the BSA. The East Highline Canal, an IID water delivery conveyance passes through the extreme southwestern corner of the BSA (Figure 2-2).

According to the BRTR, four soil types were mapped within the BSA including Niland gravelly sand; Niland-Imperial complex, wet; Vint and Indio very fine sandy loams, wet and NOTCOM (No Digital Data Available) (United States Department of Agriculture [USDA] Natural Resources Conservation Service [NRCS] 2020a). The project site falls within the portion of the BSA for which no digital data is available. However, a 1903 soil survey, identifies the project site as occurring on Imperial gravelly loam. Of the above soils, only "Niland gravelly sand" appears on the NRCS hydric soils list (USDA NRCS 2020b).

Methodology

General Surveys

Prior to conducting field surveys, a literature search was conducted to identify special-status plant and animal species with potential to occur within 10 miles of the BSA. Sources reviewed included:

- CDFW California Natural Diversity Database (CDFW 2019a)

- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2018a)
- Special Animals List (CDFW 2018b)
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2018c)
- Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society [CNPS] 2019)
- California Sensitive Natural Communities (CDFW 2018d)
- Consortium of California Herbaria (CCH; 2020)

On January 30, 2019, Stantec conducted a habitat assessment and reconnaissance-level survey by vehicle and on foot with the primary goal of identifying habitat that could be capable of supporting special-status species and to document the presence/absence of special-status biological resources. During that site visit, biologists recorded preliminary vegetation type boundaries over recent aerial photograph base maps using the ESRIi® Collector for ArcGIS app on an Apple® iPad® coupled with a Bad Elf® GNSS Surveyor sub-meter external global positioning system unit. Mapping was further refined in the office using ArcGIS (version 10.4). Vegetation descriptions and names are based on Sawyer et al. (2009) and have been defined at least to the alliance level. Additional details regarding methodology are available in the BRTR for the Project (Appendix E of this EIR).

Habitat Assessments

SPECIAL-STATUS PLANTS

Each of the special-status plants species, subspecies, or variety identified from the literature search, including those listed as threatened or endangered under the Federal ESA or CESA, proposed for such listing, or with a California Rare Plant Rank (CRPR) of 1-4, was assessed for their potential to occur within the BSA based on the following criteria:

- **Present:** Species was observed within the BSA during recent botanical surveys or one or more populations have been acknowledged by CDFW, USFWS, or local experts.
- **High:** A documented recent record (within 10 years) exists of the species within the BSA or immediate vicinity (approximately 5 miles), the environmental conditions (including soil type) associated with presence of the species occur within the BSA, and the BSA is located within the known current distribution of the species.
- **Moderate:** A documented recent record (within 10 years) exists of the species within the BSA or immediate vicinity (approximately 5 miles), the environmental conditions associated with presence of the species are marginal and/or limited within the BSA, and the BSA is located within the known current distribution of the species.
- **Low:** A historical record (over 10 years) exists of the species within the BSA or general vicinity (approximately 10 miles) and the environmental conditions (including soil type) associated with presence of the species are marginal and/or limited within the BSA.
- **Not Likely to Occur:** The environmental conditions associated with presence of the species do not occur within the BSA.

SPECIAL-STATUS WILDLIFE

Each of the special-status wildlife species or subspecies identified from the literature search, including those listed as threatened or endangered under the Federal ESA or CESA, proposed for such listing, designated as Species of Special Concern or Fully Protected, and other species that have been identified by the USFWS, CDFW, or local jurisdictions as unique or rare, was assessed for their potential to occur within the BSA based on the following criteria:

- **Present:** Species (or sign) were observed in the BSA or in the same watershed (aquatic species only) during the most recent surveys, or a population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Suitable habitat (including soils) for the species occurs on site and a known occurrence has been reported within the BSA or adjacent areas (within 5 miles of the BSA) within the past 20 years; however, these species were not detected during the most recent surveys.
- **Moderate:** Suitable habitat (including soils) for the species occurs on site and a known regional record occurs within the database search, but not within 5 miles of the BSA or within the past 20 years; or a known occurrence occurs within 5 miles of the BSA and within the past 20 years and marginal or limited amounts of suitable habitat occur on site; or the species' range includes the BSA and suitable habitat exists within the BSA.
- **Low:** Limited suitable habitat for the species occurs on site, no known occurrences were produced from the database search, and the species' range includes the BSA.
- **Not Likely to Occur:** The environmental conditions associated with presence of the species do not occur within the BSA.

Focused Surveys for Flat-Tailed Horned Lizard

Per guidance provided by Magdalena Rodriguez, CDFW Senior Environmental Scientist (Specialist) from the Ontario, California field office, focused surveys for flat-tailed horned lizard were conducted for the entire 640-acre parcel on August 31, 2018. Surveys were conducted by Barrett's Biological Surveys in accordance with the survey protocol provided in the Flat-tailed Horned Lizard Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). Additional details regarding methodology are available in the BRTR for the Project (Appendix E of this EIR).

Jurisdictional Delineation

Stantec conducted a formal jurisdictional delineation on April 12, 2018. During that survey, the BSA was evaluated for potential wetlands and/or waters subject to federal and/or state jurisdiction pursuant to Sections 404 and 401 of the Clean Water Act. The jurisdictional assessment also included an investigation of areas that could be jurisdictional pursuant to Section 1600 et seq. of the California FGC. Prior to conducting the jurisdictional delineation, Stantec reviewed current and historic aerial imagery, topographic maps, soil maps, local and state hydric soils lists, and the National Wetlands Inventory (USFWS 2006) to evaluate the potential active channels and wetland features that occur within the BSA. During the field assessment, hydrologic features were mapped using the same data collection equipment described above for vegetation mapping. Field data were further refined in the office using a Geographic Information System (GIS) and total jurisdictional area for each regulatory jurisdiction calculated. Additional details regarding methodology are available in the Preliminary Jurisdictional Waters/Wetlands Delineation Report for the Project (Appendix G of this EIR).

Vegetation Communities and Land Cover Types

The following vegetation communities and land cover types were mapped within the BSA during field surveys conducted for the Project: creosote bush – white bursage scrub, arrow weed thickets, blue palo verde – ironwood woodland, tamarisk thickets, agriculture, disturbed, and developed land. These vegetation communities and land cover types within the BSA are depicted on Figure 3.4-1 and summarized in Table 3.4-1. A brief description of each vegetation community and land cover type is provided below the table.

Table 3.4-1. Vegetation Communities or Land Cover Types within the Biological Study Area

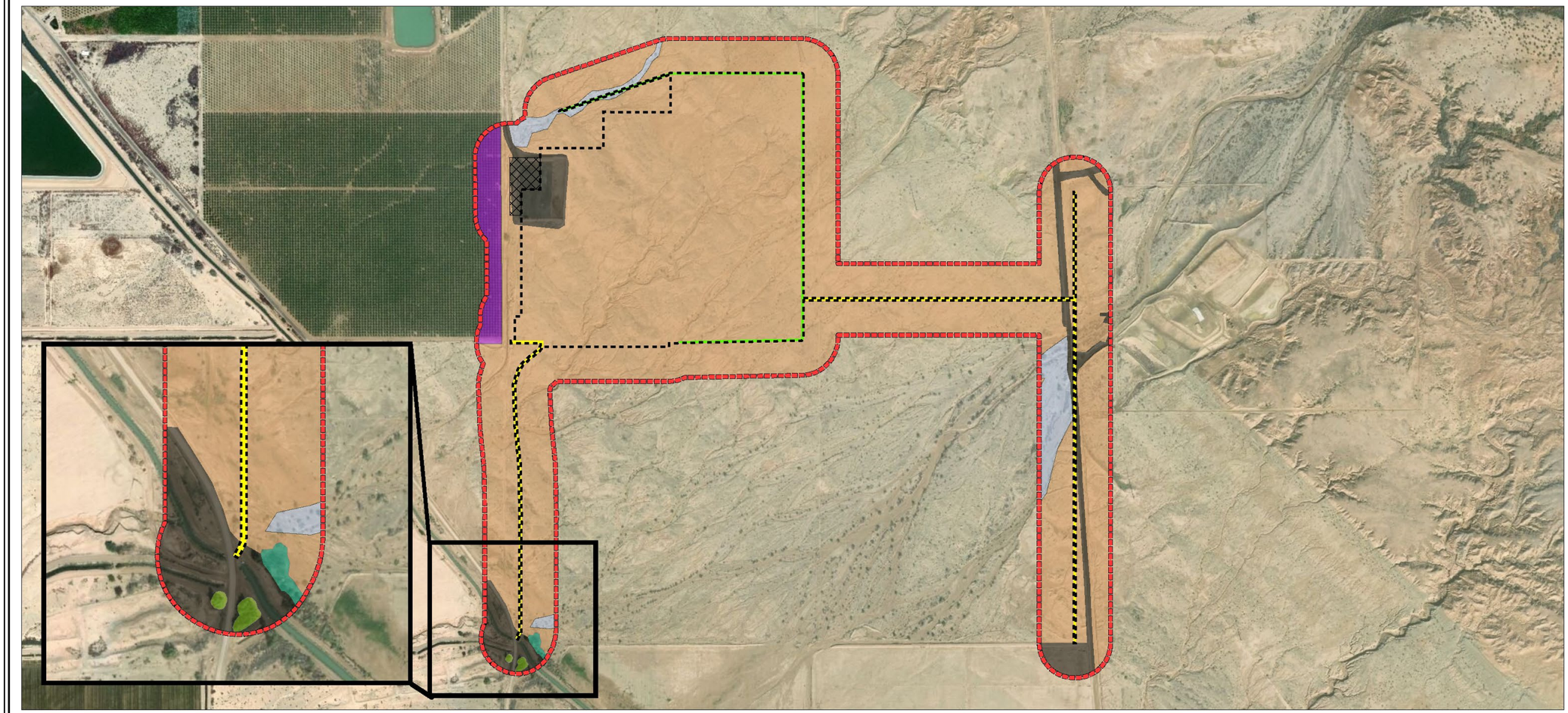
Vegetation Community or Land Cover Type	Acres within BSA
Creosote Bush – White Bursage Scrub	279.83
Arrow Weed Thickets	0.41
Blue Palo Verde – Ironwood Woodland	9.87
Tamarisk Thickets	0.29
Agriculture	7.92
Disturbed/Developed	21.80
Total	**320.12**

Source: Appendix E of this EIR

Creosote Bush – White Bursage Scrub

Creosote bush (*Larrea tridentata*) - white bursage (*Ambrosia dumosa*) scrub is the primary vegetation community throughout the BSA. Other shrub species present within this community include a number of saltbush species (*Atriplex* spp.) and desert thorn (*Lycium brevipes*). The sparse understory consists of native herbaceous species, including desert dandelion (*Malacothrix glabrata*) and desert plantain (*Plantago ovata*), and non-native grasses, primarily bromes (*Bromus* spp.) and Mediterranean grass (*Schismus barbatus*).

Figure 3.4-1. Vegetation Communities and Land Cover Types in the Biological Study Area



Source: Appendix E of this EIR

This page is intentionally blank.

Arrow Weed Thickets

Arrow weed (*Pluchea sericea*) thickets are the dominant vegetation along the small section of the East Highline Canal in the southwestern corner of the BSA. Other species that are less common in this vegetation community include cattails (*Typha* spp.), common reed (*Phragmites australis*), and saltcedar (*Tamarix ramosissima*).

Blue Palo Verde – Ironwood Woodland

This vegetation community occurs along the margins of some of the larger drainage features within the BSA, particularly in the southeast portion of the BSA. This vegetation community is dominated by ironwood (*Olneya tesota*) trees, though a few blue palo verde (*Parkinsonia florida*) and honey mesquite (*Prosopis glandulosa* var. *torreyana*) trees are interspersed throughout the community. The understory consists of white bursage, creosote bush, and brome grasses.

Tamarisk Thickets

This vegetation community is comprised of a monoculture of mature tamarisk trees up to approximately 40 feet tall with no appreciable understory. It occurs along the small section of the East Highline Canal in the southwestern corner of the BSA.

Agriculture

This land cover type was used to map areas of active agriculture. Within the BSA, areas mapped as Agriculture were limited to citrus farms located within and adjacent to the northwest corner of the BSA.

Disturbed/Developed

This land cover type was used to map portions of the BSA that are developed, primarily unpaved roadways. Where vegetated, these areas are generally composed of scarce occurrences of native and non-native herbaceous species common to the vegetation communities through which they pass.

Sensitive Natural Communities

Sensitive natural communities are defined by CDFW as, "…communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank, however only those that are of special concern (S1-S3 rank) are generally evaluated under CEQA.

Arrow weed thickets are listed with a rank of S3 and approximately 0.41 acre of this habitat type occurs within the BSA (Table 3.4-1).

Designated Critical Habitat

Based on the literature review conducted prior to field surveys, federally designated critical habitat that is nearest to the BSA is for the federally and state threatened desert tortoise (*Gopherus agassizii*), which occurs approximately 4 miles northeast of the BSA. Marginally suitable habitat for this species was present within and adjacent to the BSA.

Plant Species

Plants observed during the January 2019 reconnaissance-level survey were recorded to the taxonomic level feasible at the time of the survey given the plant's phenology; however, a focused, floristic-level survey was not conducted. The survey resulted in the documentation of 38 species of native and non-native plants within the BSA. A complete list of the plant species observed within the BSA is provided in the BRTR (Appendix E of this EIR).

Special-Status Plant Species

No special-status plant species were observed within the BSA during field surveys conducted in April and August 2018 and January 2019. A complete list of the special-status plant species with potential to occur in the vicinity of the project site is provided in the BRTR (Appendix E of this EIR). Table 3.4-2 identifies the special-status plant species that have a high to moderate potential to occur within the BSA.

Table 3.4-2. Known and Potential Occurrences of Special-Status Plant Species within the Biological Study Area

Species		Status	Habitat and Distribution	Blooming Period	Potential to Occur
Scientific Name	Common Name				
Astragalus insularis var. *harwoodii*	Harwood's milkvetch	2B.2	Sandy or gravelly. Desert dunes, Mojavean desert scrub. <500 m.	January - May	**High.** Suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is from 2005, approximately 3 miles to the northwest.
Astragalus sabulonum	gravel milk-vetch	2B.2	Usually sandy, sometimes gravelly. Flats, washes, and roadsides. Desert dunes, Mojavean desert scrub, Sonoran Desert scrub. 60 to 885 m.	February - June	**Moderate.** Suitable habitat occurs within the BSA and the nearest occurrence to the BSA is less than 1 mile to the southwest, although that occurrence is from 1906.
Cylindropuntia munzii	Munz's cholla	1B.3	Sonoran Desert scrub, (sandy or gravelly). 150-600 m.	May	**Moderate.** Suitable habitat occurs within the BSA. The nearest occurrences to the BSA are approximately 6 miles to the east and 6 miles to the northeast.

Source: Appendix E of this EIR

Status Codes – California Rare Plant Rank designation: 1B = Plants rare, threatened, or endangered in California and elsewhere; 2B = Plants rare, threatened, or endangered in California but more common elsewhere; .2 = Fairly threatened in California (20-80% occurrences threatened / moderate degree/immediacy of threat); .3 = Not very threatened in California (less than 20% of occurrences threatened / low degree/immediacy of threats or no current threats known)

Wildlife Species

Conditions in the BSA provide microhabitats suitable for a variety of terrestrial insects and other invertebrates. As in all ecological systems, invertebrates in the BSA play a crucial role in a number of biological processes, including serving as primary or secondary food sources for bird, reptilian, and mammalian predators and pollination vectors, and providing pest control, waste removal, and nutrient cycling. The hand raked and visually inspected areas of the BSA included a wide variety of common native and non-native invertebrates further detailed in the BRTR (Appendix E of this EIR).

Although the ephemeral washes within the BSA do not support fish, the East Highline Canal, which traverses the extreme southwestern corner of the BSA, is known to support fish species including channel catfish (*Ictalurus punctatus*), bass (*Micropterus* sp.), and sunfish (*Lepomis* sp.).

Amphibians all require aquatic habitat for all or part of their life cycle, which may only be present within the BSA (except for the East Highline Canal) for a short period time during and immediately after substantial rain events. Therefore, amphibians are not expected to occur throughout the vast majority of the BSA. Common species known to occur in the region associated with more permanent sources of water provided by irrigation infrastructure include the Rio Grande leopard frog (*Lithobates berlandieri*), American bullfrog (*L. catesbeianus*), and Great Plains toad (*Anaxyrus cognatus*).

No reptile species were observed in the BSA at the time of the reconnaissance survey. Although these species were not detected, suitable habitat for a number of common reptiles was observed within the BSA, including sidewinder (*Crotalus cerastes*), Sonoran gopher snake (*Pituophis catenifer affinis*), western whiptail (*Aspidoscelis tigris*), desert iguana (*Dipsosaurus dorsalis*), and zebra-tailed lizard (*Callisaurus draconoides*).

The most common bird species observed was sagebrush sparrow (*Artemisiospiza nevadensis*), although mourning dove (*Zenaida macroura*) and flyovers by turkey vulture (*Cathartes aura*) and American kestrel (*Falco sparverius)* were also noted. Suitable habitat for a number of common birds known to occur in the region were observed at the time of the survey, including greater roadrunner (*Geococcyx californianus*), ladder-backed woodpecker (*Dryobates scalaris*), Gambel's quail (*Callipepla gambelii*), and phainopepla (*Phainopepla nitens*), although these species were not detected in the BSA.

Signs of mammal species (tracks, scat, etc.) were detected, but no individuals were observed during the January 2019 reconnaissance survey. A number of common mammals are expected to occur within the BSA given the habitat conditions and species that are known to occur in the region. These include round-tailed ground squirrel (*Xerospermophilus tereticaudus*), desert cottontail (*Sylvilagus audubonii*), kangaroo rats (*Dipodomys* spp.), coyote (*Canis latrans*), kit fox (*Vulpes macrotis),* and raccoon (*Procyon lotor*).

Special-Status Wildlife Species

No special-status wildlife species or their diagnostic sign (i.e., scat, tracks, whitewash, pellets or burrows) were observed within or immediately adjacent to the BSA during field surveys conducted in April and August 2018 or January 2019. A complete list of the special-status wildlife species with potential to occur in the vicinity of the project site is provided in the BRTR (Appendix E of this EIR). Table 3.4-3 identifies the special-status wildlife species that have a high to moderate potential to occur within the BSA.

This page is intentionally blank.

Table 3.4-3. Known and Potential Occurrences of Special-Status Wildlife Species within the Biological Study Area

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	Common Name				
Amphibians					
Incilius alvarius	Sonoran Desert toad	SSC	Inhabits grasslands, arid desert low lands, mountain canyons w ith oaks and sycamores, and pinyon-oak-juniper mountain forests. Found near w ashes, river bottoms, springs, reservoirs, canals, irrigation ditches, stock ponds, streams, temporary pools, and sometimes aw ay from w ater sources.	Suitable habitat occurs w ithin the East Highline Canal in the extreme southw est corner of the BSA. The nearest recorded occurrence to the BSA is less than 1 mile to the southw est; how ever, this record is from 1916.	Moderate (in IID canal only)
Lithobates yavapaiensis	low land leopard frog	SSC	Found in streams, river side channels, springs, ponds, stock ponds in desert scrub, grassland, w oodland, and pinyon juniper habitats. Has been observed in canals, roadside ditches, and ponds in the Imperial Valley during the first quarter of this century, but the context of its occurrence in those areas is not w ell understood because that era w as a period of extensive habitat alteration. Low land leopard frogs may have simply been transitory in those areas.	Suitable habitat occurs w ithin the East Highline Canal in the extreme southw est corner of the BSA. The nearest recorded occurrence to the BSA is approximately 1.5 miles to the southw est; how ever, this record is from 1940.	Moderate (in IID canal only)
Scaphiopus couchii	Couch's spadefoot	SSC	Desert and arid regions of grassland, prairie, mesquite, creosote bush, thorn forest, and sandy w ashes. Temporary desert rain pools that last at least 7 days, w ith w ater temps >15°C and w ith subterranean refuge sites close by. An insect food base, especially termites, must be available.	Moderately suitable dispersal habitat occurs w ithin the BSA, but formation of temporary desert pools for breeding and gestation w ould occur infrequently. The nearest recorded occurrence to the BSA is approximately 3 miles to the w est.	Moderate
Reptiles					
Gopherus agassizii	desert tortoise	FT, ST	A desert species that needs firm ground in order to dig burrow s, or rocks to shelter among. In California, it is found in arid sandy or gravelly locations along riverbanks, w ashes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides.	Marginally suitable habitat occurs w ithin the BSA. The nearest recorded occurrence to the BSA is approximately 4.3 miles to the northeast.	Moderate

Table 3.4-3. Known and Potential Occurrences of Special-Status Wildlife Species within the Biological Study Area

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	Common Name				
Birds					
Athene cunicularia	burrowing owl	SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is less than 1 mile to the west.	High
Charadrius montanus	mountain plover (wintering)	SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	No suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 1.4 miles to the south.	Moderate (as a transient)
Falco columbarius	merlin (wintering)	WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Suitable foraging habitat occurs within the BSA, but no roosting habitat is present. The nearest recorded occurrence to the BSA is approximately 2 miles to the south.	Moderate (foraging only)
Lanius ludovicianus	loggerhead shrike (nesting)	SSC	Loggerhead shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Often seen along mowed roadsides with access to fence lines and utility poles.	Suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 7 miles to the southeast.	Moderate
Polioptila melanura	black-tailed gnatcatcher	WL	Live year-round in semiarid and desert thorn scrub at elevations up to 7,000 feet, often among creosote bush, salt bush, mesquite, palo verde, ocotillo, and spiny hackberry, as well as cacti such as saguaro, prickly pear, cholla, and barrel cactus. Along the lower Colorado River they may use willows as well as the invasive species tamarisk (salt cedar). They are well adapted to dry habitats and tend to be most common in areas with less than 8 inches of annual rainfall. They often live far away from streams and other bodies of water.	Marginally suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 6 miles to the southwest.	Moderate

Table 3.4-3. Known and Potential Occurrences of Special-Status Wildlife Species within the Biological Study Area

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	Common Name				
Setophaga petechia	yellow warbler (nesting)	SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in the Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets and in other riparian plants, including cottonwoods, sycamores, ash, and alders.	No suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 3 miles to the southwest.	Moderate (as a transient)
Toxostoma crissale	Crissal thrasher	SSC	Found in dense, low scrubby vegetation, such as desert and foothill scrub and riparian brush.	Suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 6 miles to the southwest.	Moderate
Toxostoma lecontei	Le Conte's thrasher	SSC	Desert scrub, mesquite, tall riparian brush and, locally, chaparral.	Suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 9 miles to the southwest.	Moderate
Mammals					
Eumops perotis californicus	western mastiff bat	SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Suitable foraging habitat occurs within the BSA, but no roosting habitat is present. The nearest recorded occurrence to the BSA is less than 1 mile to the northeast.	High (foraging only)
Nyctinomops femorosaccus	pocketed free-tailed bat	SSC	Variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, and rocky areas with high cliffs.	Marginally suitable foraging habitat occurs within the BSA, but no roosting habitat is present. The nearest recorded occurrence to the BSA is less than 1 mile to the northeast.	High (foraging only)

Table 3.4-3. Known and Potential Occurrences of Special-Status Wildlife Species within the Biological Study Area

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	Common Name				
Taxidea taxus	American badger	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Suitable habitat occurs within the BSA. The nearest recorded occurrence to the BSA is approximately 6 miles to the southwest.	Moderate

Source: Appendix E of this EIR
Federal Rankings: FE = Federally Endangered; FT = Federally Threatened
State Rankings: FP = Fully Protected; SE = State Endangered; ST = State Threatened; SSC = Species of Special Concern; WL = CDFW Watch List

Jurisdictional Waters

Two types of jurisdictional features were documented within the BSA: potential USACE non-wetland waters of the United States (19.15 acres) and CDFW state waters (25.83 acres). The BSA is bisected from northeast to southwest by numerous braided ephemeral drainage channels that contain surface water only during heavy storm events, draining the mountains to the northeast. These drainages ultimately flow into the Salton Sea, which is considered a Traditionally Navigable Water. As such, these drainage features would likely be considered federally and state jurisdictional. The extent of potential jurisdictional features within the BSA is depicted on Figure 3.4-2.

Wildlife Corridors and Habitat Connectivity

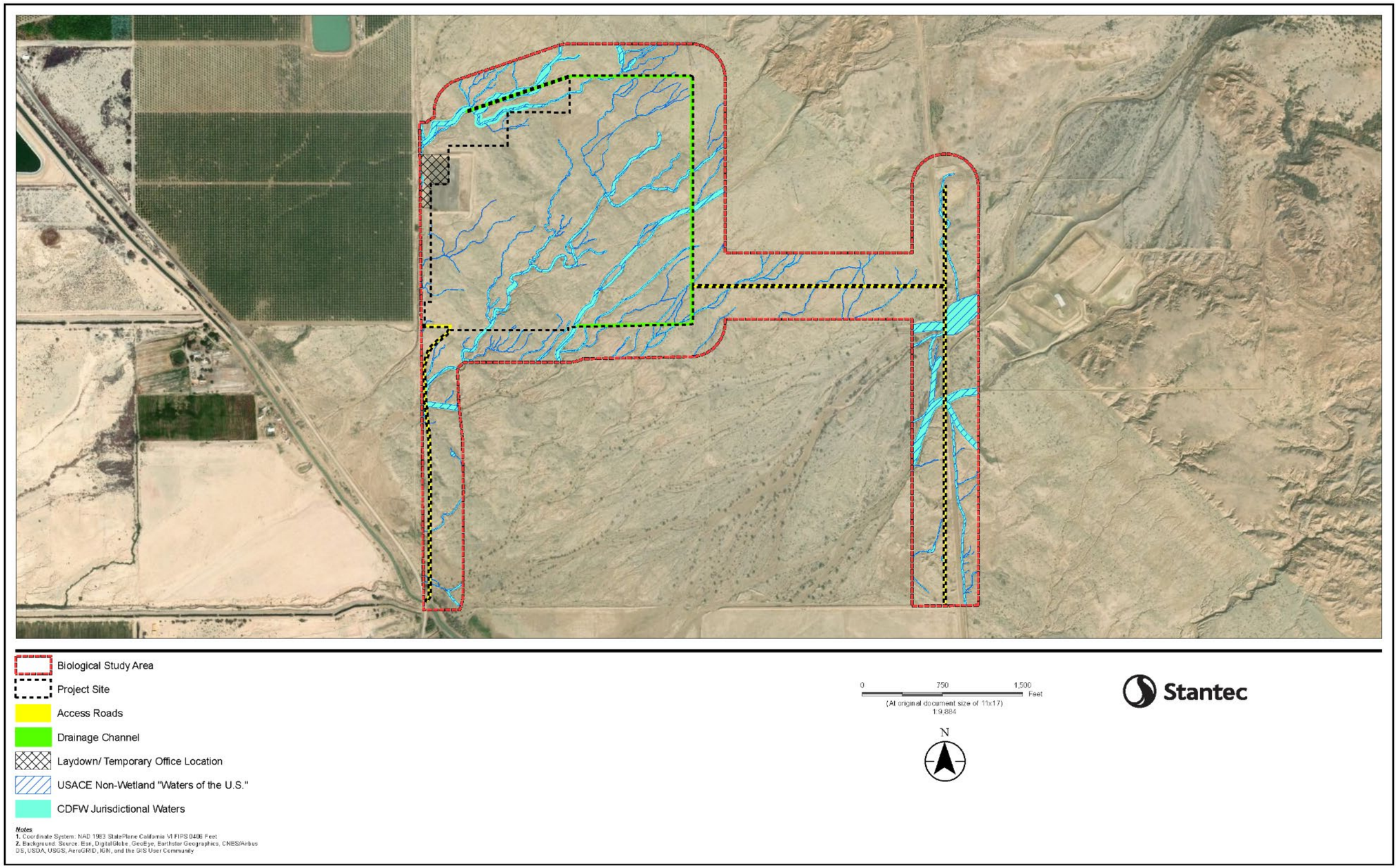
Linkages and corridors facilitate regional animal movement and are generally centered in or around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because they provide fresh water and wildlife can move easily through these areas. Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals.

The BSA is located at the edge of a vast area of generally undeveloped open space that facilitates unimpeded wildlife movement and provides “live-in habitat” for a variety of species. Due to the lack of significant development to the north, northeast, and southeast of the BSA, wildlife movement is generally unconstrained in these directions. Lands to the west, southwest, and south are more developed, generally with agriculture to the west and southwest separating the BSA from the Salton Sea and a solar power generating facility to the south. In addition, SR 111 runs to the southwest of the BSA and likely serves as some level of barrier to wildlife movement. These areas contain few structures that would significantly impact wildlife movement.

Within the BSA, the lack of structures or other significant development and the presence of relatively intact habitat and features such as desert washes and unpaved roads all facilitate wildlife passage. However, the BSA does not occur within any known wildlife movement corridor or habitat linkage (Penrod et al. 2001).

This page is intentionally blank.

Figure 3.4-2. Potentially Jurisdictional Waters



Source: Appendix E of this EIR

This page is intentionally blank.

3.4.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) requires all Federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and utilize public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA with other planning requirements and prepare appropriate NEPA documents to facilitate better environmental decision making. NEPA requires Federal agencies to review and comment on Federal agency environmental plans/documents when the agency has jurisdiction by law or special expertise with respect to any environmental impacts involved (42 USC 4321- 4327) (40 CFR 1500-1508).

Bald and Golden Eagle Protection Act of 1940

The Bald Eagle Protection Act of 1940 protects bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. 'Take' is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." 'Disturb' is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 *Federal Register* [FR] 31132; 50 CFR 22.3). All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this Act.

Federal Endangered Species Act

The Federal ESA protects federally listed threatened and endangered species and their habitats from unlawful take and ensures that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. USFWS regulations define harm to mean "an act which actually kills or injures wildlife" (50 CFR 17.3).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA.

Section 404 Permit (Clean Water Act)

The Clean Water Act establishes a program to regulate the discharge of dredge and fill material into waters of the U.S., including wetlands. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404b permit or authorization to use an existing USACE Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway.

Farmland Protection Policy Act

The Farmland Protection Policy Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It also stipulates that federal programs be compatible with state, local, and private efforts to protect farmland. The USDA NRCS is charged with oversight of the Farmland Protection Policy Act.

State

California Endangered Species Act

Provisions of CESA protect state-listed threatened and endangered species. CDFW regulates activities that may result in "take" of individuals ("take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under California FGC. Additionally, California FGC contains lists of vertebrate species designated as "fully protected" (California FGC §§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed.

In addition to state-listed species, CDFW has also produced a list of Species of Special Concern to serve as a "watch list." Species on this list are of limited distribution or the extent of their habitats has been reduced substantially such that threats to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

Birds of prey are protected in California under California FGC. Section 3503.5 states it is "unlawful to take, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

California Fish and Game Code Section1600 (as amended)

California Fish and Wildlife Code Section 1600 regulates activities that substantially divert or obstruct the natural flow of any river, stream, or lake or use materials from a streambed. This can include riparian habitat associated with watercourses.

California Fish and Game Codes 3503, 3503.5, and 3513

Under Sections 3503, 3503.5, and 3513 of the California FGC, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated by the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant

to FGC Section 3800 are prohibited. Additionally, the state further protects certain species of fish, mammals, amphibians and reptiles, birds, and mammals through CDFW's Fully Protected Animals which prohibits any take or possession of classified species.

Native Plant Protection Act (California Fish and Game Code Sections 1900-1913)

California's Native Plant Protection Act prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. This allows CDFW to salvage listed plant species that would otherwise be destroyed.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, all projects proposing to discharge waste that could affect waters of the State must file a waste discharge report with the appropriate regional board. The project falls under the jurisdiction of the Colorado River RWQCB.

California Environmental Quality Act

Title 14 CCR 15380 requires the identification of endangered, rare, or threatened species or subspecies of animals or plants that may be impacted by a project. If any such species are found, appropriate measures should be identified to avoid, minimize, or mitigate the potential effects of projects.

California Land Conservation Act

The Williamson Act (California Land Conservation Act, California Government Code, Section 51200 et eq.) is a statewide mechanism for the preservation of agricultural land and open space land. The Act provides a comprehensive method for local governments to protect farmland and open space by allowing lands in agricultural use to be placed under contract (agricultural preserve) between a local government and a land owner.

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space. The purpose of this element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. In addition, the purpose of this element is to promote the protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the state's natural resources. Table 3.4-4 analyzes the consistency of the project with specific policies contained in the Imperial County General Plan associated with biological resources.

Table 3.4-4. Project Consistency with General Plan Goals and Policies

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element - *Open Space and Recreation Conservation* **Policy No. 2 -** The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County. **Program:** Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.	Consistent	A biological assessment has been conducted at the project site to evaluate the proposed project's potential impacts on biological resources. No sensitive resources, including burrowing owl (California species of special concern) and flat-tailed horned lizard (BLM sensitive species) were identified within the BSA. Applicable agencies responsible for protecting plants and wildlife will be notified of the proposed project and provided an opportunity to comment on this EIR prior to the County's consideration of any approvals for the project. As described in Chapter 2, Project Description, implementation of the project would require the approval of CUPs, General Plan Amendment, Zone Change, and Variance by the County to allow for the construction and operation of the project.
Conservation of Environmental Resources for Future Generations **Goal 1 -** Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. **Objective 1.6 -** Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.	Consistent	A biological assessment has been conducted at the project site to evaluate the project's potential impacts on biological resources. No sensitive resources, including burrowing owl (California species of special concern) and flat-tailed horned lizard (BLM sensitive species), were identified within the BSA. With implementation of Mitigation Measures BIO-1 through BIO-5, the project would not result in residual significant and unmitigable impacts on biological resources.

Source: County of Imperial 1993
BLM=Bureau of Land Management; CDFW – California Department of Fish and Wildlife; EIR – environmental impact report; USFWS – U.S. Fish and Wildlife Service

The Agricultural Element of the County's General Plan serves as the primary policy statement for implementing development policies for agricultural land use in Imperial County. The goals, objectives, implementation programs, and policies found in the Agricultural Element provide direction for new development as well as government actions and programs. Imperial County's Goals and Objectives are intended to serve as long-term principles and policy statements to guide agricultural use decision-making and uphold the community's ideals.

Agriculture has been the single most important economic activity in the County throughout its history. The County recognizes the area as one of the finest agricultural areas in the world because of several environmental and cultural factors, including good soils, a year-round growing season, the availability of adequate water transported from the Colorado River, extensive areas committed to agricultural production, a gently sloping topography, and a climate that is well-suited for growing crops and raising livestock. The Agricultural Element in the County General Plan demonstrates the long-term commitment by the County to the full promotion, management, use, and development and protection

of agricultural production, while allowing logical, organized growth of urban areas (County of Imperial 2015).

Other Applicable Regulations, Plans and Standards

California Native Plant Society Rare Plant Program

As part of the CNPS Rare Plant Program, if a species has been identified as being of potential conservation concern, it is put through an extensive review process. Once a species has gone through the review process, information on all aspects of the species (e.g., listing status, habitat, distribution, threats, etc.) are entered into the online CNPS Inventory and given a CRPR. The CNPS Rare Plant Program currently recognizes more than 1,600 plant taxa (species, subspecies, and varieties) as rare or endangered in California.

3.4.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts on biological resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to biological resources are considered significant if any of the following occur:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS
- Have a substantial adverse effect on state or federally-protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, Project Description, to result in significant impacts on biological resources based on the criteria established in Appendix G of the CEQA Guidelines.

Impact Analysis – Solar Energy Facility and Gen-Tie Line

As indicated in Table 3.4-5 and depicted on Figure 3.4-1, construction of the proposed project would result in the direct, long-term (20-25 year) loss of 115.4 acres of native Creosote Bush – White Bursage Scrub and 0.2 acre of Blue Palo Verde – Ironwood Woodland. In addition to habitat removal, grading may also result in the direct, albeit incidental, mortality of ground-dwelling insects, reptiles, amphibians, and mammals, and nesting birds. Construction of the project may fill or modify washes that are regulated by USACE, CDFW, and/or RWQCB. Construction activities may also result in indirect impacts on adjacent biological resources by introducing water quality or air pollutants (e.g., sediment and dust), altering drainage patterns, introducing non-native species that may compete or prey upon native species, introducing night lighting, or causing edge effects that can disorient wildlife, make them more susceptible to predation, or increase the threat of wildfire.

Table 3.4-5. Vegetation Communities and Other Land Cover Types Impacted by the Project

Vegetation Community or Land Cover Type	Project Impacts (acres)
Creosote Bush – White Bursage Scrub	115.4
Arrow Weed Thickets	0.0
Blue Palo Verde – Ironwood Woodland	0.2
Tamarisk Thickets	0.0
Agriculture	0.0
Disturbed/Developed	7.1
Total	**122.7**

Source: Appendix E of this EIR

Project operations, although requiring minimal active management, have potential to directly or indirectly impact biological resources. Photovoltaic solar panels and the associated gen-tie line may be struck by birds as they fly through the site or may increase the risk of electrocution for larger birds such as raptors. Certain waterfowl species may be lured to the site and become trapped if they are not capable of taking flight from land. Vehicle travel on the site has potential to strike wildlife and introduce non-native plant species. Trash or carcass remains may increase the presence of scavengers, such as ravens and crows, which may prey on other species' eggs or juveniles. Panel washing may change drainage patterns or transport pollutants or sediment off-site where it may adversely impact downstream aquatic resources.

A more detailed analysis of these potential impacts is provided below.

Impact 3.4-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Special-Status Plant Species

FEDERALLY OR STATE-LISTED PLANT SPECIES

The proposed project site does not include suitable habitat and does not have potential to support any federally or state-listed plant species. Therefore, the project would not impact federally or state-listed plant species.

OTHER SPECIAL-STATUS PLANT SPECIES

Construction

According to the BRTR, three special-status plant species have potential to occur within the Project footprint, including Harwood's milkvetch, gravel milk-vetch, and Munz's cholla. Construction of the proposed project would result in the loss of 115.4 acres of potentially suitable creosote bush – white bursage scrub habitat for these three species, as indicated in Table 3.4-5.

Gravel milk-vetch and Munz's cholla actually have a low probability of occurring on the project site. Specifically, there are no recent records of gravel milk-vetch in Imperial County and the only records of this species in California within the past decade are from Inyo County (CCH 2020). Munz's cholla occurs at higher elevation in the Chocolate Mountains to the east of the project site (CCH 2020). Therefore, the proposed project is not anticipated to impact these two species.

The current geographic range of Harwood's milkvetch within California is relatively small. If the project site supported a substantial population of any of this species, direct loss could result in loss of local genetic variation that is important to long-term sustainability of the species. Potential indirect impacts on Harwood's milkvetch, if it occurs on site, could include the introduction of competitive invasive plant species, non-native pests, air and water quality pollutants, dust production, or drainage pattern alteration.

Operations

Project operations would result in minimal, if any, disturbance to potential habitat for special-status plant species adjacent to the project site. During ongoing operations, lighting would be minimized and personnel would only visit the site as-needed for maintenance. In addition, wastewater from panel washing would be directed away from undeveloped lands. Therefore, project operations are not expected to result in impacts on special-status plant species, if they are present in the vicinity of the project site.

Conclusion

Construction and operation of the proposed project could result in significant impacts on Harwood's milkvetch, if present. Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce potential impacts to less than significant.

Special-Status Wildlife Species

FEDERALLY OR STATE-LISTED WILDLIFE SPECIES

The proposed project site occurs on the western margin of the known range of the federally and state-threatened desert tortoise and supports marginally suitable habitat for the species. Although the Coachella Canal, located approximately 0.8 mile to the northeast of the project site, provides a substantial barrier to tortoise movement, it is porous in that there are periodic gaps in the above ground canal for vehicle traffic and drainage.

Construction

If desert tortoise is present on or in the vicinity of the project site, grading and vehicular traffic could crush and kill individual tortoises or tortoises could become trapped in open trenches and may be killed due to an increased exposure to predators or extreme weather. Indirect impacts from construction would include the long-term loss of 115.4 acres of habitat and could include an increase in desert tortoise predators such as ravens and crows drawn to the project site by ground disturbing activities that expose wildlife and produce carcasses and waste for scavenging. Due to its threatened status, any direct or indirect impacts on this species resulting from construction would be considered significant.

Operation

Although vehicular traffic will be minimal because maintenance requirements are minimal, the risk of a vehicle striking a desert tortoise on site or an access road to the site remains if desert tortoise is present. Also, security fencing could pose a trapping hazard. Additionally, should the solar panels, gen-tie line, or auxiliary facilities pose a strike hazard for birds or bats, the resulting carcasses could lead to an increase in scavenger density. As described above, those scavengers pose a threat to desert tortoise. As indicated above, due to its threatened status, any direct or indirect impacts on this species resulting from operation would be considered significant.

Conclusion

Construction and operation of the proposed project would result in a significant impact on the federally and state-listed threatened desert tortoise, if present.

Implementation of Mitigation Measures BIO-2, BIO-3, BIO-4, and BIO-5 would reduce potential impacts on desert tortoise, if present, to a level less than significant.

OTHER SPECIAL-STATUS WILDLIFE SPECIES

As indicated in Table 3.4-5, suitable habitat for two Species of Special Concern, Sonoran desert toad and lowland leopard frog, is limited to the IID canal, which will not be impacted by the project and are not discussed further in this analysis. Two Species of Special Concern, mountain plover and yellow warbler, have potential as transient visitors only. These species do not rely on the project site for breeding, dispersal or foraging. Therefore, the proposed project would not result in a significant impact on these two species and they are not further addressed in this analysis.

Six other special-status wildlife species have potential to occupy the proposed project site, including five CDFW Species of Special Concern: burrowing owl, loggerhead shrike, Crissal thrasher, Le Conte's thrasher and American badger, and one CDFW Watch List species: black-tailed gnatcatcher. Four other special-status wildlife species have potential to forage on or disperse through the proposed

project site, including three Species of Special Concern: Couch's spadefoot, western mastiff bat, and pocketed free-tailed bat, and one Watch List species: merlin.

Special-Status Amphibian Species

As previously indicated, Couch's spadefoot would use the site only for dispersal. The project site is located at the extreme western margin of its range. Given that the site is also abutted by agriculture to the west, the project site is not located within a significant dispersal corridor. It also does not prevent movement to the east since it abuts undeveloped lands with suitable Couch's spadefoot habitat to the north, east and south. Therefore, the construction and operation of the proposed project does not impact Couch's spadefoot.

Special-Status Bird Species

Burrowing Owl

Burrowing owls were not present on the project site during the biological surveys. As this project is not within the IID Service District, no IID canals or drains (which are very attractive to burrowing owls) are present within the project site. However, the nearest recorded occurrence to the BSA is less than 1 mile to the west and suitable nesting and foraging habitat is present within the proposed project site. Therefore, burrowing owl could be present at the start of project construction.

Construction

If burrowing owls are present within or adjacent to the proposed project site, project construction could result in take, as defined by California FGC, if burrowing owl were trapped in burrows during grading activities or struck by vehicles. Additionally, take of an active breeding burrow complex would violate the MBTA and California FGC Sections 3503, 3503.5, 3513 and 3800. Indirect impacts from construction activities, although not meeting the definition of take, could include changes in prey diversity and abundance, changes in visibility due to dust that could affect foraging effectiveness, increases in noise levels disrupting communication between individuals, an increased risk of wildfire and an increase in the density of potential predators due to ground disturbance and food waste at the project site. However, the conversion of the project site to a solar field does not preclude burrowing owl use.

Following construction, burrowing owls are expected to persist beneath the solar panels, along the perimeter of the solar fields along canals, drains, or roads, which provide burrowing and foraging opportunities. The owls are also expected to utilize the solar field perimeter fence as a foraging perch. As a result, the proposed project would not result in significant impacts due to loss of foraging habitat. However, direct take of individual burrowing owl would be considered a significant impact. Implementation of Mitigation Measures BIO-2, BIO-3 and BIO-6 would eliminate the potential for take of burrowing owl during construction and would reduce potential impacts on this species from construction to less than significant.

Operations

As indicated above, after the solar fields are constructed, burrowing owls, if present, would be expected to continue utilizing the project site. While searching for prey, burrowing owls characteristically hover for periods of several minutes at heights of 8 to 15 meters. During the night, their foraging behavior changes to suit the reduced visibility of small food items; they may pursue arthropods on the ground by walking and running. They may also glide about 1 meter above the ground

when foraging for rodents. Given the static and highly visible nature of the solar panels and transmission towers, burrowing owls are not expected to collide with the structures during daytime foraging activities when they may be hovering or flying in search for prey. No impacts on burrowing owl are anticipated as a result of collision with facility structures, and no mitigation would be required. However, vehicles driving on access roads during operations and maintenance (O&M) activities within the solar fields and along the transmission line where burrowing owls are foraging may result in direct mortality of burrowing owl. Additionally, food waste, if not properly disposed of, could attract predators, further increasing predation risk if burrowing owl is present on or adjacent to the site. These impacts would be considered significant and mitigation would be required. Mitigation Measure BIO-5 would reduce potential impacts on burrowing owls from O&M activities to a level less than significant.

Other Special-Status Bird Species

Construction

As indicated above loggerhead shrike, Crissal thrasher, Le Conte's thrasher and black-tailed gnatcatcher have potential to reside on the project site while merlin has potential to forage on-site. These species are all relatively wide-ranging and utilize a wide range of habitats (Fink et al. 2020, United States Geological Survey [USGS] 2020). Specifically, merlin is the widest ranging species with its non-breeding range including most of the U.S., Mexico, Central America and a portion of South America. Loggerhead shrike ranges throughout much of North America and Mexico and utilizes agricultural and pasturelands in addition to native habitats. Crissal thrasher and black-tailed gnatcatcher exhibit similar ranges throughout the southwest and northern Mexico while Le Conte's thrasher exhibits the narrowest range generally including inland portions of southern California, southern Nevada, western Arizona and northern Mexico and Baja California but still encompassing over 42 million acres of suitable habitat (USGS 2020). The loss of 115.6 acres of potential live-in or foraging habitat (less than 0.0003-percent of the available habitat even for Le Conte's thrasher with the narrowest range) would have a negligible impact on sustainability of the species. Similarly, indirect impacts to a small number of individuals of these special-status species from noise, dust, night lighting or the attraction of predators and scavengers to the project site during construction would have a negligible impact on sustainability of the species. However, take of active avian nests (including loggerhead shrike, Crissal thrasher, Le Conte's thrasher and black-tailed gnatcatcher, should they reside on the project site) during clearing and grubbing would be considered adverse and significant. Implementation of Mitigation Measure BIO-7 would reduce impacts to less than significant.

Operation

All electrical components on the project site shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution. Additionally, based on the Avian Powerline Interaction Committee's (APLIC) 1996 report on power line electrocution in the U.S., avian electrocution risk is highest along distribution lines (generally less than 69 kV) where the distance between energized phases, ground wires, transformers, and other components of an electrical distribution system are less than the length or skin-to-skin contact distance of birds. The distance between energized components along transmission lines (>69 kV) is generally insufficient to present avian electrocution risk. Therefore, no impact to avian or bat species is anticipated to occur due to electrocution along the proposed gen-tie line.

However, a potentially significant impact may occur to avian mortality during operations should avian species protected by California FGC collide with solar panels or any ancillary facilities such as the

Gen-tie line. These impacts would be considered significant. Implementation of Mitigation Measures BIO-5 and BIO-8 would reduce impacts to a level less than significant.

Special-Status Mammal Species

Also as indicated above American badger has potential to reside on the project site while western mastiff bat and pocketed free-tailed bat have potential to forage on-site. These species are all relatively wide-ranging and utilize a wide range of habitats (USGS 2020, Pierson and Rainey 1998). Specifically, American Badger occupies the western half of the U.S. Western mastiff bat and pocketed free-tailed bat exhibit similar ranges including the southwest U.S. and northern Mexico. As for the special-status species analyzed above, the loss of 115.6 acres of potential live-in or foraging habitat (less than 0.0003-percent of the available habitat even for Le Conte's thrasher with the narrowest range) would have a negligible impact on sustainability of the species. This would not necessarily be true if the project site supported a maternity roost habitat. However, as previously indicated, the project site does not support roosting habitat. Similarly to the special-status birds above, indirect impacts to a small number of individuals of these special-status species from noise, dust, night lighting or the attraction of predators and scavengers to the project site during construction would have a negligible impact on sustainability of the species. However, take of American Badger if residing on the project site and trapped in a burrow during grading would be considered significant. Implementation of Mitigation Measure BIO-9 will reduce potential impacts to less than significant.

Operation

All electrical components on the project site shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution. The distance between energized components along transmission lines (>69 kV) is also presumed to generally insufficient to present bat electrocution risk. Therefore, no impact to bat species is anticipated to occur due to electrocution along the proposed gen-tie line.

However, a potentially significant impact may occur to bat mortality during operations should bat species collide with solar panels or any ancillary facilities such as the Gen-tie line. Implementation of Mitigation Measures BIO-5 and BIO-8 would reduce impacts to a level less than significant.

Mitigation Measure(s)

BIO-1 **Pre-Construction Plant Survey.** Prior to initiating ground disturbance, a focused survey for Harwood's milkvetch shall occur during its blooming period. A reference population shall be identified and confirmed to be blooming at the time that surveys are conducted on the project site.

Should Harwood's milkvetch be present on site, project design will be evaluated to determine if modifications can be made to avoid at least 90-percent of the observed individuals or compensatory mitigation shall be provided through off-site preservation of an equivalent population.

BIO-2 **General Impact Avoidance and Minimization Measures.** The following measures will be applicable throughout the life of the project:

- To reduce the potential indirect impact on migratory birds, bats and raptors, the project will comply with the APLIC 2012 Guidelines for overhead utilities, as appropriate, to minimize avian collisions with transmission facilities (APLIC 2012)

- All electrical components on the project site shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution.
- The Project proponent shall designate a Project Biologist who shall be responsible for overseeing compliance with protective measures for the biological resources during vegetation clearing and work activities within and adjacent to areas of native habitat. The Project Biologist will be familiar with the local habitats, plants, and wildlife. The Project Biologist will also maintain communications with the Contractor to ensure that issues relating to biological resources are appropriately and lawfully managed and monitor construction. The Project Biologist will monitor activities within construction areas during critical times, such as vegetation removal, the implementation of Best Management Practices (BMP), and installation of security fencing to protect native species. The Project Biologist will ensure that all wildlife and regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed.
- The boundaries of all areas to be newly disturbed (including solar facility areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) will be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment will be confined to the flagged areas.
- No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight. Any uncovered pitfalls will be excavated to 3:1 slopes at the ends to provide wildlife escape ramps. Alternatively, man-made ramps may be installed. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles.
- To avoid wildlife entrapment (including birds), all pipes or other construction materials or supplies will be covered or capped in storage or laydown area, and at the end of each work day in construction, quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.
- No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the project site, on off-site project facilities and activities, or in support of any other project activities.
- Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater within retention basins will be removed to avoid attracting wildlife to the active work areas.
- To minimize the likelihood for vehicle strikes on wildlife, speed limits will not exceed 15 miles per hour when driving on access roads. All vehicles required for O&M must remain on designated access/maintenance roads.

- Avoid night-time construction lighting or if nighttime construction cannot be avoided use shielded directional lighting pointed downward and towards the interior of the project site, thereby avoiding illumination of adjacent natural areas and the night sky.
- All construction equipment used for the Project will be equipped with properly operating and maintained mufflers.
- Hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand-held equipment, will be stored within secondary containment when within 50 feet of open water to the fullest extent practicable. Secondary containment will consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials secondary containment unit shall be utilized by the Contractor.
- The Contractor will be required to conduct vehicle refueling in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. Any fuel containers, repair materials, including creosote-treated wood, and/or stockpiled material that is left on site overnight, will be secured in secondary containment within the work area and staging/assembly area and covered with plastic at the end of each work day.
- In the event that no activity is to occur in the work area for the weekend and/or a period of time greater than 48 hours, the Contractor will ensure that all portable fuel containers are removed from the project site.
- All equipment will be maintained in accordance with manufacturer's recommendations and requirements.
- Equipment and containers will be inspected daily for leaks. Should a leak occur, contaminated soils and surfaces will be cleaned up and disposed of following the guidelines identified in the Stormwater Pollution Prevention Plan or equivalent, Materials Safety Data Sheets, and any specifications required by other permits issued for the project.
- The Contractor will utilize off-site maintenance and repair shops as much as possible for maintenance and repair of equipment.
- If maintenance of equipment must occur onsite, fuel/oil pans, absorbent pads, or appropriate containment will be used to capture spills/leaks within all areas. Where feasible, maintenance of equipment will occur in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species.
- Appropriate BMPs will be used by the Contractor to control erosion and sedimentation and to capture debris and contaminants from bridge construction to prevent their deposition in waterways. No sediment or debris will be allowed to enter the creek or other drainages. All debris from construction of the bridge will be contained so that it does not fall into channel. Appropriate BMPs will be used by the Contractor during construction to limit the spread of resuspended sediment and to contain debris.

- Erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.
- Firearms, open fires, and pets would be prohibited at all work locations and access roads. Smoking would be prohibited along the Project alignment.
- Cross-country vehicle and equipment use outside of approved designated work areas and access roads shall be prohibited to prevent unnecessary ground and vegetation disturbance.
- Any injured or dead wildlife encountered during project-related activities shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the Project Biologist shall notify the County, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.
- Stockpiling of material will be allowed only within established work areas.
- Actively manage the spread of noxious weeds (See Mitigation Measure BIO-5)
- The ground beneath all parked equipment and vehicles shall be inspected for wildlife before moving.

BIO-3 **Worker Environmental Awareness Program.** Prior to project construction, a Worker Environmental Awareness Program shall be developed and implemented by a qualified biologist, and shall be available in both English and Spanish. Handouts summarizing potential impacts to special-status biological resources and the potential penalties for impacts to these resources shall be provided to all construction personnel. At a minimum, the education program shall including the following:

- the purpose for resource protection;
- a description of special status species including representative photographs and general ecology;
- occurrences of USACE, RWQCB, and CDFW regulated features in the Project study area;
- regulatory framework for biological resource protection and consequences if violated
- sensitivity of the species to human activities;
- avoidance and minimization measures designed to reduce the impacts to special-status biological resources
- environmentally responsible construction practices;
- reporting requirements;,
- the protocol to resolve conflicts that may arise at any time during the construction process; and

- workers sign acknowledgement form indicating that the Environmental Awareness Training and Education Program that has been completed and would be kept on record

BIO-4 **Desert Tortoise Avoidance and Minimization** A qualified biologist shall conduct focused presence/absence surveys for Desert Tortoise for 100-percent of the project footprint pursuant to the October 19, 2019 Version of the USFWS Desert Tortoise Survey Protocol. If no live desert tortoise or sign of active desert tortoise are detected, no further avoidance and minimization is required.

If live desert tortoise or sign of active desert tortoise are detected, the project proponent shall initiate consultation with USFWS and CDFW to obtain the necessary federal and state ESA authorizations and the following avoidance, minimization and compensatory mitigation measures will be implemented:

- Permanent tortoise-proof fencing shall be along the perimeter of the project site. Fencing shall be installed, inspected, and maintained according to specifications in the current USFWS *Desert Tortoise (Mojave Population) Field Manual (Gopherus agassizii)*. An authorized desert tortoise biologist shall conduct pre-construction clearance surveys for the project site no more than 14-days prior to the initiation of fence installation. All potentially active burrows shall be identified for hand excavation. Pre-construction clearance surveys shall be repeated within the fenced impact area after fence installation is complete. If desert tortoise are observed they shall be relocated from within the work area to outside the fenced area by a permitted biologist.
- The authorized biologist shall conduct desert tortoise pre-construction clearance surveys along all existing and new dirt access road alignments, and the Gen-tie alignment before any ground disturbing activities are initiated and prior to the start of construction activities each day during ground-disturbing activities and weekly thereafter. Relocate desert tortoises as necessary. Any handling of special-status species must be approved by the appropriate Federal and State agencies and be done in accordance with species-specific handling protocols.
- Where burrows would be unavoidably destroyed, they would be excavated carefully using hand tools under the supervision of the authorized biologists with demonstrated prior experience with this species.
- Inspect construction pipes, culverts, or similar structures: (a) with a diameter greater than 3 inches, (b) stored for one or more nights, (c) less than 8 inches aboveground and (d) within desert tortoise habitat, before the materials are moved, buried, or capped.
- Incorporate Raven Management into the Pest Control Plan (See BIO-5)
- Inspect the ground under vehicles and equipment for the presence of desert tortoise any time a vehicle or construction equipment is parked in desert tortoise habitat. If a desert tortoise is seen, it may move on its own. If it does not move within 15 minutes, an authorized biologist or biological monitor under the direction of the authorized biologist may remove and relocate the animal to a safe location.

- All culverts for access roads or other barriers will be designed to allow unrestricted access by desert tortoises and will be large enough that desert tortoises are unlikely to use them as shelter sites (e.g., 36 inches in diameter or larger). Desert tortoise exclusion fencing may be utilized to direct tortoise use of culverts and other passages. If possible, pipes and culverts greater than 3 inches in diameter would be stored on dunnage to prevent wildlife from taking refuge in them, to the extent feasible.
- To fully mitigate for habitat loss and potential take of the Mojave desert tortoise, the Applicant will provide compensatory mitigation at a ratio of 1:1 ~~3:1~~. For the purposes of this measure, the project site (i.e., footprint) means all Project areas with new direct ground disturbance during construction and operation of the Project. This includes all lands directly disturbed that will no longer provide viable long-term habitat for the Mojave desert tortoise, such as the solar field, substation and new access roads. Areas within the gen-tie line corridor where no ground disturbance will occur are not included in the area to be mitigated through compensation. Compensatory mitigation could include agency-approved payment of an in-lieu fee; acquiring mitigation land or conservation easements; restoration or habitat enhancement activities on preservation lands; or a combination of the three.

BIO-5 **Prepare and Implement an Operation and Maintenance Worker Education Plan.** An Operation and Maintenance Worker Education Plan shall be prepared to advise personnel on general operations measures. The Worker Education Plan shall be submitted to the County of Imperial Planning and Development Services Department for review and approval prior to issuance of building permits. The following provisions shall be included in the Worker Education Plan and implemented throughout the operational lifespan of the Project: Operation and maintenance personnel shall be prohibited from:

- Exceeding nighttime and daytime vehicle speeds of 10 miles per hour and 25 miles per hour, respectively, within the facility, on access roads and within the Gen-Tie line corridor. Speed limit signs shall be posted throughout the project site to remind workers of travel speed restrictions.
- Harming, harassing, or feeding wildlife and/or collecting special-status plant or wildlife species.
- Disturbing active avian nests
- Traveling (either on foot or in a vehicle) outside of the Project footprint except on public roads.
- Littering on the Project area.
- Allowing persons not employed at the facility to remain on site after daylight hours.
- Exceeding normal nighttime operational noise or lighting levels
- Bringing domestic pets and firearms to the site.

The Operation and Maintenance Worker Education Plan shall require that:

- All operation and maintenance vehicles and equipment park in approved designated areas only.
- The project site and Gen-Tie line corridor be kept clear of trash and other litter to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral dogs that may prey on sensitive species.
- Operation and maintenance employees maintain Hazardous Materials Spill Kits on-site. All operation and maintenance staff shall be trained in how to use Hazardous Materials Spill Kits in the event of a spill.
- An approved Long-Term Maintenance Plan for the retention/detention basins be developed and implemented.
- Weed and Raven management shall be addressed in a project-specific pest management plan (See BIO-5)
- Maintain shielding on external lighting to direct down and towards the project site and away from adjacent undeveloped land.
- Workers sign acknowledgement form indicating that the Environmental Awareness Training and Education Program that has been completed and would be kept on record
- desert tortoise avoidance and minimization measures be implemented if desert tortoise is detected during pre-construction surveys
- The ground beneath all parked equipment and vehicles shall be inspected for wildlife before moving.
- Personnel are trained to avoid causing wildfires and manage them safely and promptly if necessary

BIO-6 **Burrowing Owl Avoidance and Minimization.** Take Avoidance (pre-construction) surveys for burrowing owl shall be completed prior to project construction. Surveys shall be conducted as detailed within Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). If burrowing owl is not detected, construction may proceed.

- If burrowing owl is identified during the non-breeding season (September 1 through January 31), then a 50 meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW-approved exclusion plan has been implemented. The buffer distance may be reduced if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities.
- If burrowing owl is identified during the breeding season (February 1 through August 31), then an appropriate buffer will be established by the biological monitor in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young have fledged. The buffer distance may be reduced in consultation with CDFW if noise attenuation buffers

such as hay bales are placed between the occupied burrow and construction activities.

BIO-7 **Pre-Construction Nesting Bird Surveys.** To the extent possible, construction shall occur outside the typical avian breeding season (February 15 through September 15). If construction must occur during the general avian breeding season, a pre-construction nest survey shall be conducted within the impact area and a 500-foot (150-meter) buffer by qualified biologist no more than 7 days prior to the start of vegetation clearing and/or ground disturbing construction activities in any given area of the Project footprint. Construction crews shall coordinate with the qualified biologist at least 7 days prior to the start of construction in a given area to ensure that the construction area has been adequately surveyed. A nest is defined as active once birds begin constructing or repairing the nest in readiness for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest. If no active nests are discovered, construction may proceed. If active nests are observed that could be disturbed by construction activities, these nests and an appropriately sized buffer (typically a 200-foot (61-meter) buffer for non-raptor species nests and at least a 500-foot (150-meter) buffer for raptor or federally listed species nests) would be avoided until the young have fledged. Final construction buffers or setback distances shall be determined by the qualified biologist in coordination with USFWS and CDFW on a case-by-case basis, depending on the species, season in which disturbance shall occur, the type of disturbance, and other factors that could influence susceptibility to disturbance (e.g., topography, vegetation, existing disturbance levels, etc.). Active nests shall be avoided until the young have fledged and/or the monitor determines that no impacts are anticipated to the nesting birds or their young. If vegetation clearing and/or ground disturbing activities cease for 14 or more consecutive days during the nesting season in areas where suitable nesting habitat remains, repeat nesting bird surveys shall be required to ensure new nesting locations have not been established within the impact area and the defined buffers.

BIO-8 **Develop a Bird and Bat Conservation Strategy (BBCS)**. A BBCS shall be developed by the Project Applicant in coordination with the County of Imperial, USFWS, and CDFW.

The BBCS will include the following components:

- A description and assessment of the existing habitat and avian and bat species;
- An avian and bat risk assessment and specific measures to avoid, minimize, reduce, or eliminate avian and bat injury or mortality during all phases of the project.
- A post-construction monitoring plan that will be implemented to assess impacts on avian and bat species resulting from the Project.
- The post-construction monitoring plan will include a description of standardized carcass searches, scavenger rate (i.e., carcass removal) trials, searcher efficiency trials, and reporting. Statistical methods will be used to estimate Project avian and bat fatalities if sufficient data is collected to support statistical analysis.

- An injured bird response plan that delineates care and curation of any and all injured birds.
- A nesting bird management strategy to outline actions to be taken for avian nests detected within the impact footprint during operation of the Project.
- A conceptual adaptive management and decision-making framework for reviewing, characterizing, and responding to monitoring results.
- Monitoring studies following commencement of commercial operation of each CUP area. Monitoring results will be reviewed annually by the Applicant and the County of Imperial, in consultation with CDFW and USFWS, to inform adaptive management responses. During Project construction, incidental avian carcasses or injured birds found during construction shall be documented. Should a carcass be found by Project personnel, the carcass shall be photographed, the location shall be marked, the carcass shall not be moved, and a qualified biologist shall be contacted to examine the carcass. When a carcass is detected, the following data shall be recorded (to the extent possible): observer, date/time, species or most precise species group possible, sex, age, estimated time since death, potential cause of death or other pertinent information, distance and bearing to nearest structure (if any) that may have been associated with the mortality, location (recorded with Global Positioning System), and condition of carcass.
- If any federal listed, state listed or fully protected avian carcasses or injured birds are found during construction or post-construction monitoring, the Project Applicant shall notify USFWS and CDFW within 24 hours via email or phone and work with the resource agencies to determine the appropriate course of action for these species. For such listed species, the CUP owner shall obtain or retain a biologist with the appropriate USFWS Special Purpose Utility Permit(s) and CDFW Scientific Collecting Permit(s) to collect and salvage all dead and injured birds, and store/curate them in freezers for later disposition and analysis.

BIO-9 **Pre-Construction Surveys for American Badger** Preconstruction surveys shall be conducted by a qualified biologist for the presence of American badger dens within 14 days prior to commencement of construction activities. The surveys shall be conducted in areas of suitable habitat for American badger, which include desert scrub habitats. Surveys need not be conducted for all areas of suitable habitat at one time; they may be phased so that surveys occur within 14 days prior to that portion of the project site disturbed. If potential dens are observed and avoidance is feasible, the following buffer distances shall be established prior to construction activities:

- American badger potential den: 30 feet.
- American badger active den: 100 feet.
- American badger natal den: 500 feet.
- If avoidance of the potential dens is not possible, the following measures are required to avoid potential adverse effects to the American badger
- Outside the reproductive season defined as February 1 through September 30 for American badger if the qualified Lead Biologist determines through camera monitoring for three consecutive days that potential dens are inactive, the biologist

shall excavate these dens by hands with a shovel to prevent American badgers from re-using them during construction.

- Outside of the reproductive season defined as February 1 through September 30 for American badger if the Lead Biologist determines that potential dens may be active, an onsite passive relocation program shall be implemented. This program shall consist of excluding American badgers from occupied burrows by installation of one-way doors at burrow entrances, monitoring of the burrow for seven days to confirm usage has discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the qualified biologist determines that American badgers have stopped using the dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent use during construction.

Impact 3.4-2 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?

Arrow weed thickets are recognized by CDFW as a sensitive vegetation type. Arrow weed thickets occurs on approximately 0.41 acres along the small section of the East Highline Canal within the southwestern corner of the BSA. However, as shown on Figure 3.4-1, the proposed project would avoid the arrow weed thickets. Therefore, the proposed project would not impact a sensitive natural community and no impact would occur.

CONSTRUCTION

The proposed project results in the direct long-term (20-25-year) loss of riparian Blue Palo Verde-Ironwood Woodland associated with the northwestern wash where on-site drainage will be discharged. As described above in the *Regulatory Setting* and *Jurisdictional Waters* sections, the ephemeral washes on site may also be regulated by USACE and RWQCB pursuant to the Clean Water Act, RWQCB pursuant to the Porter-Cologne Act and CDFW pursuant to California FGC Section 1600. As such, impacts to these features are included in this analysis. As depicted on Figure 3.4-2 and in Table 3.4-6, construction on the proposed project would result in long-term (20-25 year) discharge of fill to 6.00 acres of potential Waters of the U.S. and 8.20 acres CDFW State Waters and temporary discharge of fill to 0.07 acre of potential USACE non-wetland Waters of the U.S. and 0.10 acre of CDFW State Waters. These impacts are considered significant. Implementation of Mitigation Measure BIO-10 would reduce impacts to less than significant.

Table 3.4-6. Jurisdictional Features Occurring within the Biological Study Area and Impacts

Non-Wetland Waters of the U.S. (acres)			CDFW Jurisdictional Waters (acres)		
BSA	Project Temporary Impact Area	Project Permanent Impact Area	BSA	Project Temporary Impact Area	Project Permanent Impact Area
19.15	0.07	6.00	28.53	0.10	8.20

Source: Appendix E of this EIR

The ephemeral washes and associated riparian habitat adjacent or downstream of the proposed project could be indirectly impacted by the introduction of non-native species that alter biogeomorphic function of the washes, alteration of drainage patterns and introduction of pollutants such as sediment or hydrocarbons into surface waters. These impacts would be considered significant. Implementation of Mitigation Measures BIO-2 and BIO-3 would reduce potentially significant impacts to less than significant.

Although the project is not within a parcel zoned for agriculture, it is adjacent to and near parcels currently being farmed. The proposed project would have potential to introduce pest such as insects, vertebrates, weeds and plant pathogens. These pests would have potential to significantly adversely affect the adjacent Important Farmlands and are subject to management by the County's Agricultural Commissioner. These impacts would be considered significant. Implementation of Mitigation Measure BIO-11 would reduce potentially significant impacts to less than significant.

OPERATION

Operation of the proposed project could also result in indirect impacts to ephemeral washes and associated riparian habitat adjacent or downstream of the proposed project could be indirectly impacted by the introduction of non-native species that alter biogeomorphic function of the washes, alteration of drainage patterns and introduction of pollutants such as sediment or hydrocarbons into surface waters. Implementation of Mitigation Measures BIO-2 and BIO-3 would reduce potential impacts to less than significant.

Mitigation Measure(s)

BIO-10 **Compensatory Mitigation for Riparian Woodland and Ephemeral Wash.** Following the completion of project construction, Palo Verde- Ironwood Woodland will be created, enhanced and or conserved within the undeveloped portions of the project site at a ratio of 3:1 (i.e., 3 acres created or enhanced for each acre impacted)by permanent or temporary project activities).

Permanent impacts to jurisdictional waters and wetlands shall be mitigated at a minimum 1:1 ratio either through on-site and/or off-site re-establishment, enhancement and conservation of jurisdictional waters or through an approved-mitigation bank or in lieu fee program, if one is available. The type of mitigation, mitigation location and the final mitigation ratios will be established during the permit process for the Project's USACE Section 404 permit, the RWQCB Section 401 Water Quality Certification, and a CDFW Streambed Alteration Agreement, as applicable.

BIO-11 **Develop and Implement a Pest Management Plan.** The Project shall develop and implement a Pest Management Plan that will reduce negative impacts to surrounding (not necessarily adjacent) farmland during construction, operation and reclamation. The Plan shall include:

- Methods for Preventing the Introduction and Spread of pests, including weeds.
- Monitoring methods for all agricultural pests and weeds with potential to adversely impact adjacent native habitat (Species on California Invasive Plants Council Inventory rated as Moderately to Highly Invasive) to including insects, vertebrates, weeds, and pathogens.

- Eradication and Control Methods All treatments must be performed by a qualified applicator or a licensed pest control business.
    - "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation.
    - Effective control methods may include physical/mechanical removal, biocontrol, cultural control, or chemical treatments.
    - Use of "permanent" soil sterilants to control weeds or other pests is prohibited due to the fact that this would interfere with reclamation.
- Notification Requirements:
    - Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of Food Agriculture (CDFA) and the USDA.
    - Request a sample be taken by the Agricultural Commissioner's Office of a suspected invasive species.
- Eradication of exotic pests will be done under the direction of the Agricultural Commissioner's Office and/or CDFA.
- Obey all pesticide use laws, regulations, and permit conditions.
- Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties.
- Ensure that all project employees that handle pest control issues are appropriately trained and certified, that all required records are maintained and available for inspection, and that all permits and other required legal documents are current.
- Maintain records of pests found and treatments or pest management methods used. Records should include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this.
- Reporting Methods
    - Submit a report of monitoring, pest finds, and treatments, or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request.
    - The report is required even if no pests were found or treatment occurred. It may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request.

Impact 3.4-3 Would the project have a substantial adverse effect on state or federally-protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means?

The proposed project would not impact USACE wetlands. Please refer to Impact 3.4-2 above for a discussion of CDFW-regulated aquatic features.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.4-4 Would the project interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As previously indicated, the project site is located at the eastern edge of the Imperial Valley and generally abutting agricultural lands to the west and undeveloped lands to the east. The project site is not situated within is significant dispersal corridor. In fact several north-south trending features already disrupt east to west movement including SR 111, Coachella Canal and East Highline Canal. Local North-South movement can continue east of the project.

Following construction of the project, ground-dwelling wildlife will continue to be able to move locally through the area using the surrounding agricultural lands, undeveloped lands and margins of the irrigation canals. As previously discussed, the project site does include a Gen-tie line with which birds may collide as they move through the area. Significant impacts could occur if CDFW-regulated bird or bat species collide with the Gen-tie line. Implementation of Mitigation Measures BIO-5 and BIO-8 would reduce this potential impact to less than significant.

Mitigation Measure(s)

Implement Mitigation Measures BIO-5 and BIO-8.

Impact 3.4-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project consists of the construction and operation of a solar energy facility and associated electrical transmission lines. Development of the solar facility is subject to the County's zoning ordinance.

Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County: Major facilities relating to the generation and transmission of electrical energy provided such facilities are not under State or Federal law, to approved exclusively by an agency, or agencies of the State or Federal government, and provided such facilities shall be approved subsequent to coordination review of the IID for electrical matters. Such uses shall include but be limited to the following:

- Electrical generation plants
- Facilities for the transmission of electrical energy (100-200 kV)

- Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)

As demonstrated in Table 3.4-4 and discussed further in Section 3.9 Land Use Planning, with approval of a CUP and General Plan Amendment, the project would be consistent with Imperial County General Plan, and with biological resources policies contained therein. Therefore, implementation of the proposed project would not result in a significant impact associated the project's potential to conflict with local policies protecting biological resources.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.4-6 Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not located in a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Implementation of the proposed project would result in no impact associated with the potential to conflict with local conservation plans.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles and would not require grading or vegetation removal. No new transmission structures would be required to install the fiberoptic cable.

Construction

Staging and preparation of the poles would require vehicle traffic along the proposed route. Staging and access to each pole has the potential to crush vegetation and burrows and the temporary increase in vehicle traffic has potential to increase the risk of collision with wildlife. If desert tortoise was struck, the impact would be considered significant. Additionally, if construction was conducted during the breeding season there would be potential to damage active nests or disrupt nesting that may occur on the power poles. Taking active nests during construction would be considered a significant impact. Implementation of Mitigation Measures BIO-2, BIO-3, BIO-4, BIO-6, BIO-7 and BIO-9 shall reduce potential impacts to less than significant.

Because the fiberoptic cable is being strung on existing transmission line poles no significant new collision risk is being created. However, if traffic on the transmission line alignment is increased or maintenance activity at the poles is increased, operations could continue to result in increased risk of vegetation and burrows being crushed or of wildlife being struck be maintenance vehicles. As indicated above, if desert tortoise was struck, the impact would be considered significant. Implementation of Mitigation Measure BIO-5 would reduce potential impacts to less than significant.

3.4.4 Decommisssioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Project decommissioning activities will require construction vehicles to drive across the solar facility, transmission line, and access roads. Concrete footings, foundations, and pads would be removed using heavy equipment and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. Similar to project construction, if desert tortoise is present, there would be potential for individual tortoises to be struck when vehicles are moving on access roads and along the transmission line. Nesting birds and burrowing owl could occupy the project site as well as habitat abutting the access roads or transmission line and fiber optic cable corridor. Adjacent native habitats could be degraded by the introduction of invasive species or by wildlife caused by construction activities. These impacts could be significant. Implementation of Mitigation Measures BIO-2, BIO-3, BIO-4, BIO-6 and BIO-9 would reduce this impact to less than significant.

Residual

The proposed project does not impact state or federally-protected wetlands, does not conflict with any local policies or ordinances protecting biological resources and does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

With the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8 and BIO-9 the project would reduce potential impacts to special-status species, including Harwood's milkvetch, desert tortoise, burrowing owl, migratory birds, western mastiff bat, pocketed free-tailed bat and American Badger to a level less than significant.

With the implementation of Mitigation Measures BIO-2, BIO-3, BIO-5, BIO-10, and BIO 11, the project reduces potential impacts to special status ecological communities, to less than significant.

With the implementation of Mitigation Measure BIO-8 the project reduces any potential impact to avian or bat movement to less than significant.

Therefore, the project would not result in residual significant and unmitigable impacts related to biological resources.

This page is intentionally blank.

3.5 Cultural Resources

This section discusses cultural resources and tribal cultural resources that may be potentially impacted by the proposed project. The following identifies the existing cultural resources within the project site, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project.

Information for this section is summarized from the *Cultural Resources Survey of 640-Acres Proposed for Alternative Energy Exploration* prepared by Tierra Environmental Services. This report is included in Appendix H of this EIR.

3.5.1 Existing Conditions

Cultural Setting

Paleoindian Period

The earliest well documented prehistoric sites in southern California are identified as belonging to the Paleoindian period, which has locally been termed the San Dieguito complex/tradition. The Paleoindian period is thought to have occurred between 9,000 years ago, or earlier, and 8,000 years ago in this region.

Although varying from the well-defined fluted point complexes, such as Clovis, the San Dieguito complex is still seen as a hunting focused economy with limited use of seed grinding technology. The economy is generally seen to focus on highly ranked resources, such as large mammals and relatively high mobility, which may be related to following large game. Archaeological evidence associated with this period has been found around inland dry lakes, on old terrace deposits of the California desert, and near the coast. The San Dieguito complex, as seen in the desert region, is generally comprised of lithic scatters and rock features associated with activities of the hunting economy. Such resources are typically located on desert pavement terraces or along ancient shorelines or major drainages (Appendix H of this EIR).

Early Archaic Period

Native Americans during the Archaic period had a generalized economic focus on hunting and gathering. In many parts of North America, Native Americans chose to replace this economy with others based on horticulture and agriculture. Southern California economies remained largely based on wild resource use until European contact. Changes in hunting technology and other important elements of material culture have created two distinct subdivisions within the Archaic period in southern California.

The Early Archaic period is differentiated from the earlier Paleoindian period by a shift to a more generalized economy and an increased focus on use of grinding and seed processing technology. At sites dated between approximately 5,000 and 1,500 years BP, the increased use of groundstone artifacts and atlatl dart points, along with a mixed core-based tool assemblage, identify a range of adaptations to a more diversified set of plant and animal resources. Variations of the Pinto and Elko series projectile points, large bifaces, manos and portable metates, and core tools are characteristic of this period. However, archaeological evidence for the Archaic period is minimal throughout the desert region and major changes in technology within this relatively long chronological unit appear limited. Several scientists have considered changes in projectile point styles and artifact frequencies

within the Early Archaic period to be indicative of population movements or units of cultural change, but these units are poorly defined locally due to poor site preservation.

Late Prehistoric Period

Around 2,000 BP, Takic-speaking people from the Great Basin region began migrating into southern California, marking the beginning of what is called the Late Prehistoric period in the southern California region. The Late Prehistoric period in this portion of Imperial County is recognized archaeologically by smaller projectile points, the replacement of flexed inhumations with cremation, the introduction of ceramics, and an emphasis on inland plant food collection and processing, especially acorns and mesquite. Inland semi-sedentary villages were established along major water courses and around springs, and montane areas were seasonally occupied to exploit mesquite, acorns, and piñon nuts. Mortars for mesquite and acorn processing increased in frequency relative to seed grinding basins.

The most numerous of the archaeological resources in the Imperial Valley date to the Late Prehistoric period. The majority of sites recorded in the region have been small temporary campsites related to processing food resources or manufacturing tools. Larger habitation sites were less common, but displayed a wider range of activities and longer periods of occupation. Typical artifacts at these sites include Desert Side-notched and Cottonwood Triangular projectile points and Lower Colorado buffware and Tizon brownware ceramics. Lithic artifacts are typically made from chert, volcanic, or quartz material.

Historic/Contact Period

Cultural activities within Imperial County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American control, occupation, and land use.

Native American control of the southern California region ended in the political views of western nations with Spanish colonization of the area beginning in 1769. However, Native American control of the majority of California did not end until several decades later. In southern California Euroamerican control was firmly established by the end of the Garra uprising in the early 1850s.

The Spanish Period (1752-1821) represents a period of Euroamerican exploration and settlement. The first Europeans to arrive in this region were the Spanish, who traveled along the California Coast by ships establishing settlements and missions to secure their hold on California. Using these same ships, they traveled around the Golfo de California and up the Colorado River, establishing additional settlements at inland locations, such as Tubac south of modern Tucson. In 1772, Pedro Fages, Commandante of California, pursued several deserters into the arid territory from his headquarters in San Diego. Fages was perhaps the first white person to see the Imperial Valley.

At about the same time, Juan Bautista de Anza was Commandante of the Spanish settlement of Tubac. In 1774, Anza received permission to explore the Gila and Colorado rivers in search of a trans-desert route. His journey from Tubac to the San Gabriel Mission in California took approximately three months. Portions of Anza's route were used for mail delivery by the Spanish and ran through Imperial Valley to what is now Riverside County and beyond. However, hostilities broke out between the Spanish and Colorado River tribes in 1781 and the route was abandoned. The cultural and institutional systems established by the Spanish continued beyond the year 1821, when California came under Mexican rule. During this period the Native American populations of the Colorado Desert remained relatively unaffected due to their isolation from the coast.

The Mexican Period (1821-1848) includes the retention of many Spanish institutions and laws. During this period the Romero Expedition passed through Cahuilla territory looking for a new route to the

Colorado River. They provided some of the earliest records of Cahuilla culture. The mission system was secularized in 1834 which dispossessed many Native Americans and increased Mexican settlement. After secularization, large tracts of land were granted to individuals and families and the rancho system was established. Cattle ranching dominated other agricultural activities during the early part of this period. The Mexican Period ended when Mexico ceded California to the United States after the Mexican-American War of 1846-48.

The American Period (1848-Present) began following the Mexican-American War, the U.S. assumed control of the area. Not much changed with transfer of governmental power until 1849 when gold was discovered in California. The ensuing gold rush brought an estimated 70,000 people through the desert on their way to the gold fields of northern California. Many of these people traveled along the Southern Emigrant Trail which itself was an appropriation of older Native American trails. Afterwards, gold strikes in the eastern portion of Imperial County during the early 1850s attracted some mining interests. However, few settled in the Imperial Valley.

In the 1870s, interest in the area began to pick up as the U.S. Government sent out surveying parties to investigate the potential agricultural uses of the Colorado River. It was during this time that Southern Pacific Railroad completed its line through the desert to Yuma. During the 1880s and 1890s, Imperial Valley was used as grazing lands for herds that would feed on grasses grown in areas fed by overflow from the Colorado River. However, there were few wells in Imperial Valley and most of the water had to be imported by rail from Coachella Valley. It was not until the shortage of water in the valley was overcome that white settlement in the valley began to rise.

As early as the 1850s, plans to irrigate the valley using water from the Colorado River had been developed but it wasn't until the turn of the 20th century that work was begun on the Alamo Canal. The Alamo Canal coursed along the U.S-Mexico border, crossing into Mexico then back into the U.S. This required cooperation and permission from both nations' governments. From the completion of the Alamo canal in 1902 to the year 1905, the population of Imperial Valley jumped from a few hundred to 12,000 and arable land increased from 1,500 acres to 67,000 acres. The new water source helped to establish cities such as El Centro, Imperial, Brawley and Niland.

The Salton Sea was created in 1905 when the Colorado River breached an Imperial Valley diversion channel and began to fill the Salton Sink. It took two years before the course of the river was restored to the Gulf of California. Imperial County was established in 1907. Political instability in Mexico necessitated the construction of another canal built completely on United States soil to ensure a reliable source of water to the farmers of the Imperial Valley.

The All-American canal was built to meet this need in years from 1934-1940. The completion of the All-American canal and its four tributaries, the Coachella Canal, East Highline Canal, Central Canal, and Westside Main Canal finally established a stable source of water that would reach throughout the valley. The Coachella Canal, completed in 1949, runs adjacent to portions of the project area. The construction of these canals allowed for the expansion of agriculture and reclamation of the land. Agriculture continues to dominate the region's land use, including neighboring sections.

Local Setting

The project area is located in Township 10 South, Range 14 East on the Wister and Iris Wash USGS 7.5' Quadrangles, Section 27. The project area is located on one parcel of land approximately 640 acres in size. The proposed project would be located on approximately 100 acres within the northwest portion of the 640-acre parcel.

The project site is located on the eastern edge of active agricultural lands with desert lands located immediately to the east and beyond. Road construction, off-road activity and the construction of the Coachella Canal have disturbed the project area to varying degrees.

The cultural resources survey report prepared for the project included archival and other background studies, in addition to a field survey. The archival research consisted of a literature and records search conducted for the project in addition to identifying previously recorded resources and to determine the types of resources that might occur in the survey area.

Records Search

The records search indicated that 10 archaeological studies have been conducted within a one mile radius of the project. Five of those studies covered a portion of the project area. Four of these were regional overviews of the general area and only one, Sowell 2005, surveyed a portion of Section 27. This survey covered less than five percent of the project area.

Previously Recorded Resources

Eighteen previously recorded resources have been identified within a one-mile radius of the project area (Table 3.5-1).This includes CA-IMP-68, which was originally recorded as site C-20 in 1920 and 1939 by Malcolm Rogers.

Since that time, seven other resources (CA-IMP-118, CA-IMP-6659, CA-IMP- 7866, and CA-IMP-8479 through 8482) were identified nearby and subsumed into the record for CA-IMP-68. The site is located at the edge of West Mesa along the old shoreline of Lake Cahuilla and extending west and below sea level. The resource was identified as a village site of approximately 0.75-mile long, along the 10-foot contour line. The site included housepits and freshwater mussel shell deposits. In 1951, the site was further recorded. Cremations were located within the site's boundaries along with projectile points, knives, scrapers, pottery, shell, bone, metates, manos and painted pebbles. The artifacts were collected and stored at the San Diego Museum of Man. It appears that the site forms were updated in the 1990s using information from a 1951 update to fill in some of the data that was missing when the site was first recorded. The records show the site to be 1400m long east/west and 800m north/south with the sea level contour being its furthest extent west. The site was identified as nearly destroyed at that time and later forms record this as well. It should be noted that CA-IMP-118 is the same as CA-IMP- 68 but was erroneously given a new trinomial.

The remaining sites subsumed under CA-IMP-68 (sites CA-IMP-6659, CA-IMP-7866, and CA-IMP-8479 through 8482) are located in Section 26. With the exception of CA-IMP-6659, the sites were recorded during a BLM survey of land which was transferred to the County of Imperial for the currently operating Niland Landfill in 1999. The sites are comprised of individual sparse lithic and ceramic scatters.

Table 3.5-1. Previously Recorded Cultural Resources Located Within a 1-Mile Radius of the Project Area

Site No.	Description	CEQA Eligibility
CA-IMP-00068	Habitation Site: Cremation, Groundstone, Lithic-Pottery Scatters, Shell, Painted Pebbles, Points, Hearths, Slabs	Not Eligible
CA-IMP-00118	Subsumed under CA-IMP-00068, Shell Midden and House Pits	Not Eligible
CA-IMP-01142	Trail and Lithic Scatter	Unknown
CA-IMP-06506	Lithic Scatter	Unknown
CA-IMP-06507	Occupation Site	Unknown
CA-IMP-06653	Ceramic Scatter	Not Eligible
CA-IMP-06654	Occupation Site	Not Eligible
CA-IMP-06655	Lithic and Ceramic Scatter	Not Eligible
CA-IMP-06656	Lithic Scatter	Not Eligible
CA-IMP-06657	Ceramic Scatter	Unknown
CA-IMP-06658	Temporary Campsite	Not Eligible
CA-IMP-06659	Rock Circle with sherd and lithic, Subsumed under CA-IMP-00068	Unknown
CA-IMP-06889	Isolate: Lithic	Not Eligible
CA-IMP-07866	Lithic Scatter, Subsumed under CA-IMP-00068	Unknown
CA-IMP-08479	Lithic Scatter, Subsumed under CA-IMP-00068	Unknown
CA-IMP-08480	Lithic Scatter, Subsumed under CA-IMP-00068	Unknown
CA-IMP-08481	Lithic Scatter, Subsumed under CA-IMP-00068	Unknown
CA-IMP-08482	Lithic Scatter, Subsumed under CA-IMP-00068	Possibly Eligible

Source: Appendix H of this EIR

Sacred Lands File Database

A letter was sent to the Native American Heritage Commission (NAHC) to request a search of the sacred lands in regards to the project area on May 11, 2010. On May 24, 2010, the NAHC responded that no previously identified cultural resources were known to be in the vicinity of the project area. The response letter from the NAHC is included in the *Cultural Resources Survey of 640-Acres Proposed for Alternative Energy Exploration* (Appendix H of this EIR).

Field Survey

A total area of approximately 640 acres was surveyed from April 6-9, 2010 for the project. An intensive survey using parallel transects with 10 to 15 meter intervals was conducted throughout the project

area. Visibility in the project area was excellent with few hindrances. Vegetation in the project area was sparse and the ground surface was open with nearly 100 percent visibility. Much of the project area has been disturbed, particularly in the eastern half, but numerous areas have been previously cut by bulldozers or grubbed and vegetation has only recently begun to re-establish itself. Two Global Positioning System (GPS) units were running during the entire survey and used to maintain transect integrity and record cultural resources locations.

Eighteen cultural resources were identified during the survey. These resources are summarized in Table 3.5-2. These resources include five prehistoric archaeological sites, three historic can dumps, two prehistoric trails, and eight prehistoric isolates. The prehistoric sites are ceramic and lithic scatters or temporary camps. The isolates include cores, flakes, and potsherds. Full descriptions of the resources are provided in the cultural resource survey report (Appendix H of this EIR).

As shown in Table 3.5-2, six cultural resources within the 640-acre survey area are recommended for listing in the California Register of Historical Resources (CRHR). None of these cultural resources recommended for listing in the CRHR are located within the 100-acre solar energy facility, or along proposed access roads, gen-tie, or fiber optic alignment.

Table 3.5-2. Cultural Resources Located within 640-acre Survey Area

Site No.	Description	Recommended as California Register Eligible?
CA-IMP-68/118	Large habitation/village site	No
OS27-1	Isolate buff pot sherd	No
OS27-2	Isolate buff pot sherds	No
OS27-3	Obsidian chunk manuport	No
OS27-4	Trail segment, 10 meters long	Possibly
OS27-5	Isolate buff pot sherd	No
OS27-6	Historic can dump	No
OS27-7	Trail segment, 25 meters long	Possibly
OS27-8	Isolate secondary flake	No
OS27-9	Isolate buff pot sherd	No
OS27-10	Historic can dump	No
OS27-11	Isolate jasper core fragment	No
OS27-12	Ceramic scatter	Possibly
OS27-13	Isolate buff pot sherd	No
OS27-14	Large ceramic scatter	Possibly
OS27-15	Ceramic and lithic scatter with cleared circles	Possibly

Table 3.5-2. Cultural Resources Located within 640-acre Survey Area

Site No.	Description	Recommended as California Register Eligible?
OS27-16	Ceramic and lithic scatter with a rock circle	Possibly
OS27-17	Ceramic scatter	No
OS27-18	Historic can dump	No

Source: Appendix H of this EIR

3.5.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

National Historic Preservation Act

Federal regulations (36 CFR Part 800.2) define historic properties as "any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion in, in the National Register of Historic Places." Section 106 of the National Historic Preservation Act (NHPA) (Public Law 89-665; 80 Stat 915; USC 470, as amended) requires a federal agency with jurisdiction over a project to take into account the effect of the project on properties included in or eligible for the (NRHP, and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The term "cultural resource" is used to denote a historic or prehistoric district, site, building, structure, or object, regardless of whether it is eligible for the NRHP.

Native American Graves Protection and Repatriation Act (1990); Title 25, United States Code Section 3001, et seq.

The Native American Graves Protection and Repatriation Act defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of human remains, but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for the return of specified cultural items.

State

California Office of Historic Preservation

The California Office of Historic Preservation (OHP) administers state and federal historic preservation programs and provides technical assistance to federal, state, and local government agencies, organizations, and the general public with regard to historic preservation programs designed to identify, evaluate, register, and protect California's historic resources.

Section 15064.5 of the CEQA Guidelines also requires that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations, and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and

associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (HSC Section 7050.5, PRC Sections 5097.94 et seq.).

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1; Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1; Title 14 CCR, Section 4852) including the following:

   (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

   (B) Is associated with the lives of persons important to our past;

   (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

   (D) Has yielded, or may be likely to yield, information important in prehistory or history.[1]

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

[1] Ibid.

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to PRC § 5097.98, which provides specific guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the NAHC:

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (HSC Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner or the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the NAHC within 24 hours.
2. The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
3. The mostly descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of,

with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

(2) Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Assembly Bill 4239

AB 4239, passed in 1976, established the NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the Commission to act in order to prevent damage to and insure Native American access to sacred sites and authorized the Commission to prepare an inventory of Native American sacred sites located on public lands.

Assembly Bill 52

AB 52 amends PRC 5097.94, and adds eight new sections to the PRC relating to Native Americans. AB 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental impacts that must be considered under CEQA called tribal cultural resources (PRC 21074) and establishes a process for consulting with Native American tribes and groups regarding potential impacts to tribal resources. Under AB 52, a project that may substantially change the significance of a tribal cultural resource is a project that may have a significant impact on the environment. If a project may cause a significant impact on a tribal cultural resource, the lead agency shall implement measures to avoid the impacts when feasible.

Senate Bill 18

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to approvals and amendments of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Prior to the approval or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct

consultations for the purpose of preserving, or mitigating impacts on, cultural places on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).

Public Resources Code Section 21074

PRC Section 21074 defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, and any object with cultural value to a California Native American Tribe. A tribal cultural resource must be on or eligible for the CRHR or must be included in a local register of historical resources. The lead agency can determine if a tribal cultural resource is significant even if it has not been evaluated for the CRHR or is not included on a local register.

Public Resources Code 5097.97

No public agency and no private party using or occupying public property or operating on public property under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the U.S. Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

Public Resources Code 5097.98 (b) and (e)

PRC 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified most likely descendants (MLD) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reenter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code, Section 7050.5

California HSC 7050.5 makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the County Coroner.

Local

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. The Conservation and Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. While Section 3.9, Land Use Planning, of this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors and Planning Commission ultimately make a determination as to the project's consistency with the General Plan. Goals and Objectives applicable to the proposed project are summarized in Table 3.5-3.

Table 3.5-3. Project Consistency with Applicable General Plan Goals and Objectives

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element - *Open Space and Recreation Conservation* **Goal 1** - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. **Objective 1.4** - Ensure the conservation and management of the County's natural and cultural resources.	Consistent	A cultural resources report was prepared for the project site. Known archaeological resources within the project site boundary will be avoided and not impacted. However, as discussed below, the proposed project has the potential to encounter undocumented historical, archaeological resources, and human remains. Implementation of Mitigation Measures CR-1, CR-2, and CR-3 would reduce potentially significant impacts on unknown historic or unique archaeological materials during construction of the project site. Implementation of Mitigation Measure CR-4 would reduce potential impacts on human remains to a level less than significant.
Objective 3.1 - Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	

Source: County of Imperial 1993
Notes:
SLF=sacred lands file

3.5.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to cultural and tribal cultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Cultural Resources

Based on CEQA Guidelines Appendix G, project impacts related to cultural resources are considered significant if any of the following occur:

- Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- Disturb any human remains, including those interred outside of dedicated cemeteries

Tribal Cultural Resources

Based on CEQA Guidelines Appendix G, project impacts related to tribal cultural resources are considered significant if the project causes a substantial adverse change in the significance of a tribal cultural resource defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k)
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, Project Description, to interact with cultural resources in the project site. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, a cultural resources report was prepared for the project site. The report provides the results of a records search, a sacred lands file (SLF) search conducted by the NAHC, and field survey, which have been completed for the project site pursuant to CEQA. This report is included in Appendix H of this EIR. The information from the cultural resources report was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with cultural resources and tribal cultural resources that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities.

Impact Analysis – Solar Energy Facility and Gen-Tie

Impact 3.5-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

To be considered historically significant, a resource must meet one of four criteria for listing outlined in the CRHR (CEQA Guidelines 15064.3 (a)(3)). In addition to meeting one of the criteria outlined the CRHR, a resource must retain enough intact and undisturbed deposits to make a meaningful data contribution to regional research issues (CCR Title 14, Chapter 1.5 Section 4852 [c]). Further, based on CEQA Guidelines Section 15064.5 (b), substantial adverse change would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. This can occur when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR, NRHP, a local register, or historic resources.

- Demolishes or materially alters in an adverse manner those physical characteristics that account for its identification in an historical resources survey meeting the requirements of PRC §5024.1(g), unless the public agency establishes by a preponderance of the evidence that the resource is not historically or culturally significant.

As shown in Table 3.5-2, six cultural resources within the 640-acre survey area are recommended for listing in the CRHR. None of these cultural resources recommended for listing in the CRHR are located within the proposed 100-acre solar energy facility site, or along the proposed access roads, gen-tie, or fiber optic alignment. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5, and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.5-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Pursuant to CEQA Guidelines §15064.5(c)(1) and (2), an archaeological resource includes an archaeological site that qualifies as a significant historical resource as described for Impact 3.5-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 3.5-1, but meets the definition of a "unique archaeological resource" in PRC 21083.2, the site shall be treated in accordance with the provisions of PRC 21083.2, unless the project applicant and public agency elect to comply with all other applicable provisions of CEQA with regards to archaeological resources. "Unique archaeological resource" means an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important historic event or person.

CEQA Guidelines 15064.5(c)(4) confirms that if an archaeological resource is neither a unique archaeological nor an historic resource, the effects of the project on those resources shall not be considered a significant effect on the environment.

The proposed project includes ground-disturbing activities. As such, the project has the potential to disturb previously undocumented cultural resources that could qualify as unique archaeological resources pursuant to CEQA. This potential impact is considered significant. Implementation of Mitigation Measures CR-1 and CR-2 would reduce the potential impact to a level less than significant.

Mitigation Measure(s)

CR-1 Pursuant to CEQA Guidelines §15064.5(f), in the event that previously unidentified unique archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until significance and the appropriate

mitigation measures are determined by a qualified archaeologist familiar with the resources of the region.

Applicant shall notify the County within 24 hours. Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.

CR-2 In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act, the discovery of any cultural resource within the project area shall not be grounds for a "stop work" notice or otherwise interfere with the project's continuation except as set forth in this paragraph.

In the event of an unanticipated discovery of archaeological materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.

Significance after Mitigation

With the implementation of Mitigation Measures CR-1 and CR-2, the project would reduce the potential impacts associated with the inadvertent discovery of archaeological resources to a less than significant level.

Impact 3.5-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

During the construction and operational phases of the proposed project, grading, excavation and trenching will be required. Although the potential for encountering subsurface human remains within the project site is low, there remains a possibility that human remains are present beneath the ground surface, and that such remains could be exposed during project construction. The potential to encounter human remains is considered a significant impact. Mitigation Measures CR-1 through CR-3 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA.

Mitigation Measure(s)

Implement Mitigation Measures CR-1 and CR-2.

CR-3 In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the HSC). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC, which will designate a MLD for the project (Section 5097.98 of the PRC). The designated MLD

then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

Significance after Mitigation

Implementation of Mitigation Measures CR-1 through CR-3 will reduce the potential impact associated with inadvertent discovery of human remains to a level less than significant.

Impact 3.5-4 ***Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:***

Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

The NAHC maintains the confidential SLF which contains sites of traditional, cultural, or religious value to the Native American community. A letter was sent to the NAHC to request a search of the SLF database in regards to the project area on May 11, 2010. On May 24, 2010, the NAHC responded that no previously identified cultural resources were known to be in the vicinity of the project area.

AB 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental resources that must be considered under CEQA called tribal cultural resources (PRC 1074) and establishes a process for consulting with Native American tribes and groups regarding those resources.

AB 52 requires a lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic areas of the proposed project. In accordance with AB 52, the County provided notification of the proposed project to Native American tribes that the County understands to be traditionally and culturally affiliated with the geographic area of the proposed project. This notification was provided in a letter sent via certified mail on October 16, 2019 to the Quechan Indian Tribe, and the Torres-Martinez Desert Cahuilla Indians. Additionally, on October 16, 2019 the County provided notification in a letter sent via certified to the Augustine Band of Cahuilla Mission Indians, Camp Ban of Mission Indians Chemehuevi Reservation, Cocopah Indian Tribe, Colorado River Indian Tribe, EWIIAAPAAYP Tribal Office, Fort Yuma-Quechan Indian Tribe, Inter-Tribal Cultural Resource Protection Council, Kumeyaay Cultural Repatriation Committee, Manzanita Band of Kumeyaay Nation, LA Posta Band of Mission Indians, Torres-Martinez Desert

Cahuilla Indians, Torres-Martinez Indian Tribe and NAHC for SB-18 consultation purposes. The County requested for tribes to provide any information regarding any Traditional Cultural Properties, Sacred Sites, resource collecting areas, or any other areas of concern known to occur in the project area.

No tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1, and, per the criteria set forth in Section 5024.1, considering the significance of the resource to a California Native American tribe. Impacts on tribal cultural resources would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. No new transmission structures would be required to install the fiberoptic cable. No grading or excavation would be required. Therefore, installation of the fiberoptic cable would not involve ground disturbance. Based on these considerations, installation of the fiberoptic cable is not anticipated to impact cultural resources. No impact would occur.

3.5.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

No impact is anticipated from restoration activities as the ground disturbance and associated impacts on cultural resources will have occurred during the construction phase of the project.

Residual

Implementation of Mitigation Measures CR-1 and CR-2 would reduce potentially significant impacts on unknown archaeological materials to a less than significant level during construction. Implementation of Mitigation Measure CR-3 would reduce potential impacts on human remains to a level less than significant. No unmitigable impacts on cultural resources would occur with implementation of the project.

This page is intentionally blank.

3.6 Geology and Soils

This section includes an evaluation of the project in relation to existing geologic and soils conditions within the project site. Information contained in this section is summarized from the *CEQA Level Geotechnical Study* prepared by Stantec. The geotechnical report prepared for the project is included in Appendix I of this EIR.

3.6.1 Existing Conditions

Geology

The project site is located in Imperial County in the eastern portion of the Colorado Desert Geomorphic Province. The Colorado Desert Geomorphic Province consists of a low-lying barren desert basin separated by northwest trending valleys of the Peninsular Ranges to the west. The province is a depressed block between active branches of alluvium covered by the San Andreas Fault. It is characterized by the ancient beach lines and silt deposits of extinct Lake Cahuilla. The province extends to the southern border of California and Mexico and Mojave Desert to the east.

The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County. The primary seismic hazard at the project site is the potential for strong ground shaking. The project site is located within a highly active seismic zone. The nearest active major fault is the Elmore Ranch fault, located approximately 8.8 miles northwest of the project site.

Surface Subgrade Soils and Groundwater Conditions

The project site is generally underlain by Quaternary Lake Deposits, which are characterized as Pleistocene lake deposits consisting of claystone, sand, and beach gravel deposited in former extensive lake and Salton trough. The near surface (approximately 10 feet deep) soils consist of sand with variable amount of silt and clay followed by clay with variable amounts of sand (Appendix I of this EIR).

Static groundwater was not encountered during the geotechnical investigation. According to the preliminary geotechnical study, groundwater data from an offsite location approximately 8 miles southwest of the project site indicates the depth to groundwater is approximately 49 feet below the ground surface (Appendix I of this EIR).

Seismicity

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces which cause the continents to change their relative position on the earth's surface, a process called “continental drift.” The earth's outer shell is composed of a number of relatively rigid plates which move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes. As a result, southern California is located in a considerably seismically active region as the Pacific Plate moves northward relative to the North American Plate at their boundary along the San Andreas Fault System.

The project site is located in the seismically active southern California region. Recent earthquakes in the project's regional area include the 1975 Brawley earthquake, the 1979 Imperial, Brawley, and Rico earthquake, and the 1987 Superstition Hills earthquake. As shown in Table 3.6-1, several active or potentially active faults are located in the vicinity of the project site.

Table 3.6-1. Nearby Faults

Fault Name	Distance (miles)	Maximum Magnitude
Elmore Ranch	8.8	6.7
South San Andreas	13.1	8.2
Imperial	23.5	7.0
Superstition Hills	24.5	6.8
San Jacinto	28.1	7.9

Source: Appendix I of this EIR

Ground Shaking

Ground shaking is the byproduct of an earthquake and is the energy created as rocks break and slip along a fault during an earthquake. The amount of ground shaking that an area may be subject to during an earthquake is related to the proximity of the area to the fault, the depth of the hypocenter (focal depth), location of the epicenter and the size (magnitude) of the earthquake. Soil type also plays a role in the intensity of shaking. Bedrock or other dense or consolidated materials are less prone to intense ground shaking than soils formed from alluvial deposition.

As the project site is located in the seismically active southern California region, strong ground shaking can be expected during moderate to severe earthquakes in the general region.

Surface Rupture

Surface rupture occurs when movement along a fault results in actual cracking or breaking of the ground along a fault during an earthquake; however, it is important to note that not all earthquakes result in surface rupture. Surface rupture almost always follows preexisting fault traces, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Fault creep is the slow rupture of the earth's crust. Sudden displacements are more damaging to structures because they are accompanied by shaking.

The project site is not located within a currently mapped AP Special Studies Fault Zone. As previously mentioned above, the nearest active major fault is the Elmore Ranch fault, located approximately 8.8 miles northwest of the project site. Based on this distance, and since the fault does not project towards the project site, the potential for surface fault rupture to occur on the project site is considered low.

Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as those produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases

and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations.

Four conditions are generally required for liquefaction to occur:

1. Soil must be saturated (relatively shallow groundwater);
2. Soil must be loosely packed (low to medium relative density);
3. Soil must be relatively cohesionless (not clayey); and
4. Ground shaking of sufficient intensity must occur to function as a trigger of mechanism.

The project site is not located within a current, mapped California Liquefaction Hazard Zone (Appendix I of this EIR). In addition, groundwater in the site vicinity is expected to be approximately greater than 49 feet below the ground surface. Based on the near surface soil conditions and depth to groundwater, the potential for liquefaction is considered low.

Landslides

Landslides are the descent of rock or debris caused by natural factors, such as the pull of gravity, fractured or weak bedrock, heavy rainfall, erosion, and earthquakes. The project site is relatively flat, with a topographic gradient less than two percent. Due to the existing topography, landslides are not considered a potential hazard for the project.

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. This movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free.

Due to the low potential for liquefaction, the depth of groundwater, and the fact that the project site is not located near free faces or bodies of water, the potential for lateral spreading is considered low.

Land Subsidence

Land subsidence is the sinking of the ground surface caused by the compression of earth materials or the loss of subsurface soil because of underground mining, tunneling, or erosion. The major causes of subsidence include fluid withdrawal from the ground, decomposing organics, underground mining or tunneling, and placing large fills over compressible earth materials. The effective stress on underlying soils is increased resulting in consolidation and settlement. Subsidence may also be caused by tectonic processes.

The project site is not located within a mapped area of known land subsidence. Due to the depth of groundwater and the fact that the project site is not located in a mapped subsidence area, the potential for subsidence is considered low. However, strong shaking in the region could cause subsidence in the loose to medium dense sand below the project site.

Soil-related Hazards

Corrosive soils can damage underground utilities including pipelines and cables, or weaken roadway structures. In addition, expansion and contraction of soil volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). Generally, sands are not considered expansive soils and clays may exhibit moderate to high expansion potential because of variation in moisture content. The near-surface soils encountered during the geotechnical investigation were mostly sandy soils whose expansion potential is considered low.

Paleontological Resources

Paleontological resources (fossils) are the remains of prehistoric plant and animal life. Fossil remains, such as bones teeth, shell, and wood, are found in geologic deposits (rock formations) within which they were originally buried.

Many paleontological fossil sites are recorded in Imperial County and have been discovered during construction activities. Paleontological resources are typically impacted when earthwork activities, such as mass excavation cut into geological deposits (formations) with buried fossils.

One area in which paleontological resources appear to be concentrated in this region is the shoreline of ancient Lake Cahuilla, which would have encompassed the present-day Salton Sea. The project site is in the Salton Basin near the shoreline of ancient Lake Cahuilla. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. As previously mentioned above, the project site is generally underlain by Quaternary Lake Deposits. Sediments from this formation have yielded fossilized remains of continental vertebrates, invertebrates, and plants at numerous previously recorded fossil sites in the Imperial Valley. Therefore, the paleontological sensitivity of these formations within the project site is considered to be high.

3.6.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs

under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the project would be required to adhere.

State

Alquist-Priolo Special Studies Zone Act

The Alquist-Priolo (AP) Special Studies Zone Act was passed into law following the destructive February 9, 1971 San Fernando earthquake. The AP Special Studies Zone Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Special Studies Zone Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The state geologist (Chief of the California Division of Mines and Geology) is required to identify "earthquake fault zones" along known active faults in California. Counties and cities must withhold development permits for human occupancy projects within these zones unless geologic studies demonstrate that there would be no issues associated with the development of projects. According to the current AP Earthquake Fault Zone Maps produced by the California Geological Survey (CGS), the project site is not located within a currently mapped Alquist-Priolo Special Studies Fault Zone (Appendix I of this EIR).

California Building Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. CCR Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment, known as building standards. The California Building Code (CBC) is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The California Health and Safety Code (HSC) Section and 18980 HSC Section 18902 give CCR Title 24 the name of California Building Standards Code. The 2019 California Building Standards Code was published on July 1, 2019, with an effective date of January 1, 2020.

Local

County of Imperial Land Use Ordinance

Title 9 Division 15 (Geological Hazards) of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy are prohibited across the trace of an active fault. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction.

County of Imperial General Plan

The County of Imperial General Plan, Seismic and Public Safety Element identifies potential natural and human-induced hazards and provides policy to avoid or minimize the risk associated with hazards. The Seismic and Public Safety Element identifies 'lifelines and critical facilities' whose disruption could endanger the public safety. Lifelines are defined as networks of services that extend over a wide area and are vital to the public welfare, and can be classified into four categories: energy, water,

transportation, and communications. The IID has a formal Disaster Readiness Standard Operating Procedure for the Water Department, Power Department, and the entire District staff for response to earthquakes and other emergencies.

Table 3.6-2 analyzes the consistency of the project with specific policies contained in the County of Imperial General Plan associated with geology, soils, and seismicity. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 3.6-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
Goal 1. Include public health and safety considerations in land use planning.	Consistent	Division 5 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy which are located across the trace of an active fault are prohibited. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction. Since the project site is located in a seismically active area, the project is required to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.50 gravity. It should be noted that, the project would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized. A preliminary geotechnical report has been prepared for the proposed project. The preliminary geotechnical report has been referenced in this environmental document. Additionally, a design-level geotechnical investigation would be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		
Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations.		
Objective 1.4. Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service.		
Objective 1.7. Require developers to provide information related to geologic and seismic hazards when siting a proposed project.		
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.		
Objective 2.2. Reduce risk and damage due to seismic hazards by appropriate regulation.		
Objective 2.5 Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		

Table 3.6-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Objective 2.8 Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		

Source: County of Imperial 1997

3.6.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to geologic and soil conditions, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to geology and soils are considered significant if any of the following occur:

- Directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent AP Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology Special Publication 42)
    - Strong seismic ground shaking
    - Seismic related ground failure, including liquefaction
    - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, Project Description, to interact with local geologic and soil conditions on the project site. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.6-1 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Rupture of a known earthquake fault, as delineated on the most recent AP Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology Special Publication 42)?

The project site is located in the seismically active Imperial Valley of southern California with several mapped faults of the San Andreas Fault System traversing the region. As shown in Table 3.6-1, several active or potentially active faults are located in the vicinity of the project site. No portion of the project site is located on an active fault or within a designated AP Earthquake Fault Zone and, therefore, the potential for ground rupture to occur within the project site is unlikely. Based on these considerations, no significant impact has been identified related to rupture of a known earthquake fault.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.6-2 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Strong seismic ground shaking?

As previously discussed above, the closest mapped faults to the project site are the Elmore Ranch fault (approximately 8.8 miles) and the South San Andreas fault (approximately 13.1 miles). In the event of an earthquake along one of these fault sources, seismic hazards related to ground motion could occur in susceptible areas within the project site. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking.

Even with the integration of building standards, ground shaking within the project site could cause some structural damage to the facility structures or, at least, cause unsecured objects to fall. During a stronger seismic event, ground shaking could expose employees to injury from structural damage or collapse of electrical distribution facilities. Given the potentially hazardous nature of the project facilities, the potential impact of ground motion during an earthquake is considered a significant impact, as proposed structures, such as the substation and transmission lines could be damaged. Implementation of Mitigation Measure GEO-1 would reduce the potential impacts associated with ground shaking to a level less than significant.

Mitigation Measure(s)

GEO-1 **Prepare Geotechnical Report(s) as Part of Final Engineering for the Project and Implement Required Measures.** Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following:

- Site preparation
- Soil bearing capacity
- Appropriate sources and types of fill
- Potential need for soil amendments
- Structural foundations
- Grading practices
- Soil corrosion of concrete and steel
- Erosion/winterization
- Seismic ground shaking
- Liquefaction
- Expansive/unstable soils

In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions, and shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.

Significance after Mitigation

With implementation of Mitigation Measure GEO-1, potential impacts associated with strong seismic ground shaking would be reduced to a less than significant level with the implementation of recommendations made by a licensed geotechnical engineer in compliance with the CBC prepared as part of a formal geotechnical investigation.

Impact 3.6-3 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Seismic related ground failure, including liquefaction?

As previously discussed above, four conditions are generally required for liquefaction to occur: (1) the soil must be saturated (relatively shallow groundwater); (2) the soil must be loosely packed (low to medium relative density); (3) the soil must be relatively cohesionless (not clayey); and (4) ground shaking of sufficient intensity must occur to function as a trigger of mechanism.

As groundwater in the site vicinity is expected to be approximately greater than 49 feet below the ground surface, the project site does not have relatively shallow groundwater. At the project site, near surface sandy soil consisted of variable amounts of silt and clay and were dry to the maximum depth of exploration. Clay with variable amounts of sand below the near surface sand was low in plasticity, dry to moist, and very stiff to hard in consistency. As the near surface soil is not loosely packed and consists of clay, there is low potential for liquefaction related ground failure. In addition, the project site is not located within a current, mapped California Liquefaction Hazard Zone. Based on these considerations, a less than significant impact has been identified related to liquefaction.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.6-4 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Landslides?

The project site has a topographic gradient of less than two percent and is relatively flat. It is not anticipated that the project site will have any permanent slopes higher than five feet. Therefore, due to the existing topography and the proposed grading, landslides are not considered a potential hazard for the project including off-site properties, and no impact would occur.

Mitigation Measure(s)

No mitigation measures required.

Impact 3.6-5 Would the project result in substantial soil erosion or the loss of topsoil?

During the site grading and construction phases, large areas of unvegetated soil would be exposed to erosive forces by water for extended periods of time due to ICAPCD dust suppression requirements. Unvegetated soils are much more likely to erode from precipitation than vegetated areas because plants act to disperse, infiltrate, and retain water. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters. The predominately coarse-grained soils underlying the site are potentially susceptible to erosion or the loss of topsoil due to surface water flows. If precautions are not taken to contain contaminants, construction-related erosion impacts are considered significant.

As provided in Mitigation Measure GEO-1, during final engineering for the project, a design-level geotechnical study would identify appropriate measures for the project related to soil erosion. In addition, as part of Mitigation Measure HYD-1 provided in Section 3.8 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a less than significant level with the preparation of an SWPPP for sediment and erosion control and implementation of BMPs to reduce erosion from the construction site. Therefore, with implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 identified in Section 3.8 Hydrology/Water Quality, impacts from construction-related erosion would be reduced to a less than significant level.

The project is not expected to result in substantial soil erosion or the loss of topsoil over the long term. Further, the project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Therefore, with implementation of Mitigation Measures GEO-1 and HYD-1, impacts would be reduced to a less than significant level.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 and Mitigation Measure HYD-1 are required.

Significance after Mitigation

With implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 in Section 3.8 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a less than significant level with the preparation of a SWPPP and implementation of BMPs to reduce erosion from the construction site.

Impact 3.6-6 Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Lateral spreading generally occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or “free” face such as an open body of water, channel, or excavation. This movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free.

Due to the low potential for liquefaction, the depth of groundwater, and the fact that the project site is not located near free faces or bodies of water, the potential for lateral spreading is considered low (Appendix I of this EIR). This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.6-7 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

According to the *CEQA Level Geotechnical Study* prepared for the proposed project, the near-surface soils encountered during the preliminary geotechnical investigation have a low expansion potential (Appendix I of this EIR). Therefore, the proposed project would not create a substantial direct or indirect risk to life or property as a result of expansive soils. This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.6-8 Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?

The proposed project would not require an operations and maintenance building. The proposed solar facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Therefore, no septic or other wastewater disposal systems would be required for the project and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.6-9 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site is generally underlain by Quaternary Lake Deposits. Sediments from this formation have yielded fossilized remains of continental vertebrates, invertebrates, and plants at numerous previously recorded fossil sites in the Imperial Valley. Therefore, the paleontological sensitivity of these formations within the project site is considered to be high. However these units exist at depths that exceed the proposed project construction activities (i.e., sensitive layers exist at 30 feet and deeper). Therefore, the possibility of encountering paleontological resources during construction is low. Mitigation Measure GEO-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA.

Mitigation Measure(s)

GEO-2 **Paleontological Resources.** In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find. The consulting paleontologist shall have knowledge of local paleontology and the minimum levels of experience and expertise as defined by the Society of Vertebrate Paleontology's Standard Procedures (2010) for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. If any paleontological resources or unique geologic features are found

within the project site, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.

Significance after Mitigation

Implementation of Mitigation Measure GEO-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA. In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiberoptic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. No grading would be required. No new transmission structures would be required to install the fiberoptic cable. The proposed fiberoptic cable would result in no significant geology and soil impacts. Furthermore, because no grading would be required, paleontological resources would not be directly or indirectly destroyed during installation of the fiberoptic cable.

3.6.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration of the project site at the end of its use as a solar facility would involve the removal of structures and restoration to prior (pre-solar project) conditions. No geologic or soil impacts associated with the restoration activities would be anticipated, and, therefore, no impact is identified.

No impact is anticipated from restoration activities as the ground disturbance and associated impacts on paleontological resources will have occurred during the construction phase of the project.

Residual

With implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1, impacts related to strong seismic ground-shaking and construction-related erosion would be reduced to less than significant levels. Implementation of Mitigation Measure GEO-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA. The project would not result in residual significant and unmitigable impacts related to geology and soil resources.

This page is intentionally blank.

3.7 Greenhouse Gas Emissions

This section includes an overview of existing GHG emissions within the project area and identifies applicable federal, state, and local policies related to global climate change. The impact assessment provides an evaluation of potential adverse effects with regards to GHG emissions based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description. Stantec prepared an Air Quality/Greenhouse Gas Technical Study that assesses the climate change impacts of the Wister Solar Energy Facility Project. This report is included in Appendix D of this EIR.

3.7.1 Existing Conditions

Greenhouse Gases

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHGs, particularly those generated from the production and use of fossil fuels.

GHGs refer to atmospheric gases that absorb solar radiation and subsequently emit radiation in the thermal infrared region of the energy spectrum, trapping heat in the Earth's atmosphere. These gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and water vapor, among others. While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

The dominant GHG emitted is CO_2, mostly from fossil fuel combustion. GHGs differ in how much heat each can trap in the atmosphere (global warming potential [GWP]). When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2e and are typically quantified in metric tons (MT) or million metric tons. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is expressed relative to CO_2 over a specified time period. The 2007 IPCC *Fourth Assessment Report* calculates the GWP of CH_4 as 25 and the GWP of N_2O as 298, over a 100-year time horizon (Appendix D of this EIR).

State law defines GHGs as any of the following compounds CO_2, CH_4, N_2O, hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF_6) (California HSC Section 38505(g)).

CO_2 is a colorless, odorless gas consisting of molecules made up of two oxygen atoms and one carbon atom. CO_2 is produced when an organic carbon compound, such as wood, or fossilized organic matter, such as coal, oil, or natural gas, is burned in the presence of oxygen. CO_2 is removed from the atmosphere by CO_2 "sinks", such as absorption by seawater and photosynthesis by ocean dwelling plankton and land plants, including forests and grasslands; however, seawater is also a source of CO_2 to the atmosphere, along with land plants, animals, and soils, when CO_2 is released during respiration. Whereas the natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood.

CH_4 is a colorless, odorless non-toxic gas consisting of molecules made up of four hydrogen atoms and one carbon atom. CH_4 is combustible, and it is the main constituent of natural gas-a fossil fuel. CH_4 is released when organic matter decomposes in low oxygen environments. Natural sources include wetlands, swamps and marshes, termites, and oceans. Human sources include the mining of fossil fuels and transportation of natural gas, digestive processes in ruminant animals, such as cattle, rice paddies and the buried waste in landfills. Over the last 50 years, human activities, such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

N_2O is a colorless, non-flammable gas with a sweetish odor, commonly known as "laughing gas", and sometimes used as an anesthetic. N_2O is naturally produced in the oceans and in rainforests. Man-made sources of N_2O include the use of fertilizers in agriculture, nylon and nitric acid production, cars with catalytic converters and the burning of organic matter. Concentrations of N_2O also began to rise at the beginning of the industrial revolution.

Chlorofluorocarbons (CFC) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically un-reactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Because of the discovery that they are able to destroy stratospheric ozone (O_3), an ongoing global effort to halt their production was undertaken and has been extremely successful, so much so that levels of the major CFCs are now remaining steady or declining; however, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

HFCs are synthesized chemicals that are used as a substitute for CFCs. Out of all of the GHGs; HFCs are one of three groups with the highest GWP. HFCs are synthesized for applications, such as automobile air conditioners and refrigerants.

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

SF_6 is an extremely potent GHG. SF_6 is very persistent, with an atmospheric lifetime of more than 1,000 years. Thus, a relatively small amount of SF_6 can have a significant long-term impact on global climate change. SF_6 is human-made, and the primary user of SF_6 is the electric power industry. Because of its inertness and dielectric properties, it is the industry's preferred gas for electrical insulation, current interruption, and arc quenching (to prevent fires) in the transmission and distribution of electricity. SF_6 is used extensively in high voltage circuit breakers and switchgear, and in the magnesium metal casting industry.

Statewide Greenhouse Gas Emissions Inventory

The State of California GHG Inventory performed by the CARB, compiled statewide anthropogenic GHG emissions and sinks. It includes estimates for CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs. The current inventory covers the years 2000 to 2017 and is summarized in Table 3.7-1. Data sources used to calculate this GHG inventory include California and Federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The 2000 emissions level is the sum total of sources from all sectors and categories in the inventory. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include agriculture, commercial and residential, electric power, industrial, transportation, recycling and waste, and high GWP gases.

Table 3.7-1. California Greenhouse Gas Emissions Inventory 2000 to 2017

Sector	Total 2000 Emissions ($MMTCO_2e$)	Total 2017 Emissions ($MMTCO_2e$)
Agriculture	30.97	32.42
Commercial and Residential	43.96	41.14
Electric Power	104.84	62.39
Industrial	97.41	89.40
Transportation	180.33	169.86
Recycling and Waste	7.35	8.89
High GWP Gases	6.28	19.99

Source: CARB 2019
Notes:
GWP=global warming potential; $MMTCO_2e$=million metric tons of CO_2 equivalent

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California.

The California Natural Resources Agency's Fourth Climate Change Assessment (Fourth Assessment) produced updated climate projections that provide state-of-the-art understanding of different possible climate futures for California. The science is highly certain that California (and the world) will continue to warm and experience greater impacts from climate change in the future. While the IPCC and the National Climate Assessment have released descriptions of scientific consensus on climate change for the world and the United States, respectively, the Fourth Assessment summarizes the current understanding of climate impacts and adaptation options in California (California Natural Resources Agency 2018). Projected changes in California include:

- **Temperatures:** If GHG emissions continue at current rates then California will experience average daily high temperatures that are warmer than the historical average by:
  - 2.7 Fahrenheit (°F) from 2006 to 2039
  - 5.8°F from 2040 to 2069
  - 8.8°F from 2070 to 2100
- **Wildfire:** One Fourth Assessment model suggests large wildfires (greater than 25,000 acres) could become 50 percent more frequent by the end of century if emissions are not reduced. The model produces more years with extremely high areas burned, even compared to the historically destructive wildfires of 2017 and 2018. By the end of the century, California could experience wildfires that burn up to a maximum of 178 percent more acres per year than current averages.
- **Sea-Level Rise:** If emissions continue at current rates, the Fourth Assessment model results indicate that total sea-level rise by 2100 is expected to be 54 inches, almost twice the rise that would occur if GHG emissions are lowered to reduce risk.
- **Snowpack:** By 2050, the average water supply from snowpack is projected to decline to 2/3 from historical levels. If emissions reductions do not occur, water from snowpack could fall to less than 1/3 of historical levels by 2100.
- **Agriculture:** Agricultural production could face climate-related water shortages of up to 16 percent in certain regions. Regardless of whether California receives more or less annual precipitation in the future, the state will be dryer because hotter conditions will increase the loss of soil moisture (California Natural Resources Agency 2018).

3.7.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

At the federal level, there is currently no overarching law related to climate change or the reduction of GHGs. The EPA is developing regulations under the CAA to be adopted in the near future, pursuant to the EPA's authority under the CAA. Foremost amongst recent developments have been the settlement agreements between the EPA, several states, and nongovernmental organizations (NGO) to address GHG emissions from electric generating units and refineries; the U.S. Supreme Court's decision in Massachusetts v. EPA; and EPA's "Endangerment Finding," "Cause or Contribute Finding," and "Mandatory Reporting Rule." On September 20, 2013, the EPA issued a proposal to limit carbon

pollution from new power plants. The EPA is proposing to set separate standards for natural gas-fired turbines and coal-fired units.

Although periodically debated in Congress, no federal legislation concerning GHG limitations has yet been adopted. In Coalition for Responsible Regulation, Inc., et al. v. EPA, the United States Court of Appeals upheld the EPA's authority to regulate GHG emissions under CAA. Furthermore, under the authority of the CAA, the EPA is beginning to regulate GHG emissions starting with large stationary sources. In 2010, the EPA set GHG thresholds to define when permits under the New Source Review Prevention of Significant Deterioration (PSD) standard and Title V Operating Permit programs are required for new and existing industrial facilities. In 2012, EPA proposed a carbon pollution standard for new power plants.

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. EPA jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by U.S. EPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (U.S. EPA 2011). U.S. EPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (U.S. EPA 2016).

State

Executive Order S-3-05 – Statewide Greenhouse Gas Emissions Targets

On June 1, 2005, the Governor issued EO S-3-05 which set the following GHG mission reduction targets:

- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

This EO directed the secretary of the California EPA to oversee the efforts made to reach these targets, and to prepare biannual biennial reports on the progress made toward meeting the targets and on the impacts on California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every two years thereafter. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.

Executive Order S-01-07

This order, signed by Governor Schwarzenegger, sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015, and

the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 32

Chapter 249 of the bill (September 2016) codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030. SB 32 provides another intermediate target between the 2020 and 2050 targets set in EO S-3-05.

Assembly Bill 32 – California Global Warming Solutions Act

In 2006, California passed the California Global Warming Solutions Act of 2006, also known as AB 32, which codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that CARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (HSC Section 38551(b)). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. The Scoping Plan was prepared and approved on December11, 2008 and was later updated in May 2014. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals (to the level of 427 million MT of CO_2e) defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use. In 2005, the governor issued EO S-3-05, establishing statewide GHG emissions reduction.

Under the "business as usual" (BAU) scenario established in 2008, statewide emissions were increasing at a rate of approximately 1 percent per year as noted below. It was estimated that the 2020 estimated BAU of 596 million $MTCO_2e$ would have required a 28 percent reduction to reach the 1990 level of 427 million $MTCO_2e$.

Executive Order S-01-7

This EO, signed by former Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a LCFS for transportation fuels be established for California and directs the CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Executive Order B-30-15

On April 20, 2015, former Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments, such as the 28-nation European Union which adopted the same target in October 2014.

California is on track to meet or exceed its legislated target of reducing GHG emissions to 1990 levels by 2020, as established in the AB 32. California's new emission reduction target of 40 percent below

1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which there will likely be major climate disruptions, such as super droughts and rising sea levels. The targets stated in EO B-30-15 have not been adopted by the state legislature.

Renewable Portfolio Standard

The RPS promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goals have been accelerated and increased by EOs S-14-08, S-21-09, SB 350, and SB 100.

The purpose of the RPS upon full implementation is to provide 33 percent of the state's electricity needs through renewable energy sources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

The RPS is included in CARB's Scoping Plan list of GHG reduction measures to reduce energy sector emissions. It is designed to accelerate the transformation of the electricity sector through such means as investment in the energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector.

Executive Order S-14-08

EO S-14-08 was established by California Governor Schwarzenegger in November 2008. The order establishes a RPS for all retail sellers of electricity. The specifics of this EO include the following:

- Requires retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020;
- Requires various state agencies to streamline processes for the approval of new renewable energy facilities and determine priority renewable energy zones; and
- Establishes the requirement for the creation/adoption of the Desert Renewable Energy Conservation Plan (DRECP) process for the Mojave and Colorado Desert regions.

Senate Bill X1-2

On April 12, 2011, California Governor Jerry Brown signed SB X1-2. This bill supersedes the 33 percent by the 2020 RPS, created by EO S-14-08 that Governor Schwarzenegger previously signed. The RPS required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. The SB X1-2 extends the application of the RPS to all electric retailers in the State.

Senate Bill 350

The RPS program was further accelerated in 2015 with SB 350 which mandated a 50 percent RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires 65 percent of RPS procurement to be derived from long-term contracts of 10 or more years.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045.

Climate Change Scoping Plan

The Scoping Plan released by CARB in 2008 outlined the state's strategy to achieve the AB 32 goals. This Scoping Plan, developed by CARB in coordination with the Climate Action Team, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by CARB at its meeting in December 2008. According to the Scoping Plan, the 2020 target of 427 million $MTCO_2e$ requires the reduction of 169 million $MTCO_2e$, or approximately 28.3 percent, from the state's projected 2020 BAU emissions level of 596 million $MTCO_2e$.

However, in August 2011, the Scoping Plan was re-approved by the Board and includes the Final Supplement to the Scoping Plan Functional Equivalent Document. This document includes expanded analysis of project alternatives as well as updates the 2020 emission projections in light of the current economic forecasts. Considering the updated 2020 BAU estimate of 507 million $MTCO_2e$, only a 16 percent reduction below the estimated new BAU levels would be necessary to return to 1990 levels by 2020. The 2011 Scoping Plan expands the list of nine Early Action Measures into a list of 39 Recommended Actions.

In May 2014, CARB developed; in collaboration with the Climate Action Team, the *First Update to California's Climate Change Scoping Plan* (Update), which shows that California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32. In accordance with the United Nations Framework Convention on Climate Change (UNFCCC), CARB is beginning to transition to the use of the AR4's 100-year GWPs in its climate change programs. CARB has recalculated the 1990 GHG emissions level with the AR4 GWPs to be 431 million $MTCO_2e$; therefore, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 million $MTCO_2e$ in the initial Scoping Plan.

CARB adopted the latest update to the Climate Change Scoping Plan in December 2017. The 2017 Scoping Plan is guided by the EO B-30-15 GHG reduction target of 40 percent below 1990 levels by 2030. The 2017 Scoping Plan builds upon the framework established by the initial Scoping Plan and the First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources (CARB 2017).

The majority of the Scoping Plan's GHG reduction strategies are directed at the two sectors with the largest GHG emissions contributions: transportation and electricity generation. The GHG reduction strategies for these sectors involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The reduction strategies employed by CARB are designed to reduce emissions from existing sources as well as future sources.

Senate Bill 97

SB 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs Office of Planning and Research (OPR) to develop draft CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" by July 1, 2009, and directs the Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.

On December 30, 2009, the Natural Resources Agency adopted amendments to the CEQA Guidelines in the CCR. The amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other GHG reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the GHG emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. In addition, consideration of several qualitative factors may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. The Guidelines do not set or dictate specific thresholds of significance.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of GHG emissions in Appendix G of the CEQA Guidelines.
- The Guidelines are clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- The Guidelines promote the advantages of analyzing GHG impacts on an institutional, programmatic level, and, therefore, approve tiering of environmental analyses and highlights some benefits of such an approach.
- EIRs must specifically consider a project's energy use and energy efficiency potential, pursuant to Appendix F of the CEQA Guidelines.

Senate Bill 375 – Regional Emissions Targets

SB 375 requires that regions within the state which have a metropolitan planning organization (MPO) must adopt a sustainable communities' strategy as part of their RTPs. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that "it will be necessary to achieve significant additional GHG reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 provides that new CEQA provisions be enacted to encourage

developers to submit applications and local governments to make land use decisions that will help the state achieve its goals under AB 32," and that "current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives."

California Code of Regulations Title 24, Part 6

Although not originally intended to reduce GHG emissions, CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions. Therefore, increased energy efficiency results in decreased GHG emissions.

California Green Building Code

The California Green Building Standards Code is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen 2019 standards became effective on January 1, 2020. The 2019 CALGreen Code has mandatory Green Building provisions for all new residential buildings that are three stories or fewer (including hotels and motels) and all new non-residential buildings of any size that are not additions to existing buildings.

Regional

Southern California Association of Governments - 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the designated MPO for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse," collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies.

On April 7, 2016, SCAG adopted the 2016-2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS). The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards (NAAQS) as set forth by the federal CAA. The following SCAG goal is applicable to the project:

- Protect the environment and health of our residents by improving air quality and encouraging active transportation.

As a solar generation facility, the proposed project would improve air quality by reducing the use of fossil fuels in energy production. The proposed project's renewable electricity generation would create an indirect emissions reduction of GHGs. Operation of the proposed project would likely reduce or "offset" electricity-related emissions on the state-wide utility grid, which includes energy generated by traditional sources, such as natural gas and coal-fired plants. Therefore, the proposed project would be consistent with this SCAG goal.

Local

County of Imperial

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the CEQA Guidelines to provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts. Formal CEQA thresholds for lead agencies must always be established through a public hearing process. Imperial County has not established formal quantitative or qualitative thresholds through a public rulemaking process, but CEQA permits the lead agency to establish a project-specific threshold of significance if backed by substantial evidence, until such time as a formal threshold is approved.

3.7.3 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to GHG emissions are considered significant if any of the following occur:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. Quantify greenhouse gas emissions resulting from a project; and/or
2. Rely on a qualitative analysis or performance based standards.

A lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

South Coast Air Quality Management District's Interim Thresholds

The ICAPCD has not adopted thresholds of significance for project's GHG emissions. However, the Air Quality/Greenhouse Gas Technical Study (Appendix D of this EIR) proposes to use the South Coast Air Quality Management District's (SCAQMD) "Tier 3" quantitative thresholds for residential and commercial projects. The SCAQMD proposes that if a project generates GHG emissions below 3,000 MTs of $MTCO_2e$, it could be concluded that the project's GHG contribution is not cumulatively considerable and is, therefore, considered less than significant under CEQA. If the project generates GHG emissions above the threshold, the analysis must identify mitigation measures to reduce GHG emissions.

Methodology

The project-related direct and indirect emissions of GHGs were estimated using the similar methods for quantification of criteria air pollutants, as described in Section 3.3 Air Quality. Emissions were estimated using existing conditions, project construction and operations information, as well as a combination of emission factors from various sources.

In addition to the direct and indirect emissions created from project construction and operation, the project's renewable electricity generation would create an indirect emissions reduction of GHGs. Operation of the proposed project would likely reduce or "offset" electricity-related emissions on the state-wide utility grid, which includes energy generated by traditional sources, such as natural gas and coal-fired plants. These emissions are often referred to as "displaced" or "avoided" emissions.

Displaced emissions from electricity production were modeled based on an estimated electricity generation rate of 112,910 megawatt hours (MWh)/year (for 25 megawatt facility), provided by the project proponent. Emission factors were derived from the U.S. EPA's *Emissions Generation Resource Integration Database* (2016) as well as CalEEMod for Imperial County. The lower estimated displaced emissions were used in this analysis. Emissions calculations and assumptions are included in Appendix D of this EIR.

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.7-1 Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction and operation of the project would result in a relatively small amount of GHG emissions. The project would generate GHG emissions during construction and routine operational activities at the project site. During construction, GHG emissions would be generated from the operation of off-road equipment, haul-truck trips, and on-road worker vehicle trips. Once operational, GHG emissions would be limited to vehicle trips associated with periodic routine maintenance and monitoring activities at the project site.

Total GHG emissions from all phases of construction activities were amortized over the estimated 20-year life of the project. As shown in Table 3.7-2, the yearly contribution to GHG from the construction of the project would be 18.8 $MTCO_2e$ per year. Therefore, the construction emissions are less than the SCAQMD's screening threshold of 3,000 $MTCO_2e$ per year.

Once the project is constructed and operational, the proposed project would have no major stationary emission sources and would require minimal vehicular trips. Therefore, operation of the proposed solar facility would result in substantially lower emissions than project construction.

As shown in Table 3.7-2, the yearly contribution to GHG from operation of the project would be 9.0 $MTCO_2e$ per year. Therefore, the proposed project's operational emissions are less than the SCAQMD's screening threshold of 3,000 $MTCO_2e$ per year.

In addition, the proposed project would offset GHG emissions through renewable energy generation. As shown in Table 3.7-2, once operational, the proposed project would displace approximately 65,165 $MTCO_2e$ per year. The proposed project's annual indirect GHG emissions from the displacement of fossil fuel fired electricity generation is significantly higher than the project's annualized direct and indirect emissions sources. Implementation of the proposed project would result in a less than significant impact associated with the generation of GHG emissions.

Table 3.7-2. Greenhouse Gas Emissions Summary

Emissions Source	GHG Emissions ($MTCO_2e$/year)
Construction Emissions – Amortized (20 years)*	18.8
Operational Emissions – Facility site	9.0
Displaced Emissions (from Project Operation)	-65,165
Total Annual Emissions	-65,136
Significance Threshold**	3,000
Exceed Threshold?	No

Source: Appendix D of this EIR

Notes:

Includes direct and indirect emissions of project site operation and maintenance, not including the indirect displaced GHG emissions.

Estimation of emissions avoided due to displacement of fossil fuel powered electricity generation.

The CalEEMod carbon intensity factor for Imperial Irrigation District is used to estimate displaced GHG emissions.

** Total construction emissions amortized over project life of 20 years.*

*** In the absence of ICAPCD-adopted threshold for GHG emissions, the SCAQMD threshold of 3,000 MT/year for commercial projects is used.*

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.7-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

As discussed in Impact 3.7-1, the proposed project would generate a relatively small amount of GHG emissions. The proposed project is consistent with the AB 32 Scoping Plan strategies to increase the total amount of renewable energy sources consistent with the State's RPS requirements. The project would help the state meet this goal by generating up to 20 MW of power to California's current renewable portfolio. In addition, the project would not conflict with CARB's emission reduction strategies in the Scoping Plan. As the project would not exceed applicable GHG screening thresholds and would provide a GHG emissions benefit, the project would be consistent with the Scoping Plan's goal of achieving cost-effective emissions reductions while accelerating the transition to a low-carbon economy.

Neither the County of Imperial or ICAPCD have any specific plans, policies, nor regulations adopted for reducing the emissions of GHGs; however, since the long-term operational GHG emissions are minimal and the construction emissions are short-term, the project would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of GHGs. Implementation of the proposed project would result in a less than significant impact associated with the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHG.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. No new transmission structures would be required to install the fiberoptic cable.

The installation of the fiberoptic cable would result in GHG emissions from the operation of construction equipment and vehicle travel on paved and unpaved surfaces. Once operational, GHG emissions would be limited to vehicle trips associated with routine maintenance and monitoring activities at the project site. As shown in Table 3.7-2, the yearly contribution to GHG from the construction of the solar energy facility and gen-tie line would be 18.8 $MTCO_2e$ per year. Therefore, the construction emissions are less than the SCAQMD's screening threshold of 3,000 $MTCO_2e$ per year. The installation of the fiberoptic cable would require substantially less construction equipment and shorter duration compared to the construction of the solar energy facility and gen-tie line. Based on this consideration, the installation of the fiberoptic cable would result in GHG emissions below allowable thresholds. This is considered a less than significant impact.

3.7.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Similar to construction activities, decommissioning and restoration would result in CO_2e emissions below allowable thresholds. Construction activities during decommissioning and restoration would adhere to Mitigation Measures AQ-1 and AQ-2 outlined in Section 3.3, Air Quality of this EIR, further reducing GHG emissions. Therefore, the impact is considered less than significant.

Residual

The proposed project's GHG emissions would result in a less than significant impact. Project operation, subject to the provision of a CUP, would generally be consistent with statewide GHG emission goals and policies including AB 32. Project consistency with applicable plans, policies, and regulations adopted to reduce GHG emissions would ensure that the project would not result in any residual significant and unavoidable impacts with regards to global climate change.

This page is intentionally blank.

3.8 Hydrology/Water Quality

This section provides a description of existing water resources within the project area and pertinent local, state, and federal plans and policies. Each subsection includes descriptions of existing hydrology/drainage, existing flooding hazards, and the environmental impacts on hydrology and water quality resulting from implementation of the proposed project, and mitigation measures where appropriate. The impact assessment provides an evaluation of potential adverse effects to water quality based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description.

Information for this section is summarized from the *Water Quality Management Plan* and *Hydrological Evaluation* prepared by Stantec. These reports are included in Appendix J and K of this EIR, respectively.

3.8.1 Existing Conditions

The project site is located in the Imperial Valley Planning Area of the Colorado River Basin. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics (California RWQCB 2019).

The project site is contained within the Brawley Hydrologic Area in the Imperial Hydrologic Unit (HU 723.10). The Imperial Valley is characterized as a closed basin and, therefore, all runoff generated within the watershed discharges into the Salton Sea (Appendix J of this EIR).

The project area is characterized by a typical desert climate with dry, warm winters, and hot, dry summers. Most of the rainfall occurs in conjunction with monsoonal conditions between May and September, with an average annual rainfall of less than 3 inches for the project area. The 10-year, 24-hour estimated precipitation amount is 1.87 inches; and the 100-year, 24-hour estimated precipitation is 3.70 inches (Appendix J of this EIR).

Localized Drainage Conditions

The project site and the surrounding terrain is generally flat and slopes down in a southwest direction at approximately 1.5 percent. Currently, off-site storm water runoff runs through the project site. The upstream tributary storm drainage area extends approximately 0.85 miles northeast of the project to the existing Coachella Canal. The storm water runoff eventually drains into the East Highline Canal (Appendix J of this EIR).

Flooding

According to FEMA's FIRM (Map Number 06025C0425C) (FEMA 2008), the proposed solar energy facility, gen-tie line, and access roads located on the western portion of the project site are located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain.

According to the FEMA FIRM (Map Number 06025C0450C) (FEMA 2008), the proposed eastern access road that would connect to Gas Line Road is located in a 100-year flood zone (Zone A).

Surface Water Quality

The surface waters of the Imperial Valley depend primarily on the inflow of irrigation water from the Colorado River via the All-American Canal. Excessive salinity concentrations have long been one of the major water quality problems of the Colorado River, a municipal and industrial water source to millions of people, and a source of irrigation water for approximately 700,000 acres of farmland. The heavy salt load in the Colorado River results from both natural and human activities. Land use and water resources are unequivocally linked. A variety of natural and human factors can affect the quality and use of streams, lakes, and rivers. Surface waters may be impacted from a variety of point and non-point discharges. Examples of point sources may include wastewater treatment plants, industrial discharges, or any other type of discharge from a specific location (commonly a large-diameter pipe) into a stream or water body. In contrast, non-point source pollutant sources are generally more diffuse in nature and connected to a cumulative contribution of multiple smaller sources. There are no comprehensive water quality monitoring stations located within in the project site, and water quality data are limited (Appendix J of this EIR).

Common non-point source contaminants within the project area may include, but are not limited to: sediment, nutrients (phosphorous and nitrogen), trace metals (e.g., lead, zinc, copper, nickel, iron, cadmium, and mercury), oil and grease, bacteria (e.g., coliform), viruses, pesticides and herbicides, organic matter, and solid debris/litter. Vehicles account for most of the heavy metals, fuel and fuel additives (e.g., benzene), motor oil, lubricants, coolants, rubber, battery acid, and other substances. Nutrients result from excessive fertilizing of agricultural areas, while pesticides and herbicides are widely used in agricultural fields and roadway shoulders for keeping right-of-way (ROW) areas clear of vegetation and pests. Additionally, the use of on-site septic systems for wastewater disposal can degrade shallow groundwater by contributing nitrate. All these substances are entrained by runoff during wet weather and discharged into local drain facilities and eventually into the Salton Sea (Appendix J of this EIR).

Based on the 305(b)/303(d) Integrated Report prepared by the Colorado River Basin RWQCB, the following water features within the Brawley Hydrologic Area includes the Imperial Valley Drains (Wistaria Drain and Greeson Wash), New River, and the Salton Sea (Appendix J of this EIR). Specific impairments listed for each of these water bodies (or Category 5) are identified below:

- Imperial Valley Drains: Impaired for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, endosulfan, PCBs, sedimentation/siltation; toxaphene, and selenium;
- New River: Impaired for chlordane, chlorpyrifos, copper, DDT, diazinon, dieldrin, Hexachlorobenzene, mercury, nutrients, organic enrichment/low dissolved oxygen, PCBs, pathogens, sediment, selenium, toxicity, toxaphene, trash, and zinc;
- Salton Sea: Impaired for arsenic, chlorpyrifos, DDT, enterococcus, nutrients, salinity, and selenium (Appendix J of this EIR).

In relation to the Imperial Valley Drains, the listings for DDT, dieldrin, and, endosulfan only apply to drains that are not responsible for draining the immediate project site (Appendix J of this EIR).

Groundwater Hydrology

The project site is located in the East Salton Sea Groundwater Basin (Basin 7-033). The basin occupies the northeastern margin of the Imperial Valley, including the East Mesa, and alluvial surficial deposits of the Chocolate Mountains. The basin covers 279,824 acres. Adjacent basins include

Chocolate Valley to the north, Arroyo Seco Valley to the east, Amos Valley to the southeast, and Imperial Valley to the south. No groundwater basin is defined in the footprint of the Salton Sea (Appendix K of this EIR).

Groundwater quality in the East Salton Sea Basin is generally reported as poor and not suitable for domestic, municipal, or agricultural purposes (Appendix K of this EIR).

3.8.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

Federal

Clean Water Act

The U.S. EPA is the lead federal agency responsible for managing water quality. The CWA of 1972 is the primary federal law that governs and authorizes the U.S. EPA and the states to implement activities to control water quality. The various elements of the CWA that address water quality and that are applicable to the project are discussed below. Wetland protection elements administered by the USACE under Section 404 of the CWA, including permits for the discharge of dredged and/or fill material into waters of the United States, are discussed in Section 3.4, Biological Resources.

Under federal law, the U.S.EPA has published water quality regulations under Volume 40 of the CFR. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Section 304(a) requires the U.S.EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. The U.S. EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The U.S.EPA has delegated the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the SWRCB in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollution Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating storm water or nonpoint source discharges (Section 402[p]). The U.S.EPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by RWQCBs.

Clean Water Act Section 303(d) Impaired Waters List

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers.

Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still be in compliance with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRM is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability) (i.e., the 100-year flood event).

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the State Water Resources Control Board (SWRCB) and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives.

Water bodies that have beneficial uses that may be affected by construction activity and post-construction activity include the Imperial Valley Drains (includes the Wistaria Drain and Greeson Wash), New River, and the Salton Sea. Table 3.8-1 identifies the designated beneficial uses established for the project site's receiving waters. The following are definitions of the applicable beneficial uses:

- Aquaculture (AQUA) – Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
- Freshwater Replenishment (FRSH) – Uses of water for natural or artificial maintenance of surface water quantity or quality.

- Industrial Service Supply (IND) – Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
- Water Contact Recreation (REC I) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.
- Non-contact Water Recreation (REC II) – Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Warm Freshwater Habitat (WARM) – Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Wildlife Habitat (WILD) – Uses of water that support terrestrial ecosystems including, but not limited to, the preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- Preservation of Rare, Threatened, or Endangered Species (RARE) – Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Table 3.8-1. Beneficial Uses of Receiving Waters

Beneficial Uses	Imperial Valley Drains	New River	Salton Sea
AQUA	--	--	X
FRSH	X	X	--
IND	--	P	P
REC I	X	X	X
REC II	X	X	X
WARM	X	X	X
WILD	X	X	X
RARE	X	X	X

Source: SWRCB 2019

AQUA=aquaculture; FRSH=freshwater replenishment; IND=industrial service supply; P=Potential Uses; RARE=Preservation of Rare, Threatened, or Endangered Species; REC 1= water contact recreation; REC II=non-contact water recreation; WARM=Warm Freshwater Habitat; WILD=Wildlife Habitat; X=existing beneficial uses

National Pollution Discharge Elimination System General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial BMPs in the projects' SWPPP and perform monitoring of stormwater discharges and unauthorized non–stormwater discharges.

Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds 1 acre. Coverage under a General Construction Permit requires the preparation of a SWPPP and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of BMPs to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding), storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater, and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical post-construction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Local

County of Imperial General Plan

The Water Element and the Conservation and Open Space Element of the General Plan contain policies and programs, created to ensure water resources are preserved and protected. Table 3.8-2 identifies the General Plan policies and programs for water quality and flood hazards that are relevant to the project and summarizes the project's consistency with the General Plan. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 3.8-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	The proposed project would protect water quality during construction through compliance with Imperial County design and detention requirements and the NPDES General Construction Permit, as well as preparation and implementation of project-specific SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework, design features, and BMPs.

Table 3.8-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Objective 6.3: Protect and improve water quality and quantity for all water bodies in Imperial County.	Consistent	The proposed project would protect water quality during construction through compliance with the NPDES General Construction Permit, SWPPP, and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.
Program: Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain.	Consistent	The project does not contain a residential component nor would it place housing or other structures within a 100-year flood hazard area.
Water Element		
Policy: Adoption and implementation of ordinances, policies, and guidelines which assure the safety of County ground and surface waters from toxic or hazardous materials and/or wastes.	Consistent	The project would preserve ground and surface water quality from hazardous materials and wastes during construction, operation and decommissioning activities. The proposed project would protect water quality during construction through compliance with NPDES General Construction Permit, SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. It is anticipated that project decommissioning activities would be subject to similar, or more stringent ground and surface water regulations than those currently required.
Program: The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	Mitigation measures will require that the applicant of the project prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.

Table 3.8-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Program: All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response for Water Element Policy above.

Source: County of Imperial 2016; County of Imperial 1997b

County of Imperial Land Use Ordinance, Title 9

The County's Ordinance Code provides specific direction for the protection of water resources. Applicable ordinance requirements are contained in Division 10, Building, Sewer and Grading Regulations, and summarized below.

Chapter 10 – Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

1. If the proposed grading, excavation or earthwork construction is of irrigatable land, said grading will not cause said land to be unfit for agricultural use.
2. The depth of the grading, excavation or earthwork construction will not preclude the use of drain tiles in irrigated lands.
3. The grading, excavation or earthwork construction will not extend below the water table of the immediate area.
4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of 1.5 feet on the horizontal plane to 1 foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

Imperial County Engineering Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County

Based on the guidance contained in the County's *Engineering Guidelines Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County* (2008), the following drainage requirements would be applicable to the project.

III A. GENERAL REQUIREMENTS

1. All drainage design and requirements are recommended to be in accordance with the IID "Draft" Hydrology Manual or other recognized source with approval by the County Engineer and based on full development of upstream tributary basins. Another source is the Caltrans I-D-F curves for the Imperial Valley.
3. Permanent drainage facilities and ROW, including access, shall be provided from development to point of satisfactory disposal.
4. Retention volume on retention or detention basins should have a total volume capacity for a three (3) inch minimum precipitation covering the entire site with no C reduction factors.

Volume can be considered by a combination of basin size and volume considered within parking and/or landscaping areas.

There is no guarantee that a detention basin outletting to an IID facility or other storm drain system will not back up should the facility be full and unable to accept the project runoff. This provides the safety factor from flooding by ensuring each development can handle a minimum 3-inch precipitation over the project site.

8. The developer shall submit a drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels to the Department of Public Works for approval. Unless specifically waived herein, required plans and specifications shall provide a drainage system capable of handling and disposing of all surface waters originating within the subdivision and all surface waters that may flow onto the subdivision from adjacent lands. Said drainage system shall include any easements and structures required by the Department of Public Works or the affected Utility Agency to properly handle the drainage on-site and off-site. The report should detail any vegetation and trash/debris removal, as well as address any standing water.
9. Hydrology and hydraulic calculations for determining the storm system design shall be provided to the satisfaction of the Director, Department of Public Works. When appropriate, water surface profiles and adequate field survey cross-section data may also be required.
11. The County is implementing a storm water quality program as required by the SWRCB, which may modify or add to the requirements and guidelines presented elsewhere in this document. This can include ongoing monitoring of water quality of storm drain runoff, implementation of BMPs to reduce storm water quality impacts downstream or along adjacent properties. Attention is directed to the need to reduce any potential of vectors, mosquitoes, or standing water.
12. A Drainage Report is required for all developments in the County. It shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, onsite hydrology, hydraulic calculations and a hydrology map.

Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the California Water Code. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley, operation and maintenance of the drainage canals and facilities, including those in the project area, and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements and contracts
- The Quantification Settlement Agreement and Transfer Agreements
- The Definite Plan, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments
- The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights

- Existing IID standards and guidelines for evaluation of new development and define IID's role as a responsible agency and wholesaler of water

Integrated Water Resources Management Plan

In relation to the project, IID maintains regulation over the drainage of water into their drains, including the design requirements of stormwater retention basins. IID requires that retention basins be sized to handle an entire rainfall event in case the IID system is at capacity. Additionally, IID requires that outlets to IID facilities be no larger than 12 inches in diameter and must contain a backflow prevention device (IID 2009).

3.8.3 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to hydrology/water quality are considered significant if any of the following occur:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
    - Impede or redirect flood flows
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Methodology

The drainage design will be conducted in accordance with the County of Imperial's design criteria, which establishes that 100 percent of the 100-year storm (3 inches of rain) will be stored on-site and released into the IID drainage system using existing drainage connections.

Impact Analysis – Solar Energy Facility and Gen-Tie

Impact 3.8-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality?

Construction

Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of electrical systems, control systems, and startup/ testing. In addition, the construction of transmission lines, utility pole pads, conductors, and associated structures will be required.

During the construction phase, sedimentation and erosion can occur because of tracking from earthmoving equipment, erosion and subsequent runoff of soil, or improperly designed stockpiles. The utilization of proper erosion and sediment control BMPs is critical in preventing discharge to surface waters/drains. The project would employ proper SWPPP practices to minimize any discharges in order to meet the Best Available Technology/Best Conventional Technology standard set forth in the Construction General Permit.has the potential to affect surface water quality. Many different types of hazardous compounds will be used during the construction phase, with proper application, management, and containment being of high importance. Poorly managed construction materials can lead to the possibility for exposure of potential contaminants to precipitation. When this occurs, these visible and/or non-visible constituents become entrained in storm water runoff. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project to the IID Imperial Valley Drains and could result in the accumulation of these pollutants in the receiving waters. This is considered a potentially significant impact. With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level. Prior to construction and grading activities, the project applicant is required to file an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP, which addresses the measures that would be included during construction or the project to minimize and control construction and post-construction runoff to the "maximum extent practicable." In addition, NPDES permits require the implementation of BMPs that achieve a level of pollution control to the maximum extent practical. With the implementation of Mitigation Measures HYD-1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site restoration activities.

Operation

As runoff flows over developed surfaces, water can entrain a variety of potential pollutants including, but not limited to, oil and grease, pesticides, trace metals, and nutrients. These pollutants can become suspended in runoff and carried to receiving waters. These effects are commonly referred to as non-point source water quality impacts.

Long-term operation of the solar facility poses a limited threat to surface water quality after the completion of construction. The project would be subject to the County's Grading Regulations as specified in Section 91010.02 of the Ordinance Code. However, since the project site is located in unincorporated Imperial County and not subject to a Municipal Separate Storm Sewer System or

NPDES General Industrial Permit, there is no regulatory mechanism in place to address post-construction water quality concerns. Based on this consideration, the project has the potential to result in both direct and indirect water quality impacts that could be significant. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed project will be designed to include site design, source control, and treatment control BMPs, as described below. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.

Site Design BMPs. The project will be designed to include site design BMPs, which reduce runoff, prevent storm water pollution associated with the project, and conserve natural areas onsite. Table 3.8-3 lists the various site design BMPs.

Table 3.8-3. Site Design Best Management Practices

	Design Concept	Description
1	Minimize Impervious Footprint	The project site will include a significant amount of undeveloped land and pervious area. The footprint for the solar arrays will be predominately pervious ground. A minimal amount of Class II base paving for access roads and parking will be constructed.
2	Conserve Natural Areas	Only a small amount of existing site area can be classified as natural landscape and will only be disturbed in necessary areas at the project.
3	Protect Slopes and Channels	The project site and surrounding areas is comprised of extremely flat topography. Erosion of slopes due to stabilization problems is not a concern.
4	Minimize Directly Connected Impervious Areas	No storm drain will be constructed onsite. The site layout does not change the existing drainage pattern.

Source: Appendix J of this EIR

Source Control BMPs. Source control BMPs (both structural and non-structural) means land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Table 3.8-4 identifies source control BMPs that would be applicable to the proposed project.

Table 3.8-4. Source Control Best Management Practices

	Design Concept	Description
1	Design Trash Storage Areas to Reduce Pollution Introduction	Any outdoor trash storage areas will be designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash.
2	Activity Restrictions	Restrictions include activities that have the potential to create adverse impacts on water quality.
3	Non-storm Water Discharges	Illegal dumping educational materials as well as spill response materials will be provided to employees.
4	Outdoor Loading and Unloading	Material handling will be conducted in a manner as to prevent any storm water pollution.

Table 3.8-4. Source Control Best Management Practices

	Design Concept	Description
5	Spill Prevention, Control, and Cleanup	The project will require a Spill Prevention, Control, and Countermeasure Plan, and a Hazardous Materials Business Plan in accordance with Federal and State requirements.
6	Education	Employees will receive materials for storm water pollution prevention in the form of brochures and other information in a format approved by the County of Imperial.
7	Integrated Pest Management	If any pesticide is required onsite, the need for pesticide use in the project design will be reduced by: • Keeping pests out of buildings using barriers, screens, and caulking • Physical pest elimination techniques, such as squashing, trapping, washing or pruning out pests • Relying on natural enemies to eat pests • Proper use of pesticides as a last line of defense
8	Vehicle and Equipment Fueling, Cleaning, and Repair	All vehicles will be serviced offsite whenever possible. If servicing is required onsite, it must be conducted in an area isolated from storm drain inlets or drainage ditch inlets. The area must be bermed and precluded from run on. Any spillage must be fully contained and captured and disposed of per County of Imperial Hazardous Waste requirements.
9	Waste Handling and Disposal	Materials will be disposed of in accordance with Imperial County Hazardous Material Management guidelines and will be sent to appropriate disposal facilities. Under no circumstances shall any waste or hazardous materials be stored outside without secondary containment.

Source: Appendix J of this EIR

Treatment Control BMPs. The proposed project will incorporate post-construction Low Impact Development Treatment Control BMPs, including but not limited to infiltration trenches or bioswales, which shall be investigated and integrated into the project layout to the maximum extent practicable. The drainage plan shall provide both short-term and long-term drainage solutions to ensure the proper sequencing of drainage facilities and treatment of runoff generated from project impervious surfaces prior to off-site discharge.

The proposed project shall develop a long-term maintenance plan and implemented to support the functionality of treatment control BMPs. The facility layout shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment (Appendix J of this EIR).

Mitigation Measure(s)

HYD-1 **Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration.** The project applicant or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical

sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Sediment control practices (e.g., temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

HYD-2 **Incorporate Post-Construction Runoff BMPs into Project Drainage Plan.** The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.

Significance after Mitigation

With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction.

With the implementation of Mitigation Measure HYD-2, potential water quality impacts resulting from post-construction discharges during operation for the project would be reduced to a less than significant level. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.

Impact 3.8-2 Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed project may involve the construction of a groundwater well and use of groundwater for construction, and potentially limited operational use, of the project. As described in Chapter 2 Project Description, the construction of a groundwater well requires approval of a CUP. Approval of the CUP would be contingent upon the availability of groundwater to serve the project and ability to recharge the aquifer so that groundwater supplies are not substantially decreased by the proposed project. As discussed in Section 3.11 Utilities/Service Systems, adequate groundwater resources are available to serve the project.

Further, groundwater recharge in the area will not be significantly affected because of the fact that the majority of the project site will feature a pervious landscape in both the existing and proposed conditions. Any runoff from solar panel washing would evaporate or percolate through the ground, as a majority of the surfaces in the solar field would remain pervious. Retention basins will also provide infiltration and groundwater recharge. The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. No significant impacts on groundwater supply or recharge would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

Result in substantial erosion or siltation on- or off-site?

Soil erosion could result during construction of the proposed project in association with grading and earthmoving activities. The project site would be disturbed by construction activities such as grading and clearing as a part of site preparation. To the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement. Compaction of the soil to support building and traffic loads as well as the PV module supports may be required and is dependent on final

engineering design. During construction, erosion would be controlled in accordance with County standards which include preparation, review and approval of a grading plan by the County Engineer; implementation of a Dust Control Plan (Rule 801); and compliance with the NPDES General Construction Permit.

Daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to increase erosion. During operational activities, soil erosion and sedimentation would be controlled in accordance with the NPDES General Construction Permit and project-specific SWPPP. The project site would remain largely impervious over the operational life of the project.

The project would incorporate on-site storm water retention basins to retain the 100-year, 24-hour storm event of 3 inches over the entire developed area. There would be 5 retention basins to provide 30 af of storage capacity. The basins are located westerly and southerly of the developed area. The off-site runoff will be intercepted by the proposed earthen channel at the northerly and easterly boundaries of the solar energy facility. The earthen channel will convey off-site storm water runoff around the development and discharge in the same manner as existing conditions downstream of the project site to continue its natural course and eventually into the East Highline Canal (Appendix J of this EIR). The proposed project would result in less than significant impacts associated with the alteration of drainage patterns resulting in substantial erosion or siltation on- or off-site.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-4 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The proposed project would incorporate on-site storm water retention basins to retain the 100-year (0.01 percent annual chance of a flood), 24-hour storm event of 3 inches over the entire developed area (28.75 af of runoff volume). Five retention basins would be constructed on the project site to provide 30 af of storage capacity. As shown in Figure 3-3, the retention basins are located immediately adjacent to the west and south of the solar energy facility.

The off-site runoff will be intercepted by the proposed earthen channel at the northerly and easterly boundaries of the solar energy facility. The earthen channel will convey off-site storm water runoff around the development and discharge in the same manner as existing conditions downstream of the project site to continue its natural course and eventually into the East Highline Canal. The proposed earthen channels would provide flood protection to the development from uncontrolled off-site storm runoff. The project will be designed to meet County of Imperial storage requirements (100 percent of the 100-year storm (3 inches of rain)) (refer to the County's *Engineering Guidelines Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County* (2008) for storm water runoff, which will result in an impoundment of runoff in excess of the anticipated volume of runoff to be generated by the 100-year storm event. Therefore, the proposed project would result in no significant impacts associated with the alteration of drainage patterns resulting in on- or off-site flooding

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-5 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The proposed project is not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surfaces on the project site will remain pervious. The proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-6 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

Impede or redirect flood flows?

According to the FEMA's FIRM (Map Number 06025C0425C) (FEMA 2008), the proposed solar energy facility, gen-tie line, and access roads located on the western portion of the project site are located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain.

According to the FEMA FIRM (Map Number 06025C0450C) (FEMA 2008), the proposed eastern access road that would connect to Gas Line Road is located in a 100-year flood zone (0.01 percent annual chance) (Zone A). The proposed eastern access road would not involve the addition of structures which could impede or redirect flood flows. In addition, the proposed access road would be constructed with an all-weather surface allowing runoff to continue to percolate into the ground. Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, and impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-7 In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The project site is not located near any large bodies of water. The Salton Sea is located approximately 10 miles west of the project site. Because of the distance, the Salton Sea does not pose a particularly significant danger of inundation from seiche or tsunami as related to the project site. Furthermore, the project site is over 100 miles inland from the Pacific Ocean. In addition, the project site is relatively flat. Therefore, there is no potential for the project site to be inundated by seiches or tsunamis.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-8 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As described under Impact 3.8-1 above, with the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. Therefore, the proposed project would not pose a significant threat to local surface water features or shallow groundwater resources. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce impacts to a level less than significant.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measures HYD-1 and HYD-2 are required.

Significance after Mitigation

With the implementation of Mitigation Measures HYD-1 and HYD-2, the potential water quality impacts resulting during construction and operation of the project would be reduced to a level less than significant.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiberoptic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. No grading would be required. No new transmission structures would be required to install the fiberoptic cable. The proposed fiberoptic cable would result in no significant hydrology and water quality impacts.

3.8.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration activities would result in similar impacts on hydrology and water quality as would occur during construction of the proposed project. The primary water quality issue associated with decommissioning/restoration would be potential impacts on surface water quality, as the decommissioning activities would be similar to construction activities, and would be considered a significant impact. However, during decommissioning, soil erosion would be controlled in accordance with NPDES General Construction Permit(s) and project-specific SWPPP. Compliance with requirements and best available control technologies in place at the time of decommissioning are anticipated to be similar to, or more stringent than, those currently required. Compliance with all applicable water quality regulations would reduce the project's impacts during decommissioning to a level less than significant. Impacts on other water resource issues, including alteration of drainage patterns, contributing to off-site flooding, impacts on groundwater recharge and supply, would be less than significant. There would be no impact associated with inundation from flooding or mudflows.

Residual

With implementation of the mitigation measures listed above, implementation of the project would not result in any residual significant impacts related to increased risk of flooding from stormwater runoff, from water quality effects from long-term urban runoff, or from short-term alteration of drainages and associated surface water quality and sedimentation. With the implementation of the required mitigation measures during construction and decommissioning of the project, water quality impacts would be minimized to a less than significant level. Based on these circumstances, the project would not result in any residential significant and unmitigable adverse impacts on surface water hydrology and water quality.

This page is intentionally blank.

3.9 Land Use Planning

This section provides information regarding current land use, land use designations, and land use policies within, and in the vicinity of, the project site. Section 15125(d) of the CEQA Guidelines states that "[t]he EIR shall discuss any inconsistencies between the project and applicable general plans and regional plans." This section fulfills this requirement for the project. In this context, this section reviews the land use assumptions, designations, and policies of the County General Plan and other applicable federal, state, and local requirements, which governs land use within the project area and evaluates the project's potential to conflict and/or adherence with policies adopted for the purpose of avoiding or mitigating significant environmental effects. Where appropriate, mitigation is applied and the resulting level of impact identified.

3.9.1 Existing Conditions

Solar Energy Facility Site and Gen-Tie Line

The project site is located approximately three miles north of Niland, a census-designated place, in the unincorporated area of Imperial County. The project site is located on one parcel of land identified as APN 003-240-001. The proposed project would be located on approximately 100 acres within the northwest portion of this 640-acre parcel. The project site is located east of the intersection of Wilkins Road and an unnamed County road. The project footprint (physical area where proposed solar energy facility project components are to be located) is generally located east of Wilkins Road, north of the East Highline Canal, and west of Gas Line Road.

As shown on Figure 3.9-1, the 640-acre parcel is designated as Recreation under the County's General Plan. As depicted on Figure 3.9-2, the project site is currently zoned Open Space/Preservation with a Geothermal Overlay (S-2-G).

The County adopted the RE and Transmission Element, which includes a RE Zone (RE Overlay Map). The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown on Figure 3.9-2, the project site is located outside of the RE Energy Zone, but immediately adjacent to it.

Land uses surrounding the project site are designated by the General Plan as Recreation and Government to the north, Recreation and Special Purpose Facility to the east, and Agriculture to the south and west. The project site is generally surrounded to the north, east, and south by vacant land. A private road and the East Highline Canal border the project site to the south. Existing transmission lines border the project site to the east. An agricultural field lies to the northwest of the project site. The project site is located on the eastern edge of active agricultural lands with desert lands located immediately to the east and beyond.

The project site is located in a sparsely populated portion of Imperial County. There are no established residential communities located within or in the vicinity of the project site. The nearest established residential community is in Niland, located approximately 2 miles south of the project site.

The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 10 miles south of the project site.

Figure 3.9-1. General Plan Land Use Designations

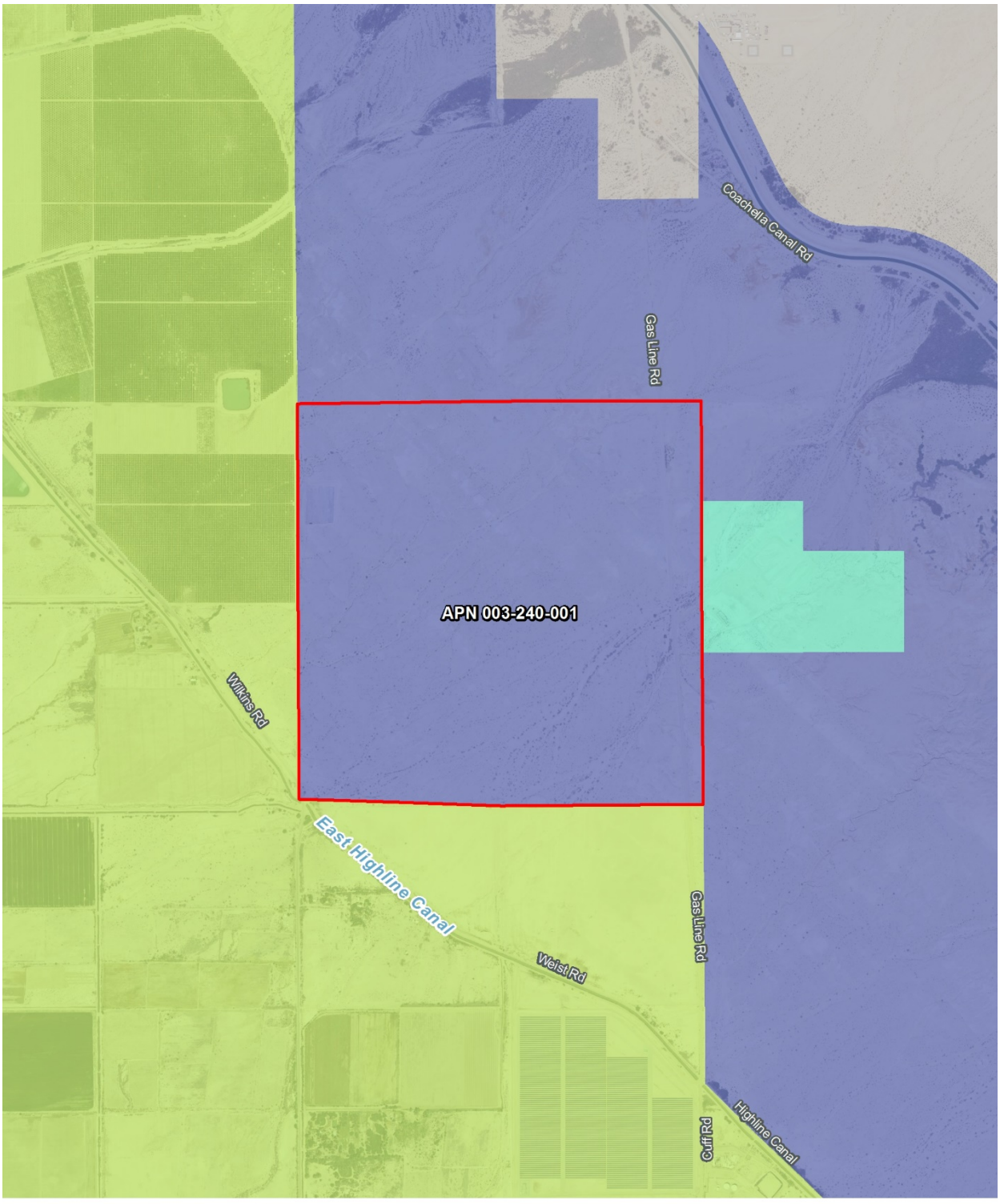
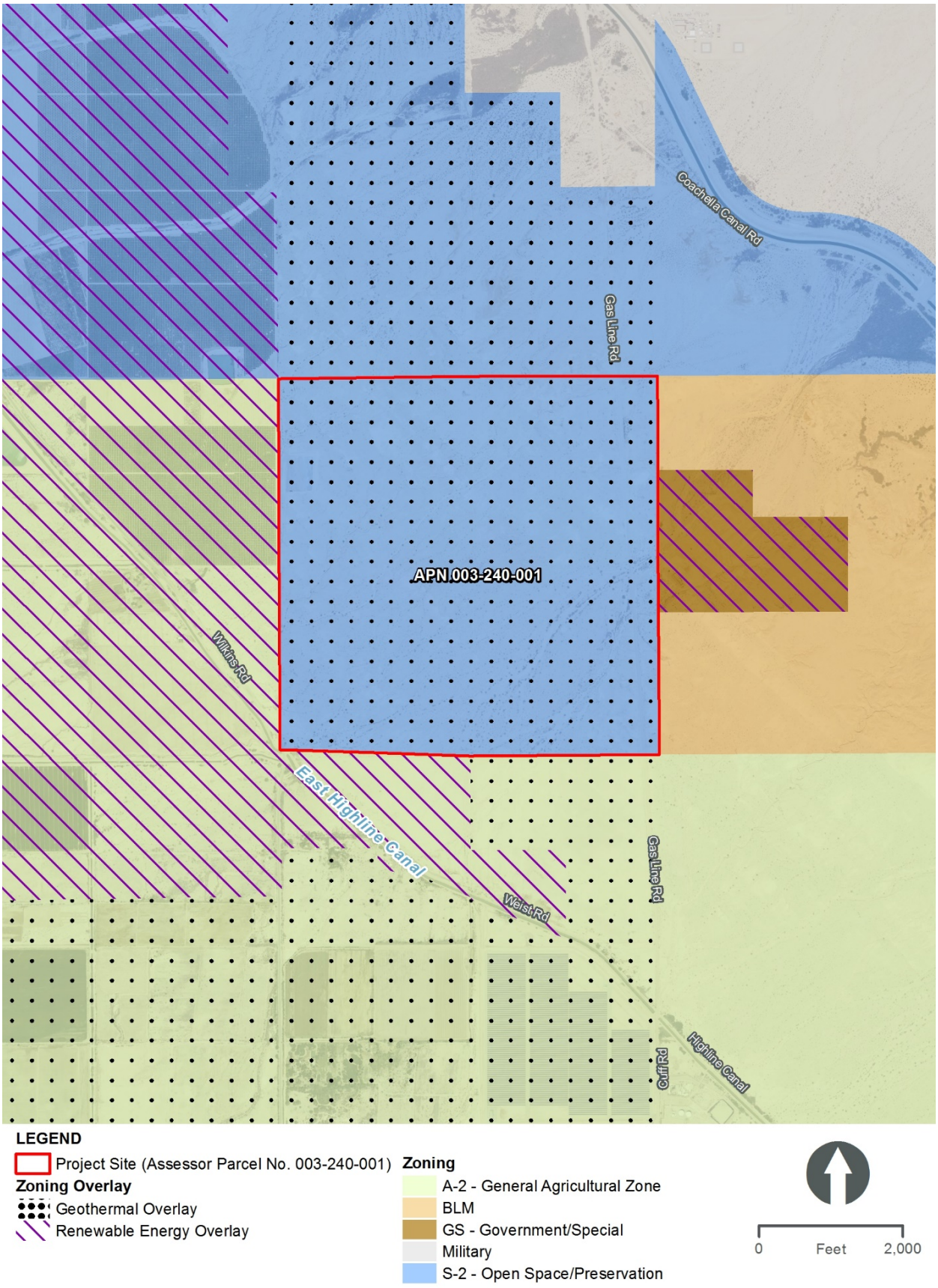


Figure 3.9-2. Zoning Designations



Fiberoptic Cable

The proposed fiberoptic cable originates at the project's substation on the solar energy facility site and terminates at the existing Niland Substation. The majority of the fiberoptic cable alignment traverses multiple parcels designated by the General Plan as Agriculture. The existing Niland Substation is located on APN 021-160-014 and is designated by the General Plan as Urban and zoned General Agriculture Zone with an urban area overlay (A-2-U).

3.9.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

State

State Planning and Zoning Laws

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning.

The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period or more.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan and any applicable specific plans.

Regional

Southern California Association of Governments - 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

SCAG is the designated metropolitan planning organization for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse," collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies.

On April 7, 2016, SCAG adopted the 2016-2040 RTP/SCS. The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the NAAQS as set forth by the federal CAA.

Local

County of Imperial General Plan

The purpose of the County's General Plan (as amended through 2008) is to direct growth, particularly urban development, to areas where public infrastructure exists or can be provided, where public health and safety hazards are limited, and where impacts to the County's abundant natural, cultural, and economic resources can be avoided. The following 10 elements comprise the County's General Plan: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; RE and Transmission Element; Water; and Parks and Recreation. Together, these elements satisfy the seven mandatory general plan elements as established in the California Government Code. Goals, objectives, and implementing policies and actions programs have been established for each of the elements. Table 3.9-1 provides an analysis of the project's consistency with applicable goals and policies contained in the County of Imperial General Plan.

Imperial County received funding from the California Energy Commission RE and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of RE projects. The Geothermal/Alternative Energy and Transmission Element was last updated in 2006. Since then there have been numerous renewable projects proposed, approved, and constructed within Imperial County as a result of California's move to reduce GHG emissions, develop alternative fuel sources and implement its Renewable Portfolio Standard. The County prepared an update to the Geothermal/Alternative Energy and Transmission Element of its General Plan, called the RE and Transmission Element. This Element is designed to provide guidance and approaches with respect to the future siting of RE projects and electrical transmission lines in the County. The County adopted this element in 2016, which has been amended several times to incorporate additional overlay zones.

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Imperial County General Plan, Land Use Element		
Public Facilities, Objective 8.7. Ensure the development, improvement, timing, and location of community sewer, water, and drainage facilities will meet the needs of existing communities and new developing areas.	Consistent	The project includes the necessary supporting infrastructure and would not require new community-based infrastructure. The project would be required to construct supporting drainage infrastructure on-site consistent with County requirements and mitigation measures prescribed in Section 3.8 Hydrology/Water Quality of the EIR. Once the project is operational, a limited amount of water would be required for solar panel washing and fire protection. The proposed project would not require an operations and maintenance building. Therefore, no septic system would be required for the project.

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Public Facilities, Objective 8.8. Ensure that the siting of future facilities for the transmission of electricity, gas, and telecommunications is compatible with the environment and County regulation.	Consistent	The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. CUP applications proposed for specific RE projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The County's General Plan and Land Use Ordinance allows that for RE projects proposed on land classified in a non-RE Overlay zone, that the land on which the project is located may be included/classified in the RE Overlay Zone if the RE project: 1) would be located adjacent to an existing RE Overlay Zone; 2) is not located in a sensitive area; and, 3) and would not result in any significant environmental impacts. As shown on Figure 3.9-2, the project site is located outside, but immediately adjacent to the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment and Zone Change to include/classify the project site into the RE Overlay Zone. With the approval of the General Plan Amendment, Zone Change, and the CUP for operation of the solar facility, the proposed project can be implemented.
Public Facilities, Objective 8.9. Require necessary public utility rights-of-way when appropriate.	Consistent	The project would include the dedication of ROW, if necessary, to facilitate the placement of electrical distribution and transmission infrastructure.
Protection of Environmental Resources, Objective 9.6. Incorporate the strategies of the Imperial County AQAP in land use planning decisions and as amended.	Consistent	Dust suppression will be implemented in accordance with a dust control plan approved by the ICAPCD. Section 3.3, Air Quality, discusses the project's consistency with the AQAP in more detail.

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Imperial County General Plan, Circulation and Scenic Highways Element		
Safe, Convenient, and Efficient Transportation System, Objective 1.1. Maintain and improve the existing road and highway network, while providing for future expansion and improvement based on travel demand and the development of alternative travel modes.	Consistent	The project would include limited operational vehicle trips and would not be expected to reduce the current LOS at affected intersections, roadway segments, and highways. The project does not propose residential or commercial development and therefore would not require new forms of alternative transportation to minimize impacts to existing roadways. A total of three access roads will service the proposed project. Access to the project site from the east would be located off Gas Line Road. Access to the solar energy facility portion of the project site from the west would include two routes: one route north from the southwest corner of the parcel off Wilkins Road (main access road), and another route off Wilkins Road just south of the existing orchard to the west of the project. All access roads will be constructed with an all-weather surface.
Safe, Convenient, and Efficient Transportation System, Objective 1.2. Require a traffic analysis for any new development which may have a significant impact on County roads.	Consistent	The Imperial County Department of Public Works has reviewed the trip generation associated with project construction and proposed construction traffic routes and has determined that a formal traffic study is not warranted for the project. Once construction is completed, the project would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. The project would include limited operational vehicle trips and would not be expected to reduce the current LOS at affected intersections, roadway segments, and highways.
Imperial County General Plan, Noise Element		
Noise Environment. Objective 1.3. Control noise levels at the source where feasible.	Consistent	Where construction-related and operational noise would occur in close proximity to noise sensitive land uses (e.g. less than 500 feet), the County would condition the projects to maintain conformance with County noise standards. There are currently no sensitive noise receptors that could be affected by the proposed project either during construction or operation.
Project/Land Use Planning. Goal 2: Review Proposed Actions for noise impacts and require design which will provide acceptable indoor and outdoor noise environments.	Consistent	As discussed in Section 6.0, Effects Found Not Significant, the project would be required to comply with the County's noise standards during both construction and operation. Further, there are no sensitive receptors that could be affected by the proposed project either during construction or operation.

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Imperial County General Plan, Conservation and Open Space Element		
Conservation of Environmental Resources for Future Generations Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Consistent	The project site would be converted from undeveloped land to a solar energy facility. The proposed project is a response to the state's need for RE to meet its Renewable Portfolio Standard, and while it would increase the availability of RE, it would also replace existing sources of non-RE. The power generated by the project would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts (i.e., air quality and GHG emissions). The proposed project would ensure future generations have access to a broad array of RE sources, providing the public with alternative choices to fossil fuels.
Conservation of Biological Resources. Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.	Consistent	A biological resources survey was conducted for the project site. As discussed in Section 3.4, Biological Resources, there are potentially significant biological resources located within the project site. However, with the implementation of mitigation identified in Section 3.4, Biological Resources, these impacts would be reduced to a level less than significant. The site is not designated or otherwise identified as critical habitat for any species.
Preservation of Cultural Resources. Objective 3.1 Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	A cultural resources report was prepared for the project site. As discussed in Section 3.5, Cultural Resources, the proposed project has the potential to encounter undocumented archaeological resources and human remains. Mitigation Measures CR-1 through CR-3 have been identified to reduce potential impacts to a level less than significant.

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Protection of Open Space and Recreational Opportunities. Objective 8.2 Focus all new renewable energy development within adopted Renewable Energy Overlay Zones.	Consistent	The County's General Plan and Land Use Ordinance allows that for RE projects proposed on land classified in a non-RE Overlay zone, that the land on which the project is located may be included/classified in the RE Overlay Zone if the RE project: 1) would be located adjacent to an existing RE Overlay Zone; 2) is not located in a sensitive area; and, 3) and would not result in any significant environmental impacts. As shown on Figure 3.9-2, the project site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment and Zone Change to include/classify the project site into the RE Overlay Zone. With the approval of the General Plan Amendment, Zone Change, and CUP for operation of the solar facility, the proposed project can be implemented. As detailed in Sections 3.1 through 3.11 of this EIR, no unavoidable or unmitigable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.
Protection of Air Quality and Addressing Climate Change Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility. Therefore, the proposed Project is consistent with this goal.
Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-2). Therefore, the proposed project is consistent with this objective.

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-2). Therefore, the proposed project is consistent with this objective.
Program: Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain.	Consistent	The project does not contain a residential component nor would it place housing or other structures within a 100-year flood hazard area.
Imperial County General Plan, RE and Transmission Element		
Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing RE facilities.	Consistent	A biological resources report has been prepared for the project, which is summarized in Section 3.4, Biological Resources, along with potential impacts attributable to the project. With incorporation of mitigation identified in Section 3.4, Biological Resources, less than significant impacts would result.
Objective 1.7: Assure that development of RE facilities and transmission lines comply with ICAPCD's regulations and mitigation measures.	Consistent	Dust suppression will be implemented including the use of water and soil binders during construction. Section 3.3, Air Quality, discusses the project's consistency with ICAPCD's regulations in more detail.
Objective 2.1: To the extent practicable, maximize utilization of IID's transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors easements, and rights-of-way.	Consistent	The project involves the construction and operation of new RE infrastructure that would interconnect with existing IID transmission infrastructure thereby maximizing the use of existing facilities located within existing easements and/or ROWy. As discussed in Chapter 2, Project Description, the power produced by the proposed project would be conveyed to the local power grid via an on-site 92 kV substation, which will be tied directly to IID's 92 kV transmission line.
Imperial County General Plan, Seismic and Public Safety Element		
Goal 1. Include public health and safety considerations in land use planning.	Consistent	Division 5 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy which are located across the trace of an active fault are prohibited. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a
Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		
Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations.		

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Objective 1.4. Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service. Objective 1.7. Require developers to provide information related to geologic and seismic hazards when siting a proposed project. Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena. Objective 2.2. Reduce risk and damage due to seismic hazards by appropriate regulation. Objective 2.5 Minimize injury, loss of life, and damage to property by implementing all state codes where applicable. Objective 2.8 Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		person to undue hazard created by the construction. Since the project site is located in a seismically active area, the project is required to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.50 gravity. It should be noted that, the project would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized. A preliminary geotechnical report has been prepared for the proposed project. The preliminary geotechnical report has been referenced in this environmental document. Additionally, a design-level geotechnical investigation would be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Imperial County General Plan, Water Element		
Program: The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	Mitigation measures will require that the applicant of the project prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.
Program: All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response for Water Element Policy 1 above.
Imperial County General Plan, Housing Element		
Not Applicable. The proposed project is a solar energy project and does not include the development of housing.		

Table 3.9-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Imperial County ALUCP		
Safety Objective 2.1*:* The intent of land use safety compatibility criteria is to minimize the risks associated with an off-airport accident or emergency landing.	Consistent	The project site is not located within a designated ALUCP area. The proposed project would use non- or anti-reflective material to reduce potential glare impacts to aircraft. At its meeting on June 17, 2020, the Airport Land Use Commission reviewed the project for consistency with the ALUCP and made the finding that the project is consistent with the 1996 ALUCP.

Source: Imperial County General Plan, as amended

Notes:
ALUCP=Airport Land Use Compatibility Plan; AQAP=air quality attainment plan; CBC=California Building Code; CUP=conditional use permit; EIR=environmental impact report; ICAPCD=Imperial County Air Pollution Control District; IID=Imperial Control District; LOS=level of service; MW=megawatt; RE=renewable energy; ROW=right-of-way

The RE and Transmission Element includes a RE Zone (RE Overlay Map). The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects, with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown on Figure 3.9-2, the project site is located outside of, but immediately adjacent to the RE Overlay Zone.

An analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in Table 3.9-1. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Planning Commission and Board of Supervisors retain final authority for the determination of the project's consistency with the General Plan.

County of Imperial Land Use Ordinance

Permitted and Conditional Uses. The County's Land Use Ordinance provides the physical land use planning criteria for development within the jurisdiction of the County. As depicted on Figure 3.9-2, the project site is zoned Open Space/Preservation with a geothermal overlay (S-2-G). The purpose of the S-2 zoning designation is to "preserve the cultural, biological, and open space areas that are rich and natural as well as cultural resources" (County of Imperial 2017). While certain uses are allowed within the S-2 zone, such uses must be compatible with the intent of the Conservation and Open Space Element of the General Plan.

Sections 90519.01 and 90519.02 of the Land Use Ordinance identifies the permitted and conditional uses within the S-2 zoning designation. Uses identified as conditionally permitted require a CUP, which is subject to the discretionary approval of the County Board of Supervisors per a recommendation by the County Planning Commission. Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County: Major facilities relating to the generation and transmission of electrical energy provide[d] such facilities are not under State or Federal law, to [be] approved exclusively by an agency, or agencies of the State or Federal government, and provided such facilities shall be approved subsequent to coordination review of the IID for electrical matters. Such uses shall include but be limited to the following:

- Electrical generation plants
- Facilities for the transmission of electrical energy (100-200 kV)
- Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)

Height Limit. Pursuant to Section 90519.07 of the Land Use Ordinance, the maximum height limit in the S-2 zone is 40 feet, except for communication towers, which have a maximum height limit of 100 feet.

Imperial County Airport Land Use Compatibility Plan

The Imperial County Airport Land Use Compatibility Plan (ALUCP) provides the criteria and policies used by the Imperial County Airport Land Use Commission to assess compatibility between the principal airports in Imperial County and proposed land use development in the areas surrounding the airports. The ALUCP emphasizes review of local general and specific plans, zoning ordinances, and other land use documents covering broad geographic areas.

The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 10 miles south of the project site. According to Figure 3C of the ALUCP, no portion of the project site is located within the Cliff Hatfield Municipal Memorial Airport's land use compatibility zones (County of Imperial 1996). At its meeting on June 17, 2020, the Airport Land Use Commission reviewed the project for consistency with the ALUCP and made the finding that the project is consistent with the 1996 ALUCP.

3.9.3 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to land use/planning are considered significant if any of the following occur:

- Physically divide an established community
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Methodology

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.9-1 Would the project physically divide an established community?

The project site is located in a sparsely populated portion of Imperial County. There are no established residential communities located within or in the vicinity of the project site. Therefore, implementation of the proposed project would not divide an established community and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-2 Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project's consistency with applicable land use plans, policies, and regulations is evaluated below.

County of Imperial General Plan

The County's General Plan applies to the solar energy facility and supporting infrastructure portions associated with the project. An analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in Table 3.9-1. As shown in Table 3.9-1, the proposed project would be generally consistent with the goals and objectives of the General Plan.

General Plan Amendment. The County adopted the RE and Transmission Element, which includes a RE Energy Overlay Zone. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As stated in the RE and Transmission Element, "CUP applications proposed for specific renewable projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone (County of Imperial 2016)." As shown on Figure 3.9-2, the project site is located outside of the RE Energy Zone. Therefore, the proposed project would conflict with the RE Overlay Zone because the project is located outside of areas designated for RE projects. Without an amendment to the RE Overlay Zone, the proposed project would not be allowed and would conflict with the RE and Transmission Element of the General Plan. This is considered a potentially significant impact. However, the project applicant is requesting a General Plan amendment to the RE and Transmission Element of the General Plan to include/classify the project site into the RE Overlay Zone.

As stated in the RE and Transmission Element:

An amendment to the overlay zone would only be approved by the County Board of Supervisors if a future RE project met one of the following two conditions:

- **Adjacent to the Existing RE Overlay Zone:** An amendment may be made to allow for development of a future RE project located adjacent to the existing RE Overlay Zone if the project:
    - Is not located in a sensitive area
    - Would not result in any significant impacts

- **"Island Overlay":** An amendment may be made to allow for development of a future RE project that is not located adjacent to the existing RE Overlay Zone if the project:
  - Is located adjacent (sharing a common boundary) to an existing transmission source
  - Consists of the expansion of an existing RE operation
  - Would not result in any significant environmental impacts (County of Imperial 2016).

Because the project site is located adjacent to an existing RE Overlay Zone; the project will need to meet the criteria identified for the "Adjacent to the Existing RE Overlay Zone" to obtain approval of an amendment to the RE Overlay Zone. Table 3.9-2 provides an analysis of the project's consistency with the "Adjacent to the Existing RE Overlay Zone" criteria. As shown in Table 3.9-2, the proposed project would be consistent with the "Adjacent to the Existing RE Overlay Zone" criteria because it is not located in a sensitive area and would not result in any significant environmental impacts.

The General Plan Amendment and Zone Change requests submitted by the project applicant are subject to approval by the County Board of Supervisors. If approved, the project applicant will be able to request for approval of a CUP to allow the construction and operation of the proposed solar facility and the proposed project would be consistent with the RE and Transmission Element of the General Plan.

Table 3.9-2. Project Consistency with "Adjacent to the Existing Renewable Energy Overlay Zone" Criteria

Criteria	Criteria Met?
Is not located in a sensitive area?	Consistent. The project site is not located in an area recognized as sensitive for any resource categories.
Would not result in any significant environmental impacts?	Consistent. As detailed in Sections 3.1 through 3.11 of this EIR, no unavoidable or unmitigable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant. Therefore, the proposed project would not result in a residual significant impact.

Notes:
EIR=environmental impact report

County of Imperial Land Use Ordinance

CUP. Development of the solar energy facility and supporting infrastructure is subject to the County's zoning ordinance. Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility project.

The project site is located on one privately-owned legal parcel zoned Open Space/Preservation with a geothermal overlay (S-2-G). Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County: Major facilities relating to the generation and transmission of electrical energy, provided such facilities are not under State or Federal law, to be approved exclusively by an agency, or agencies of the State or Federal government, and provided such facilities shall be approved subsequent to coordination review of the IID for electrical matters. Such uses shall include but be limited to the following:

- Electrical generation plants
- Facilities for the transmission of electrical energy (100-200 kV)
- Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)

The CUP request submitted by the project applicant is subject to approval by the County Board of Supervisors. If the CUP is approved, the proposed project would not conflict with the County's zoning ordinance.

Variance. The proposed project would require the use of transmission towers of up to 70 feet in height, which would exceed the height limit within the S-2 zone. The existing S-2 zone allows a maximum height limit of 40 feet. As part of the project, a Variance application would be required which, if approved by the County, would allow the new towers to be built at 70 feet in height. If the Variance is approved, the proposed project would not conflict with the County's zoning ordinance.

Imperial County Airport Land Use Compatibility Plan

According to Figure 3C of the ALUCP, no portion of the project site is located within the Cliff Hatfield Municipal Memorial Airport's land use compatibility zones (County of Imperial 1996). Furthermore, on June 17, 2020, the Airport Land Use Commission determined that the proposed project is consistent with the ALUCP. Therefore, the proposed project would not conflict with the Imperial County ALUCP, and no significant impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

If the on-site wireless communication system is not constructed as described in Section 2.3.2 Substation, ~~The proposed project includes~~ the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation would be required for the remote communication system. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles within existing easements and/or ROW intended for utility uses. No new transmission structures would be required to install the fiberoptic cable. Further, the fiberoptic cable would not present a barrier between communities. Based on these considerations, the fiberoptic cable would not physically divide an established community or conflict with a land use plan, policy or regulation. No land use impacts would occur.

3.9.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration would not physically divide an established community or conflict with any applicable land use plans, policies, or regulations. Decommissioning would be conducted in compliance with a required Reclamation Plan that would be implemented at the end of the project's life and would adhere to Imperial County's decommissioning requirements. Further, decommissioning activities would be subject to mandatory compliance with applicable local, State, and federal regulations designed to avoid adverse impacts to the project area and surrounding environment. Therefore, environmental impacts due to a conflict with an applicable land use plan, policy or regulation would be less than significant.

Residual

With the approval of a CUP and reclamation plan to address post-project decommissioning, the project would generally be consistent with applicable state, regional, and local plans and policies. Based on these circumstances, the project would not result in any residual significant and unmitigable land use impacts.

This page is intentionally blank.

3.10 Transportation/Traffic

This section addresses the project's impacts on traffic and the surrounding roadway network associated with construction and operation of the project. The following discussion describes the existing environmental setting in the surrounding area, the existing federal, state, and local regulations regarding traffic, and an analysis of the potential impacts of the proposed project.

3.10.1 Existing Conditions

The project site is located approximately three miles north of Niland, a census-designated place, in the unincorporated area of Imperial County. The project site is located east of the intersection of Wilkins Road and an unnamed county road. The project footprint (physical area where proposed project components are to be located) is generally located east of Wilkins Road, north of the East Highline Canal, and west of Gas Line Road.

Existing Circulation Network

The following roadway classifications are derived from the County of Imperial General Plan Circulation and Scenic Highways Element (County of Imperial 2008):

Expressway

The main function of this classification is to provide regional and intra-county travel services. Features include high design standards with six travel lanes; wide landscaped medians; highly restricted access; provisions for public transit lands, including but not limited to, bus lanes, train lanes, or other mass transit type means; and no parking. Minimum [right-of-way] [ROW] is 210 feet consisting of three travel lanes per direction, a 56-foot median, and shoulders along both sides of the travel way. The ROW width is exclusive of necessary adjacent easements such as for the IID facilities as these vary. The minimum intersection spacing is 1 mile (ROWs may be greater if the road segment also serves as a corridor for public utilities).

Prime Arterial

The main function of this classification is to provide regional, sub regional, and intra-county travel services. Features include high design standards with four to six travel lanes, raised and landscaped medians, highly restricted access, which in most cases will be a 1 mile minimum, provisions for public transit lanes, including but not limited to bus lanes, train lanes, or other mass transit type means and no parking. The absolute minimum ROW without public transit lanes is 136 feet. ROW dimensions are specified in the standards for specific road segments.

Minor Arterial

These roadways provide intra-county and sub-regional service. Access and parking may be allowed, but closely restricted in such a manner as to ensure proper function of this roadway. Typical standards include the provision for four and six travel lanes with raised landscaped medians for added safety and efficiency by providing protected left turn lanes at selected locations. Some may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 102 feet for four lanes and 126 feet for six lanes.

Major Collector (Collector)

These roadways are designed to provide intra-county travel as a link between the long haul facilities and the collector/local facilities. Although it frequently provides direct access to abutting properties, that is not its primary purpose. Typical design features include provision for four travel lanes without a raised median and some may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 84 feet. Parking is generally not permitted.

Minor Local Collector (Local Collector)

This is designed to connect local streets with adjacent Collectors or the arterial street system. Design standards include provision for two travel lanes and parking, except in specific locations where parking is removed to provide a turn lane at intersections. Local Collector streets frequently provide direct access to abutting properties, although that should be avoided where feasible. Minimum ROW is 70 feet.

Residential Street

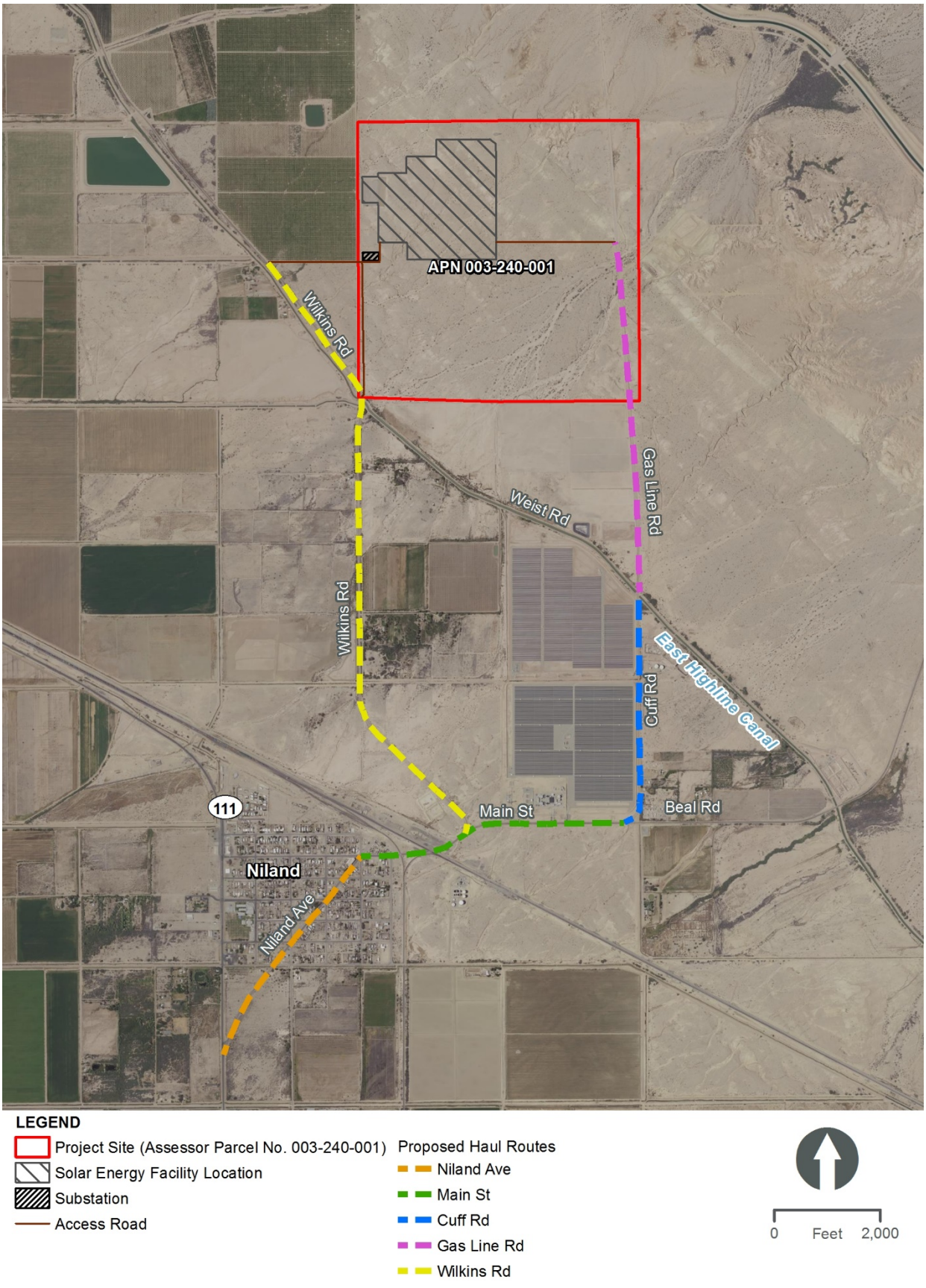
This street type includes residential cul-de-sac and loop streets and is designed to provide direct access to abutting properties and to give access from neighborhoods to the Local Street and Collector Street system. This classification should be discontinuous in alignment, such that through trips are discouraged. Typical design standards include provision for two travel lanes, parking on both sides, and direct driveway access. Minimum ROW is 60 feet.

Project Access Roadways

Following is a brief description of the roadways that would be utilized for access to the project site during construction, and subsequent operation (e.g., maintenance) activities. Figure 3.10-1 depicts the proposed haul routes/construction access to the project site.

- **State Route (SR)-111** (Caltrans-operated highway). SR 111 is maintained by Caltrans and is considered to be in good condition. Because SR 111 is a State operated facility, it is not maintained by the County.
- **Niland Avenue.** Niland Avenue is a paved County road.
- **Main Street.** Main Street is a paved County road.
- **Cuff Road.** Cuff Road is an unpaved County road.
- **Wilkins Road.** Wilkins Road is a paved County road. The portion of Wilkins Road from the southwest corner of the project parcel to the southern end of the existing orchard will only be utilized while improving the project's secondary emergency access road (along southern end of orchard). After improvement of the proposed secondary emergency access road, the project applicant's easement with the land owner specifies this road will only be used for emergency vehicles.
- **Gas Line Road.** Gas Line Road is a dirt service road.

Figure 3.10-1. Proposed Haul Routes



Alternative/Public Transportation

Fixed Route Transportation

Imperial Valley Transit (IVT) is an inter-city fixed route bus system, subsidized by the Imperial Valley Association of Governments (IVAG), administered by the County Department of Public Works and operated by a public transit bus service. The service is wheelchair accessible and Americans with Disabilities Act compliant.

Routes are categorized in the following manner:

- **Fixed Routes.** Fixed routes operate over a set pattern of travel and with a published schedule. The fixed route provides a low cost, reliable, accessible and comfortable way to travel.
- **Deviated Fixed Route.** In several service areas, IVT operates on a deviated fixed route basis so that persons with disabilities and limited mobility are able to travel on the bus. Passengers must call and request this service the day before service is desired in the communities of Seeley, Ocotillo and the east side of the Salton Sea.
- **Remote Zone Routes.** Remote zone route operate once a week. These routes are "lifeline" in nature in that they provide connections from some of the more distant communities in the Imperial County area (IVT 2020).

The project site is not within the Fixed Route Transportation system and, therefore, would not receive regular bus service to the project site or within the vicinity of the project site. The nearest IVT bus stop is on Highway 111 and Main Street in Niland.

Bicycle Facilities

The Highway Design Manual classifies bikeways into three types:

- Class I Bike Path – Provides for bicycle travel on a ROW completely separated from the street
- Class II Bike Lane – Provides a striped lane for one-way travel within the street
- Class III Bike Routes – Provides routes that are signed but not striped

Although none of the roadway segments within proximity of the project site are designated a bikeway classification, the County of Imperial Bicycle Master Plan Update lays out a framework for creating and expanding programs and improvements designed to increase bicycling activity in the County of Imperial. There are no roadways in immediate proximity to the site planned as a bike route.

Daily Street Segment Levels of Service

As previously described, the project site is located in a rural setting with many of these being compacted dirt roads with no congestion. As prescribed in the Circulation and Scenic Highway Element, the intent of the County is to provide a system of roads and streets that operate at a level of service (LOS) C or better (County of Imperial 2008).

3.10.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

State

California Department of Transportation

Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Specifically, Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System.

As it relates to the proposed project and potential construction access routes, Caltrans is responsible for maintaining and managing SR 111.

Regional

2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, the Southern California Association of Governments (SCAG) adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2016). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. Input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS demonstrates how the region will reduce emissions from transportation sources to comply with SB 375 and meet the NAAQS set forth by the Clean Air Act.

The updated RTP/SCS contains thousands of individual transportation projects that aim to improve the region's mobility and air quality and revitalize the economy. Since the RTP/SCS's adoption, the county transportation commissions have identified new project priorities and have experienced technical changes that are time-sensitive. Additionally, the new amendments for the plan have outlined minor modifications to project scopes, costs and/or funding and updates to completion years. The amendments to the RTP/SCS do not change any other policies, programs, or projects in the plan.

Local

County of Imperial Circulation and Scenic Highways Element

The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses and as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document which contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Coordination across jurisdictional standards for road classification and design standards was identified as a crucial component to the 2008 update of the Circulation and Scenic Highways Element. The intent

of this element is to provide a system of roads and streets that operate at a LOS "C" or better (County of Imperial 2008).

Level of Service

LOS is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs. Additionally, with the growth of Imperial County, transportation management and systems management will be necessary to preserve and increase roadway "capacity." LOS standards are used to assess the performance of a street or highway system and the capacity of a roadway.

County of Imperial Bicycle Master Plan Update: Final Plan

In 2012, the County of Imperial adopted an updated Bicycle Master Plan to serve as the guiding document for the development of an integrated network of bicycle facilities and supporting programs designed to link the unincorporated areas and attractive land uses throughout the County. This document is an update to the previously adopted Countywide Bicycle Master Plan; and was prepared to accomplish the following goals:

1. To promote bicycling as a viable travel choice for users of all abilities in the County
2. To provide a safe and comprehensive regional connected bikeway network
3. To enhance environmental quality, public health, recreation and mobility benefits for the County through increased bicycling

The County of Imperial's General Plan, Circulation and Scenic Highways Element, and Conservation and Open Space Element, provide a solid planning basis for the Bicycle Master Plan. In spite of the fact that there are a limited number of bicycle facilities in Imperial County and no comprehensive bicycle system, there is a growing interest in cycling and numerous cyclists bike on a regular basis for both recreation and commuting to work and school.

3.10.3 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to transportation and traffic are considered significant if any of the following occur:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

County of Imperial

The County of Imperial does not have published significance criteria for traffic impacts. However, the Circulation and Scenic Highways Element of the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS C or better. Therefore, if an intersection or segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the impact is considered significant. If the location operates at LOS D or worse with and without project traffic, the impact is considered significant if the project causes the intersection delta to increase by more than 2 seconds, or the volume to capacity (V/C) ratio to increase by more than 0.02. V/C ratios provide a quantitative description of traffic conditions for signalized intersections. These amounts are consistent with those used in the County of Imperial in numerous traffic studies.

California Department of Transportation

A project is considered to have a significant impact on Caltrans facilities if the new project traffic has decreased the operations of surrounding roadways by a defined threshold. If the project exceeds the thresholds addressed in Table 3.10-1, then the project may be considered to have a significant project impact. A feasible mitigation measure will need to be identified to return the impact within the thresholds (pre-project + allowable increase) or the impact will be considered significant and unmitigated when affecting any state highway facilities. As stated previously, Caltrans is responsible for maintaining and managing SR 111.

Table 3.10-1. Level of Service Thresholds for Unsignalized Intersections

LOS	Average Control Delay Per Vehicle (Seconds/Vehicle)	Expected Delay to Minor Street Traffic
A	0.0 ≤ 10.0	Little or no delay
B	10.1 to 15.0	Short traffic delays
C	15.1 to 25.0	Average traffic delays
D	25.1 to 35.0	Long traffic delays
E	35.1 to 50.0	Very long traffic delays
F	≥ 50.0	Severe congestion

Source: Transportation Resource Board 2010
LOS – level of service

Methodology

The assessment evaluates the potential for the project, as described in Chapter 2, Project Description, to assess the project trip generation created during and after construction, and roadway conditions for roads that would be utilized to access the project site for construction.

Project Trip Generation

Project trip generation for both the construction and operational scenarios will be very minimal. The project will generate the most traffic during construction. The construction vehicle mix for both on-road and off-road equipment, by each phase of construction, is presented in Table 6 of the *Air Quality Technical* Study prepared for the project (Appendix D of this EIR).

Table 3.10-2 provides the estimated average daily on-road project trip generation (i.e., trips to and from the site) for the construction phases of the project. As shown, the maximum number of on-road trips during construction would be approximately 80 trips (50 worker trips and 30 truck trips).

The proposed project requires minimal operations and maintenance activities and would not require presence of full-time employees. However, it is conservatively assumed that for day-to-day inspection and minor maintenance, some employees would commute to the project site. The annual operations are assumed to be as follows:

- For site inspection and minor repairs, up to 4 one-way worker trips per day would be generated.
- Routine maintenance activities would include panel washing, which is expected to occur four times annually over a total of 20 days. Panel washing activities are estimated to require additional daily trips of 4 work 6 haul trucks for transport of water during each event.

This estimated project trip generation is below the County's threshold requirement for preparation of a formal traffic impact analysis as the trips would be so minimal that they would not affect roadway or intersection levels of service for any of the roadways that would be utilized for access to and from the project site. Based on the 20 MW size of the project and relatively small acreage, the construction workforce will be limited. Because of the minimal trips estimated, the Department of Public Works has not required a detailed traffic study for this project pursuant to the Imperial County Congestion Management Program (CMP).

Table 3.10-2. Project Trip Generation

Construction Phase (Duration)	Daily Vehicle Trips	
	Workers	Trucks
Site Preparation (30 working days)	30	25
Facility Installation (110 working days)	50	30
Gen-Tie, Site Restoration (20 working days)	20	20

Source: Appendix D of this EIR

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.10-1 Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

During the construction phase of the project, the maximum number of trips generated on a daily basis would be approximately 80 trips. This trip count is so low that it does not require a formal traffic analysis as it does not have the potential to impact LOS of roadway segments and intersections. There is no regular bus service to the general area and project-related construction and operations and maintenance phases would not impact mass transit. Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. The proposed project would not interfere with bicycle facilities because the project is

located in a rural portion of the County with no existing or potential future designated bike routes in the area.

Implementation of the proposed project would not require any public road widening to accommodate vehicular trips associated with the project (construction phase and operational phase), while maintaining adequate level of service. Impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.10-2 Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

This threshold becomes mandatory for projects in which the Draft EIR is released for public review after July 1, 2020. As such, this threshold is not evaluated in this EIR. The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.10-3 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. The internal access road would be graded and compacted native soils as required for construction, operations, maintenance, and emergency vehicle access.

During construction, access to the project site for construction vehicles would utilize the following roads:

- SR 111 (Caltrans-operated highways)
- Niland Avenue
- Main Street
- Cuff Road
- Wilkins Road
- Gas Line Road

At the time of final design for the project, and as a Condition of Approval of the project, the applicant will submit a final Haul Route Study that identifies what road improvements, in any, are requested by Department of Public Works and a cost estimate. The applicant would work with Department of Public Works to address the appropriate improvements and Applicant's responsibility for the cost of improvements, if required. The haul route study would include the following components:

1. Pictures and/or other documents to verify the existing conditions of the roads proposed to be utilized for haul routes
2. The haul route study shall evaluate the impact to Wilkins Road and provide recommendations on improvements, as well as quantity and cost estimates for such improvements

The County Department of Public Works will require a Roadway Maintenance Agreement, and that the Application provide financial security to maintain the road on the approved haul route study during construction. The Applicant would be responsible to repair any damages caused by construction traffic during construction and maintain them in safe conditions. The use of the proposed access roads are not otherwise anticipated to increase hazards because of design features or incompatible uses and no significant impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.10-4 Would the project result in inadequate emergency access?

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. The internal access road would be graded and compacted (native soils) as required for construction, operations, maintenance, and emergency vehicle access. The access and service roads would also have turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards (70 feet by 70 feet and 20-foot-wide access road). The width in-between solar arrays shall be a minimum of 9 feet. The width between solar arrays shall not be less than 10 feet. Based on this context, impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

The proposed project includes the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. No new transmission structures would be required to install the fiberoptic cable. The installation of the fiberoptic cable would not require a substantial number of heavy construction equipment or vehicle trips. Average daily traffic would be less than the average daily traffic required for construction of the solar energy facility and gen-tie line. Based on these considerations, the fiberoptic cable would not result in a significant impact related to possible safety hazards, or possible conflicts with adopted policies, plans, or programs. A less than significant impact is identified and no mitigation is required.

3.10.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

This section included an analysis of construction traffic for the proposed project. As presented above, construction traffic would not result in a significant impact on any of the project area roadway segments or intersections because of the low volume of traffic. A similar scenario would occur during the decommissioning and site restoration stage for the project. Average daily traffic would be similar to or less than the average daily traffic required for construction. Similarly, the decommissioning activities would not result in a significant impact related to possible safety hazards, or possible conflicts with adopted policies, plans, or programs as the decommissioning and subsequent restoration would revert the project site to the existing condition. Therefore, decommissioning and restoration of the project site would not generate traffic resulting in a significant impact on the circulation network. A less than significant impact is identified and no mitigation is required.

Residual

The construction and operation of the proposed project would not result in direct impacts on intersections, roadway segments, and freeway segments. Therefore, less than significant impacts have been identified. No mitigation is required and no residual unmitigated impacts would occur with implementation of the project.

This page is intentionally blank.

3.11 Utilities/Service Systems

This section includes an evaluation of potential impacts for identified Utilities/Service Systems that could result from implementation of the project. Utilities/Service Systems include wastewater treatment facilities, stormwater drainage facilities, water supply and treatment, and solid waste disposal. The impact analysis provides an evaluation of potential impacts to Utilities/Service Systems based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description. Development Design & Engineering prepared the *Water Supply Assessment* (WSA) for the Wister Solar Development Project. This report is included in Appendix L of this EIR.

The IS/NOP prepared for this EIR determined that impacts with regards to solid waste disposal, storm drainage, and wastewater treatment would be less than significant.

Solid waste generation would be minor for the construction and operation of the project. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. There are over 20 active solid waste facilities listed in Imperial County in the CalRecycle database. Trash would likely be hauled to the Niland Solid Waste Site (13-AA-0009) located in Niland. The Niland Solid Waste Site has approximately 318,669 cubic yards of remaining capacity and is estimated to remain in operation through 2056 (CalRecycle n.d.). Therefore, there is ample landfill capacity in the County to accommodate the minor amount of solid waste generated by construction and operation of the project.

The project does not require expanded or new stormwater drainage facilities (other than on-site retention areas and earthen drainage channels) because the proposed solar facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events. Water from solar panel washing would continue to percolate through the ground, as a majority of the surfaces within the project site would remain pervious.

3.11.1 Environmental Setting

Groundwater

The proposed project is located within the East Salton Sea Basin, which includes the Chocolate Mountains and the northeastern margin of the Imperial Valley. The groundwater storage capacity of the East Salton Sea Basin was estimated at 360,000 acre-feet. Groundwater usage in the East Salton Sea Basin is limited due to generally poor water quality and limited inhabitants. Extraction rates for the East Salton Sea Basin were last estimated in 1952 at 6 acre-feet/year, which is 3 percent of the estimated recharge rate of 200 acre-feet/year. Limited development in the East Salton Sea Basin suggests that current extraction rates are similar. However, a lack of recent data limits the ability update this estimate. Furthermore, surface water from the Colorado River is conveyed into the Imperial Valley through a network of canals, laterals, and reservoirs, which has further reduced the need to develop groundwater resources. Groundwater in the East Salton Sea Basin is present in alluvial aquifers at depths up to several hundred feet, and with generally high transmissivities (Appendix L of this EIR).

At the project site, groundwater may also be present in an alluvial aquifer 40-50 feet below ground surface (bgs). Historically, groundwater recharge was significant in the vicinity of the earthen lined Coachella Canal. The replacement of the canal with a concrete lined channel has greatly reduced recharge to the adjacent alluvial aquifers. Near the project site, the Coachella Canal was concrete lined in the late 2000s. The East Highline Canal remains earthen-lined, which likely leads to recharge into the shallow alluvial aquifers near the project site. Recharge from precipitation is generally limited

due to low precipitation rates and high evaporation potential. Recharge rates may be higher in the Chocolate Mountains due to higher precipitation rates at higher elevations (4-6 inches/year). Recharge events are likely limited to larger storm events, which may generate runoff and seepage along ephemeral channels. Recharge rates from precipitation were estimated at 0.019 inches/year.

3.11.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

State

Senate Bill 610

With the introduction of SB 610, any project under CEQA shall provide a WSA if:

- The project meets the definition of the Water Code Section 10912:

  For the purposes of this part, the following terms have the following meanings:

  (a) ''Project'' means any of the following:

  (1) A proposed residential development of more than 500 dwelling units.

  (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

  (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

  (4) A proposed hotel or motel, or both, having more than 500 rooms.

  (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

  (6) A mixed-use project that includes one or more of the projects specified in this subdivision.

  (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

  (b) If a public water system has fewer than 5,000 service connections, then ''project'' means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

California Water Code

Water Code Sections 10656 and 10657 restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources. In addition, Water Code Section 10910 describes the WSA that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of

consultation in which to provide a WSA to the CEQA lead agency. Water Code Section 10910 also specifies the circumstances under which a project for which a WSA was once prepared would be required to obtain another assessment. Water Code Section 10631 directs that contents of the urban water management plans include further information on future water supply projects and programs and groundwater supplies.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) is designed to preserve and enhance water quality in the Region and to protect the beneficial uses of all regional waters for the benefit of present and future generations. The Basin Plan contains the Region's beneficial uses for ground and surface waters, water quality objectives to protect beneficial uses, and implementation programs to achieve water quality objectives. The Basin Plan fulfills state and federal statutory requirements for water quality planning, thereby preserving and protecting ground and surface waters of the Colorado River Basin Region.

Local

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 3.11-1 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives from the Conservation and Open Space Element, and Renewable Energy and Transmission Element, as they relate to the proposed project. While the EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 3.11-1. County of Imperial General Plan Consistency Analysis – Water Service

Applicable General Plan Goals and Policies	Consistency Determination	Analysis
Conservation and Open Space Element		
Preservation of Water Resources, Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	Water will be required during construction, operation, and decommissioning/restoration of the project. During construction, operation, and decommissioning of the project, non-potable water would be obtained from an on-site groundwater well.

Table 3.11-1. County of Imperial General Plan Consistency Analysis – Water Service

Applicable General Plan Goals and Policies	Consistency Determination	Analysis
Renewable Energy and Transmission Element		
Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	Water will be required during construction, operation, and decommissioning/restoration of the project. During construction, operation, and decommissioning of the project, non-potable water would be obtained from a proposed on-site groundwater well. As described in Chapter 2, Project Description, the construction of a groundwater well requires approval of a Conditional Use Permit (CUP). Approval of the CUP would be contingent upon the availability of groundwater to serve the project and ability to recharge the aquifer so that groundwater supplies are not substantially decreased by the proposed project.

Source: County of Imperial 1993

3.11.3 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to utilities/service systems are considered significant if any of the following occur:

Water Supply

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed

As stated previously, it was determined through the preparation of the IS/NOP that impacts with regards to solid waste disposal and policies, storm water, and wastewater treatment would be less than significant. Therefore, these issue areas will not be discussed further. Impacts associated with water quality are discussed in Section 3.8, Hydrology/Water Quality, of this EIR.

Methodology

Project-specific data was used to calculate the project's water consumption during construction and at build-out collectively ("operational").

Impact Analysis – Solar Energy Facility and Gen-Tie Line

Impact 3.11-1 Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Construction

The proposed project is anticipated to take approximately 6-9 months from the commencement of the construction process to complete. Construction water needs would be limited to earthwork, soil conditioning, dust suppression, and compaction efforts. As shown in Table 3.11-2, the proposed project would require approximately 10.22 acre-feet of water during construction. The proposed project may involve the construction of a groundwater well and use of groundwater for construction. As described in Chapter 2, Project Description, the construction of a groundwater well requires approval of a Conditional Use Permit (CUP). Approval of the CUP would be contingent upon the availability of groundwater to serve the project and ability to recharge the aquifer so that groundwater supplies are not substantially decreased by the proposed project.

Table 3.11-2. Construction Water Demand

Construction Phase	Water Demand Per Day (Gallons)	Water Demand (Acre Feet Per Day)
Phase 1	900,000	2.76
Phase 2	2,130,000	6.54
Phase 3	300,000	0.92
Total	3,330,000	10.22

Source: Appendix L of this EIR

Operations and Maintenance

Water would be required for periodic cleaning of the solar PV panels, dust suppression, and for the on-site fire tank. It is anticipated that the solar PV panels will be washed up to four times per year to ensure optimum solar absorption by removing dust particles and other buildup. As shown in Table 3.11-3, the proposed project would require approximately 1.37 acre feet annually (AFY) during operations. During operations, the project would utilize groundwater from a proposed on-site groundwater well.

Table 3.11-3. Operational and Decommissioning Water Demand

	Water Demand (Acre Feet Per Year)	Water Demand (Acre Feet – 30 Year Project Life)
Solar panel washing, dust suppression and fire tank water	1.37	41.1
Decommissioning	5	5

Source: Appendix L of this EIR

Decommissioning

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. As shown in Table 3.11-3, the proposed project would require approximately 5 AFY during decommissioning.

Total Annual Water Demand

According to the WSA prepared by Development Design & Engineering (Appendix L of this EIR), the anticipated water demand for construction, operation, and decommissioning of the project is estimated to be 56.32 AF, for an annualized demand of 1.88 AFY for the 30-year project life (Table 3.11-4).

The groundwater storage capacity of the East Salton Sea Basin was estimated at 360,000 acre-feet. Groundwater usage in the East Salton Sea Basin is limited due to generally poor water quality and limited inhabitants. Extraction rates for the East Salton Sea Basin were last estimated in 1952 at 6 acre-feet/year, which is 3 percent of the estimated recharge rate of 200 acre-feet/year. Based on the amount of groundwater within the basin and the recharge rate of 200 acre-feet/year the project supply is able to meet the project demand of the project (Appendix L of this EIR). Therefore, the proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources, and impacts would be less than significant.

Table 3.11-4. Amortized Water Demand

Phase	Water Demand (Acre Feet Per Year – for 30 Years)
Construction	10.22
Operational	41.1
Decommissioning	5
Total	56.32
Amortized (30 years)	1.88

Source: Appendix L of this EIR

Mitigation Measure(s)

No mitigation measures are required.

Impact Analysis – Fiberoptic Cable

The proposed project includes the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation. The amount of water required to install the fiberoptic cable is included in the overall water estimates for construction and operations of the solar energy facility. As described above, based on the amount of groundwater within the basin and the recharge rate of 200 acre-feet/year the project supply is able to meet the project demand of the project. This is considered a less than significant impact.

3.11.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

As shown in Table 3.11-3, the proposed project would require approximately 5 AFY during decommissioning. This water need would be less than what is required for construction and operation of the project site. Therefore, a less than significant impact is identified and no mitigation is required.

Residual

The project would not result in significant impacts to the water supply of Imperial County; therefore, no mitigation is required. The proposed project would not result in residual impacts.

This page is intentionally blank.

4 Analysis of Long-Term Effects

4.1 Growth-Inducing Impacts

In accordance with Section 15126.2(d) of CEQA Guidelines, an EIR must:

> *"discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

Projects promoting direct growth will impose burdens on a community by directly inducing an increase in population or resulting in the construction of additional developments in the same area. For example, projects involving the expansion, modifications, or additions to infrastructure, such as sewer, water, and roads, could have the potential to directly promote growth by removing existing physical barriers or allowing for additional development through capacity increases. New roadways leading into a previously undeveloped area directly promote growth by removing previously existing physical barriers to development and a new wastewater treatment plant would allow for further development within a community by increasing infrastructure capacity. Because these types of infrastructure projects directly serve related projects and result in an overall impact to the local community, associated impacts cannot be considered isolated. Indirect growth typically includes substantial new permanent employment opportunities and can result from these aforementioned modifications.

The proposed project is located within the unincorporated area of Imperial County and it does not involve the development of permanent residences that would directly result in population growth in the area. The unemployment rate in Imperial County, as of September 2019 (not seasonally adjusted), was 20.7 percent (State of California Employment Development Department 2019). The applicant expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale solar facilities. Based on the unemployment rate, and the availability of the local workforce, construction of the proposed project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

Once construction is completed, the facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds and would be dispatched to the project site in response to a fence breach or other alarm. It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated. The proposed project would not result in substantial population growth, as the number of employees required to operate and maintain the facility is minimal.

While the proposed project would contribute to energy supply, which indirectly supports population growth, the proposed project is a response to the state's need for renewable energy to meet its Renewable Portfolio Standard, and while it would increase the availability of renewable energy, it would also replace existing sources of non-renewable energy. Unlike a gas-fired power plant, the proposed project is not being developed as a source of base-load power in response to growth in demand for electricity. The power generated would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts, consistent with the findings and declarations in SB 2 that a benefit of the Renewable Portfolio Standard is displacing fossil fuel consumption within the state. The project is being proposed in response to state policy and legislation promoting development of renewable energy.

The proposed project would supply energy to accommodate and support existing demand and projected growth, but the energy provided by the project would not foster any new growth because (1) the additional energy would be used to ease the burdens of meeting existing statewide energy demands within and beyond the area of the project site; (2) the energy would be used to support already-projected growth; or, (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth would necessarily be too speculative and uncertain to merit further analysis.

Under CEQA, an EIR should consider potentially significant energy implications of a project (CEQA Guidelines Appendix F(II); PRC Section 21100(b)(3)). However, the relationship between the proposed project's increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 CCR §15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in Napa Citizens for Honest Gov't v. Napa County Board of Supervisors, 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth" *Napa Citizens, 91* CA4th at 369. The problem of uncertainty of the proposed project's growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

While this document has considered that the proposed project, as an energy project, might foster regional growth, the particular growth that could be attributed to the proposed project is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the proposed project. No accurate and reliable data is available that could be used to predict the amount of growth outside the area that would result from the proposed project's contribution of additional electrical capacity. The County of Imperial has not adopted a threshold of significance for determining when an energy project is growth-inducing. Further evaluation of this impact is not required under CEQA.

Additionally, the project would not involve the development of any new roadways, new water systems, or sewer; and thus, the project would not further facilitate additional development into outlying areas. For these reasons, the proposed project would not be growth-inducing.

4.2 Significant Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that would be caused by implementation of the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

Energy resources needed for the construction of the proposed project would contribute to the incremental depletion of renewable and non-renewable resources. Resources, such as timber, used in building construction are generally considered renewable and would ultimately be replenished. Non-renewable resources, such as petrochemical construction materials, steel, copper, lead and other metals, gravel, concrete, and other materials, are typically considered finite and would not be replenished over the lifetime of the project. Thus, the project would irretrievably commit resources over the anticipated 25-year life of the project.

At the end of the project's operation term, the applicant may determine that the project should be decommissioned and deconstructed. Should the project be decommissioned, the project applicant is required to restore land to its pre-project state. Consequently, some of the resources on the site could potentially be retrieved after the site has been decommissioned. Concrete footings, foundations, and pads would be removed and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. The applicant anticipates using the best available recycling measures at the time of decommissioning.

Implementation and operation of the proposed project would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the incremental reduction in fossil fuels would be a positive effect of the commitment of nonrenewable resources. Additionally, the project is consistent with the state's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California PRC.

4.3 Unavoidable Adverse Impacts

In accordance with CEQA Guidelines Section 15126(b), EIRs must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented. The impact analysis, as detailed in Section 3 of this EIR, concludes that no unavoidable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.

This page is intentionally blank.

5 Cumulative Impacts

The CEQA Guidelines (Section 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The CEQA Guidelines [Section 15130(a)(1)] further states that "an EIR should not discuss impacts which do not result in part from the project."

Section 15130(a) of the CEQA Guidelines provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

An adequate discussion of significant cumulative impacts requires either: (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact."

The CEQA Guidelines recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (CEQA Guidelines Section 15130(a)(3)).

This EIR evaluates the cumulative impacts of the project for each resource area, using the following steps:

1. Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project's reasonably foreseeable direct and indirect effects.
2. Evaluate the cumulative effects of the project in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.
3. Evaluate the project's incremental contribution to the cumulative effects on each resource considered in Chapter 3, Environmental Analysis. When the project's incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the project's "fair share" contribution to the cumulative effect are discussed, where required.

5.1 Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 3. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs.

The analysis of cumulative effects in this EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project site and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a project, but not beyond the scope of the direct and indirect effects of that project.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Because of uncertain development patterns that are far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan. Evaluating the proposed project's cumulative impacts when future facility decommissioning occurs is highly speculative because decommissioning is expected to occur in 20 to 25 years' time. Therefore, cumulative impacts during decommissioning are speculative for detailed consideration in this analysis.

5.2 Projects Contributing to Potential Cumulative Impacts

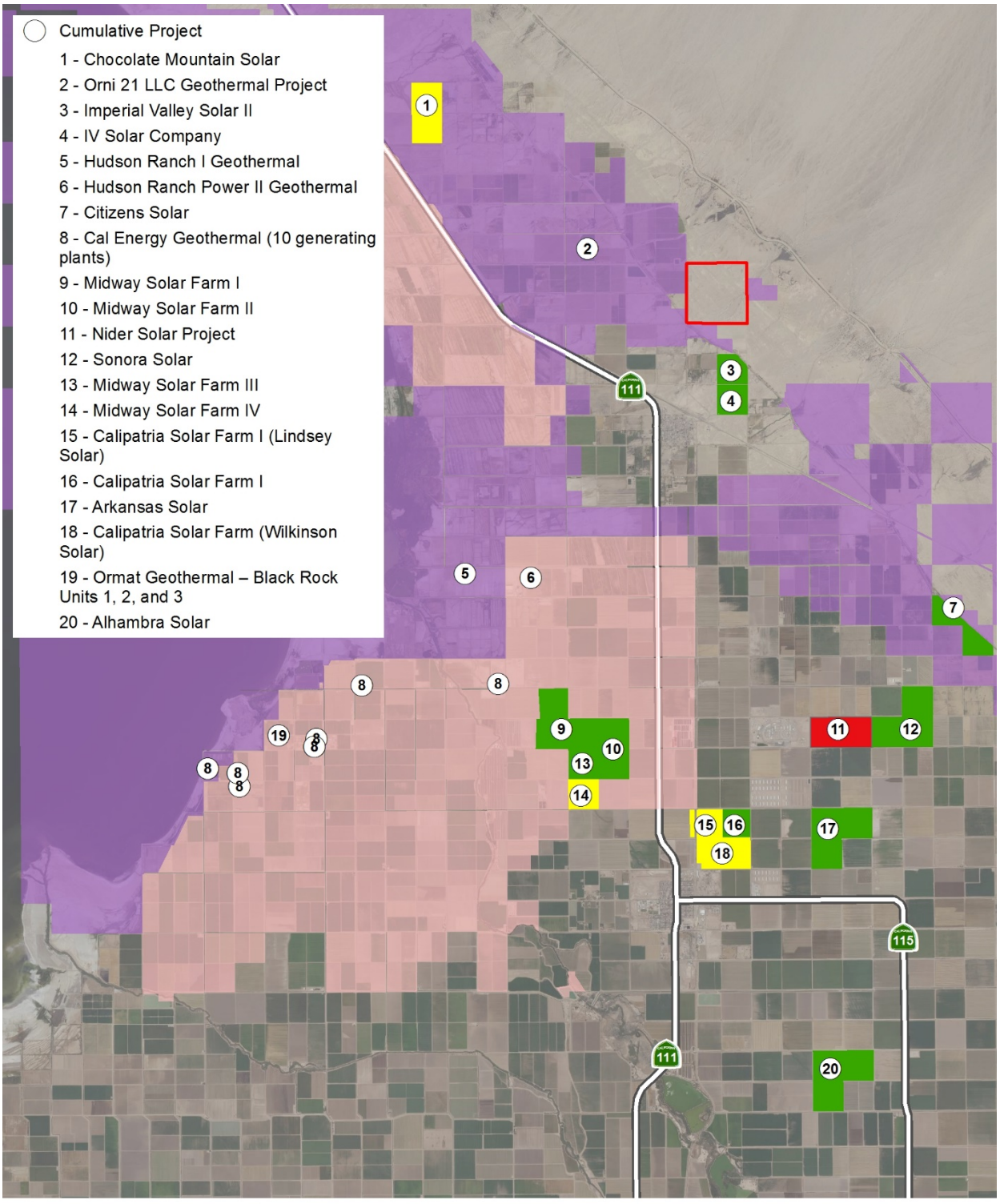
The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

For this EIR, the list approach has been utilized to generate the most reliable future projections of possible cumulative impacts. When the impacts of the project are considered in combination with other past, present, and future projects to identify cumulative impacts, the other projects considered may also vary depending on the type of environmental impacts being assessed. As described above, the general geographic area associated with different environmental impacts of the project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Figure 5-1 provides the general location for each of these projects in relation to the project site.

5.3 Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 5-1 in conjunction with the impacts identified for the project in Chapter 3 of this EIR. Table 5-1 includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Figure 5-1 provides the general location for each of these projects in relation to the project site.

Figure 5-1. Cumulative Projects



This page is intentionally blank.

Table 5-1. Projects Considered in the Cumulative Impact Analysis

Map Label[1]	Project Name	Project Type	Distance from Wister Project Site	Size (acres)	Capacity (MW)	Status[2]
1	Chocolate Mountain Solar	PV Solar Facility	Approximately 4.5 miles northwest	320	49.9	Approved – Not Built
2	Orni 21 LLC Geothermal Project	Geothermal Power Plant/ Well Field	Approximately 1.6 miles west-northwest	195	49.9	Proposed/Under Construction
3	Imperial Valley Solar II	PV Solar Facility	Approximately 0.5 mile south	146	20	Operational
4	IV Solar Company	PV Solar Facility	Approximately 1.0 mile south	123	23	Operational
5	Hudson Ranch I Geothermal	Geothermal Power Plant	Approximately 5.5 miles southwest	65	49.9	Operational
6	Hudson Ranch Power II Geothermal	Geothermal Power Plant	Approximately 5.0 miles southwest	52	49.9	Approved
7	Citizens Solar	PV Solar Facility	Approximately 5.6 miles southeast	159	30	Operational
8	Cal Energy Geothermal – 10 generating plants	Geothermal Power Plants	Approximately 6.7 to 10.7 miles southwest, along the Salton Sea	N/A	345	Operational
9	Midway Solar Farm I	PV Solar Facility	Approximately 6.4 miles southwest	480	50	Operational
10	Midway Solar Farm II	PV Solar Facility	Approximately 6.6 miles southwest	803	155	Operational
11	Nider Solar Project	PV Solar Facility	Approximately 6.8 miles southeast	320	100	Pending Entitlement
12	Sonora Solar	PV Solar Facility	Approximately 7.07 miles southeast	488	50	Operational
13	Midway Solar Farm III	PV Solar Facility	Approximately 7.33 miles south-southwest	160	20	Operational
14	Midway Solar Farm IV	PV Solar Facility	Approximately 7.27 miles south-southwest	160	15	Approved – Not Built
15	Calipatria Solar Farm I (Lindsey Solar)	PV Solar Facility	Approximately 7.98 miles south.	148	20	Approved – Not Built

Table 5-1. Projects Considered in the Cumulative Impact Analysis

Map Label[1]	Project Name	Project Type	Distance from Wister Project Site	Size (acres)	Capacity (MW)	Status[2]
16	Calipatria Solar Farm I	PV Solar Facility	Approximately 7.98 miles south	159	20	Operational
17	Arkansas Solar	PV Solar Facility	Approximately 8.15 miles south-southeast	481	50	Operational
18	Calipatria Solar Farm (Wilkinson Solar)	PV Solar Facility	Approximately 8.53 miles south	302	30	Approved – Not Built
19	Ormat Geothermal – Black Rock Units 1, 2, and 3	Geothermal Power Plant	Approximately 9.62 southwest	160	159	Approved – Not Built
20	Alhambra Solar	PV Solar Facility	Approximately 12.2 miles south-southeast	482	50	Operational

1 – See Figure 5-1 for cumulative project location.

2 – Project status based on information provided by County staff and on Imperial County Planning & Development Service's RE Geographic Information System Mapping Application (http://icpds.maps.arcgis.com/apps/Viewer/index.html?appid=c6fd31272e3d42e1b736ce8542b994ae). Accessed on November 6, 2019.

IID – Imperial Irrigation District; MW – megawatts; PV – photovoltaic

5.3.1 Aesthetics and Visual Resources

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a 5-mile radius from the project site. Views beyond 5 miles are obstructed by a combination of the flat topography coupled with the Earth's curvature. The short-term visual impacts of the project would be in the form of general construction activities including grading, use of construction machinery, and installation of the transmission poles and stringing of transmission lines, but would only be available to a very limited amount of people and would have to be in relative close proximity to the project site. Longer-term visual impacts of the project would be in the form of the presence of solar array grids, an electrical distribution and transmission system, and substation.

As provided in Section 3.2, Aesthetics and Visual Resources, the existing visual character of the project site and the quality of views in terms of visibility beyond the site would not be substantially altered. Views toward the project site are rare and not readily available to the general public. The proposed project would be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and, 0.5 mile to the south, an existing utility-scale solar facility. The project would not obstruct or substantially alter views to desert lands and mountains to the north and east of the site.

The visual changes associated with the project would be located in a remote area viewed by a minimal number of people, the project site is not located within scenic vistas, and is not readily viewable from any frequently travelled interstates or scenic highways. Additionally, with the exception of the transmission line, the project's structural features would generally be less than 15 feet in height and, therefore, would not substantially disrupt background views of mountains to the north and east. Further, the project site would be restored to its existing condition following the decommissioning of the solar uses. As a result, although the visual character of the project site would change from undeveloped to one with developed characteristics, a less than significant impact associated with the proposed project has been identified.

Development of the proposed project in conjunction with the cumulative projects identified in Table 5-1 will gradually change the visual character of this portion of the Imperial Valley. However, projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Finally, all projects listed in Table 5-1 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed, or the project will otherwise comply with the County lighting ordinance, as would all other related projects. Based on these considerations, there would be no significant cumulatively considerable aesthetic impact, and cumulative aesthetic impacts would be less than significant.

5.3.2 Air Quality

Imperial County is used as the geographic scope for analysis of cumulative air quality impacts. As shown in Table 5-1, many of the cumulative projects are large-scale renewable energy generation projects, where the main source of air emissions would be generated during the construction phases of these projects; however, there would also be limited operational emissions associated with operations and maintenance activities for these facilities. Additionally, a majority of the projects listed in Table 5-1 are already constructed and operational. Therefore the potential for a cumulative,

short-term air quality impact as a result of construction activities is anticipated to be less than significant.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour O_3, PM_{10}, and $PM_{2.5}$. Imperial County is classified as a "serious" nonattainment area for PM_{10} for the NAAQS. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) NAAQS wherein Imperial County was listed as designated nonattainment for the 2006 24-hour $PM_{2.5}$ NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed project is not located within the nonattainment boundaries for $PM_{2.5}$.

The AQAP for the SSAB, through the implementation of the AQMP and SIP for PM_{10}, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. With respect to PM_{10}, the ICAPCD implements Regulation VIII – Fugitive Dust Rules, to control these emissions and ultimately lead the basin into compliance with air standards, consistent with the AQAP. Within Regulation VIII are Rules 800 through 806, which address construction and earthmoving activities, bulk materials, carry-out and track-out, open areas, paved and unpaved roads, and conservation management practices. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area;
- Application of water or chemical stabilizers to disturbed soils;
- Construction and maintenance of wind barriers; and
- Use of a track-out control device or wash down system at access points to paved roads.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. However, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the air district is required 10 days prior to the commencement of any construction activity.

Construction

The proposed project would generate air emissions due to vehicle and dust emissions associated with construction activities. Similar effects would also be realized upon site decommissioning, which would be carried out in conjunction with the project's restoration plan, and subject to applicable ICAPCD standards. Likewise, the other cumulative projects that are approved, but not yet built (Chocolate Mountain Solar, Midway Solar Farm IV, Calipatria Solar Farm I [Lindsey Solar], and Calipatria Solar Farm [Wilkinson Solar] or pending entitlement (Nider Solar Project) identified in Table 5-1 would result in the generation of air emissions during construction activities.

With respect to the proposed project, during the construction and decommissioning phases, the project would generate PM_{10}, $PM_{2.5}$, ROG, CO, and NO_X emissions during each active day of construction.

As discussed in Section 3.3, Air Quality, the project would not result in a significant increase in CO, ROG, and NO_X that would exceed ICAPCD thresholds.

However, the project's impact could be cumulatively considerable because: (1) portions of the SSAB are nonattainment already (PM_{10} and $PM_{2.5}$), although mitigated by ICAPCD Regulations; and, (2) project construction would occur on most days, including days when O_3 already in excess of state

standards. Additionally, the effects could again be experienced in the future during decommissioning in conjunction with site restoration.

The proposed project, in conjunction with the construction of other cumulative projects as identified in Table 5-1 (Nider Solar Project, Chocolate Mountain Solar, Midway Solar Farm IV, Calipatria Solar Farm I [Lindsey Solar], and Calipatria Solar Farm [Wilkinson Solar]), could result in a cumulatively considerable increase in the generation of PM_{10} and NO_x; however, like the proposed project, cumulative projects would be subject to mitigation pursuant to County ICAPCD's Regulations and Rules, and the cumulative impact would be reduced to a level less than significant through compliance with these measures. Because the project will be required to implement measures consistent with ICAPCD regulations designed to alleviate the cumulative impact associated with PM_{10}, the proposed project's contribution is rendered less than cumulatively considerable and is therefore, less than significant.

Operation

As the proposed project would have no major stationary emission sources and would require minimal vehicular trips, operation of the proposed solar facility would result in substantially lower emissions than project construction. The project's operational emissions would not exceed the Tier I thresholds; therefore, the impact would be less than significant. Operational impacts of other renewable energy facilities identified in Table 5-1 would also be similar. Although these cumulative projects generally involve large areas, their operational requirements are very minimal, requiring minimal staff or use of machinery or equipment that generate emissions. Further, alternative energy projects, such as the project, would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Consequently, the projects would provide a positive contribution to the implementation of applicable air quality plan policies and compliance with EO S-3-05.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of PM_{10} and $PM_{2.5}$ emissions during operation of the cumulative projects is a consideration because of the fact that Imperial County is classified as a "serious" non-attainment area for PM_{10} and a "moderate" non-attainment area for 8-hour O_3 for the NAAQS and non-attainment for $PM_{2.5}$ for the urban areas of Imperial County. As previously indicated, the project is not located within the nonattainment boundaries for $PM_{2.5}$. The project's operational contribution to PM_{10} is below a level of significance. As with the construction phases, the cumulative projects would be required to comply with ICAPCD's Regulation VIII for dust control (Regulation VIII applies to both the construction and operational phases of projects). As a result, the ICAPCD would require compliance with the various dust control measures and, in addition be required to prepare and implement operational dust control plans as approved by the ICAPCD, which is a component of ICAPCD's overall framework of the AQAP for the SSAB, which sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. Therefore, the project would not contribute to long-term cumulatively considerable air quality impacts and the project would not result in cumulatively significant air quality impacts, and cumulative impacts would be less than significant.

5.3.3 Biological Resources

The geographic scope for considering cumulative impacts on biological resources includes the Imperial Valley and related biological habitats. Table 5-1 lists the projects considered for the biological resources cumulative impact analysis.

In general terms, in instances where a potential impact could occur, CDFW and USFWS have promulgated a regulatory scheme that limits impacts on these species. The effects of the project would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and state. Other cumulative projects would also be required to avoid impacts on special-status species and/or mitigate to the satisfaction of the CDFW and USFWS for the potential loss of habitat. As described in Section 3.4, Biological Resources, the project has the potential to result in impacts on biological resources. These impacts are generally focused on potential construction-related effects to burrowing owl, bird species, and bats (foraging only).

Burrowing Owls are protected by the CDFW mitigation guidelines for burrowing owl (CDFW 2012) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. Mitigation measures identified in Section 3.4, Biological Resources, contain these requirements thereby minimizing potential impacts on these species to a less than significant level. Additionally, as provided in Section 3.4, Biological Resources, special-status bird species have a potential to be present. In addition, several common bird species could nest on the project site. As a result of project-related construction activities, one or more of these species could be harmed. However, with the implementation of mitigation as identified in Section 3.4, Biological Resources, these impacts would be reduced to a level of less than significant. Similarly, the cumulative projects within the geographic scope of the project would be required to comply with the legal framework as described above. Based on these considerations, impacts on biological resources would not be cumulatively considerable.

As with the proposed project, each of the cumulative projects would be required to provide mitigation for impacts on biological resources. The analysis below is conducted qualitatively and in the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts on biological resources.

Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by USFWS. This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act. Raptors and active raptor nests are protected under California FGCs 3503.5, 3503, and 3513.

The CWA and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. Two types of jurisdictional features were documented within the BSA: USACE non-wetland Waters of the U.S. and CDFW State Waters. These drainages ultimately flow into the Salton Sea, which is considered a Traditionally Navigable Water. As such, these drainage features would likely be considered federally and state jurisdictional. Consultation will be initiated with USACE and CDFW to avoid or minimize impacts upon federally and state jurisdictional drainage features.

The proposed project would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative projects within the geographic scope of the proposed project will be required to comply

with the legal frameworks set forth above, as well as others, and will be required to mitigate their impacts to a less than significant level. Therefore, the project would not contribute to a cumulatively considerable impact to biological resources, and cumulative impacts would be less than significant.

5.3.4 Cultural Resources

As discussed in Section 3.5, Cultural Resources, no historical resources were identified within the project site. Therefore, the proposed project would not cause a substantial adverse change in the significant of a historical resource as defined in Section 15064.5 of the CEQA Guidelines and no impact would occur.

The potential of finding a buried archaeological site during construction is considered low. However, like all construction projects in the state, the possibility exists. This potential impact is considered significant. Implementation of Mitigation Measures CR-1 and CR-2 would reduce potential impacts associated with the unanticipated discovery of unknown buried archaeological resources. Implementation of Mitigation Measure CR-3 would reduce potential impacts on human remains to a level less than significant.

Future projects with potentially significant impacts on cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measures CR-1 through CR-3, the proposed project would have a less than cumulatively considerable contribution to impacts on cultural resources.

During operations and decommissioning of the project, no additional impacts on archeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

As discussed in Section 3.5, Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the proposed project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, and impacts on tribal cultural resources would be less than significant. Future cumulative projects would also be required to comply with the requirements of AB 52 to determine the presence/absence of tribal cultural resources and engage in consultation to determine appropriate mitigation measures to minimize or avoid impacts on tribal cultural resources. Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact tribal cultural resources.

5.3.5 Geology and Soils

The Imperial Valley portion of the Salton Trough physiographic province of Southern California is used as the geographic scope for the analysis of cumulative impacts on geology/soils and mineral resources. Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts on geologic resources would be considered significant if the project would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable. None of the projects identified within the geographic scope of potential cumulative impacts would intersect or be additive to the project's site-specific geology and soils impacts; therefore, no cumulatively considerable effects are identified for geology/soils, and cumulative impacts would be less than significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, mitigation is included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. Implementation of Mitigation Measure GEO-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance. Future projects with potentially significant impacts on paleontological resources would be required to comply with federal, state, and local regulations and ordinances protecting paleontological resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measure GEO-2, the proposed project would have a less than cumulatively considerable contribution to impacts on paleontological resources,

5.3.6 Greenhouse Gas Emissions

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of the projects alone would not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; affect rainfall and snowfall, leading to changes in water supply; and affect habitat, leading to adverse effects on biological resources. SCAQMD has proposed a threshold of 3,000 $MTCO_2e$ per year, for residential and commercial projects; which was applied to the project analysis as provided in Section 3.7, Greenhouse Gases. As provided, the proposed project's CO_2 emissions would not exceed SCAQMD's threshold of 3,000 $MTCO_2e$ per year. As the project's emissions do not exceed the SCAQMD's threshold, the proposed project would not result in a cumulatively considerable impact to GHG emissions and would not conflict with the State GHG reduction targets. Other cumulative projects identified in Table 5-1 largely consist of utility-scale solar facilities. The nature of these projects is such that, like the project, they would be consistent with the strategies of the Climate Change Scoping Plan. In order to meet the AB 32 GHG emissions reduction mandate, the Scoping Plan relies on achievement of the RPS target of 33 percent of California's energy coming from renewable sources by 2020 and 50 percent by 2030. The RPS target was updated in September 2018 under SB 100 to 60 percent by 2030. The project and other similar projects are essential to achieving the RPS.

Given that the project is characterized as a renewable energy project and places emphasis on solar power generation, project operations would be almost carbon-neutral with the majority of the operational GHG emissions associated with vehicle trips. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

5.3.7 Hydrology and Water Quality

Table 5-1 lists the projects considered for the hydrology and water quality cumulative impact analysis. The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Valley Hydrologic Unit as defined by the Colorado Basin RWQCB Basin Plan.

The construction of the project is expected to result in short-term water quality impacts. Compliance with the SWRCB's NPDES general permit for activities associated with construction (2009-0009-DWQ) would reduce water quality impacts. As with the proposed project, each of the cumulative projects would be required to comply with the Construction General Permit. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the CWA, and addresses the cumulative impacts of numerous construction activities throughout the state. This determination in conjunction with the implementation of mitigation would ensure short-term water quality impacts are not cumulatively considerable.

The project is not expected to result in long-term operations-related impacts related to water quality. The project would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. Some cumulative projects would require compliance with the SWRCB's NPDES general permit for industrial activities, as well as rules found in the CWA, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the RWQCB. With implementation of SWRCB, Colorado River RWQCB, and County policies, plans, and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards, cumulatively considerable impacts on water quality would be minimized to a less than significant level.

Based on a review of the FEMA Flood Insurance Rate Map FIRM, the proposed solar energy facility, gen-tie line, and access roads located on the western portion of the project site are located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain. As such, the project would not result in a significant cumulatively considerable impact on floodplains by constructing new facilities within an identified flood hazard zone.

Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact to hydrology or water quality, and cumulative impacts would be less than significant.

5.3.8 Land Use Planning

The geographic scope for the analysis of cumulative land use and planning impacts is typically defined by government jurisdiction. The geographic scope for considering potential inconsistencies with the General Plan's policies from a cumulative perspective includes all lands within the County's jurisdiction and governed by its currently adopted General Plan. In contrast, the geographic scope for considering potential land use impacts or incompatibilities include the project site plus a one-mile buffer to ensure a consideration for reasonably anticipated potential direct and indirect effects.

As provided in Section 3.9, Land Use/Planning, the project would not involve any facilities that could otherwise divide an established community. Based on this circumstance, no cumulatively considerable

impacts would occur. As discussed in Section 3.9, Land Use/Planning, the project would not conflict with the goals and objectives of the County of Imperial General Plan if all entitlements (General Plan amendment, Conditional Use Permit, and Variance) are approved by the County Board of Supervisors. In addition, a majority of the cumulative projects identified in Table 5-1 would not result in a conflict with applicable land use plans, policies, or regulations. In the event that incompatibilities or land use conflicts are identified for other projects listed in Table 5-1, similar to the projects, the County would require mitigation to avoid or minimize potential land use impacts. Where General Plan Amendments and/or Zone Changes are required to extend the RE Overlay Zone, that project would also be required to demonstrate consistency with the overall goals and policies of the General Plan, and would be required to demonstrate meeting the criteria for extending the RE Overlay onto the project site. Based on these circumstances, no significant cumulatively considerable impact would occur, and cumulative impacts would be less than significant.

5.3.9 Transportation/Traffic

During the construction phase of the project, the maximum number of trips generated on a daily basis would be approximately 80 trips. This trip count is so low that it does not require a formal traffic analysis as it does not have the potential to impact LOS of roadway segments and intersections. A majority of the projects listed in Table 5-1 are already constructed. As shown on Table 5-1, there are cumulative projects that are approved, but not yet built (Chocolate Mountain Solar, Midway Solar Farm IV, Calipatria Solar Farm I [Lindsey Solar], and Calipatria Solar Farm [Wilkinson Solar] or pending entitlement (Nider Solar Project). The construction phasing of these projects is not anticipated to overlap with the proposed project. Furthermore, with exception of SR-111, the cumulative projects are not anticipated to use the same construction haul route as the proposed project. Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. Based on these findings, the project would not result in cumulatively considerable roadway or intersection impacts, and this impact would be less than significant.

5.3.10 Utilities/Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. The proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities, storm water facilities, or water facilities. Additionally, the project would be comprised of mostly recyclable materials and would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Based on these considerations, the project would result in less than significant impacts on existing utility providers and, therefore, would not result in cumulatively considerable impacts.

6 Effects Found Not Significant

In accordance with Section 15128 of the CEQA Guidelines, an EIR must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant. Based on the Initial Study and Notice of Preparation prepared for the proposed project (Appendix A of this EIR), Imperial County has determined that the proposed project would not have the potential to cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in this EIR; however, the rationale for eliminating these topics is briefly discussed below.

6.1 Agriculture and Forestry Resources

6.1.1 Agriculture Resources

According to the farmland maps prepared by the California Department of Conservation (2017), the project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2017). The proposed project would not convert Important Farmland to non-agricultural uses.

The project site is currently designated by the General Plan as "Recreation" and is zoned "Open Space/Preservation" with a Geothermal Overlay (S-2-G). According to the 2016/2017 Imperial County Williamson Act Map produced by the California Department of Conservation's Division of Land Resource Protection, the project site is not located within Williamson Act contracted land (California Department of Conservation 2016). The proposed project has no potential to conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, implementation of the proposed project would not impact agriculture resources.

6.1.2 Forestry Resources

No portion of the project site or the immediate vicinity is zoned or designated as forest lands, timberlands, or timberland production. As such, the proposed project would not result in a conflict with existing zoning or cause the need for a zone change. Therefore, implementation of the proposed project would not impact forestry resources.

6.2 Energy

The use of energy associated with the project includes both construction and operational activities. Construction activities consume energy through the use of heavy construction equipment and truck and worker traffic. The proposed project will use energy-conserving construction equipment, including standard mitigation measures for construction combustion equipment recommended in the ICAPCD CEQA Air Quality Handbook (ICAPCD 2017). The use of better engine technology, in conjunction with the ICAPCD's standard mitigation measures will reduce the amount of energy used for the project.

Implementation and operation of the proposed project would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. The project would generate renewable energy resources and is considered a beneficial effect. Based on these considerations, the proposed project would not result in significant

environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

The project will help California meet its Renewable Portfolio Standard of 50 percent of retail electricity sales from renewable sources by the end of 2030. The electricity generation process associated with the project would utilize solar technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California PRC. The proposed project would not conflict with or obstruct a state or local plan for renewable energy of energy efficiency. The proposed project would result in a less than significant impact related to energy.

6.3 Hazards and Hazardous Materials

Construction of the proposed project will involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. No extremely hazardous substances are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. No operations and maintenance facilities, or habitable structures are proposed on-site. Operation of the project will be conducted remotely. Regular, routine maintenance of the project may result in the potential to handle hazardous materials. However, the hazardous materials handled on-site would be limited to small amounts of everyday use cleaners and common chemicals used for maintenance.

The applicant will be required to comply with State laws and County Ordinance restrictions, which regulate and control hazardous materials handled on-site. Such hazardous wastes would be transported off-site for disposal according to applicable State and County restrictions and laws governing the disposal of hazardous waste during construction and operation of the project. Based on these considerations, a less than significant impact would occur.

The project site is not located within 0.25 mile of an existing or proposed school. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

Based on a review of the Cortese List conducted in November 2019, the project site is not listed as a hazardous materials site. Therefore, the proposed project would not create a significant hazard to the public or the environment and no impact would occur.

The project site is not located within two miles of a public airport or public use airport. Therefore, the proposed project would not result in airport hazards for people residing or working in the project area and no impact would occur.

The proposed project is not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project applicant will be required, through the conditions of approval, to prepare a street improvement plan for the project that will include emergency access points and safe vehicular travel. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, the proposed project would result in a less than significant impact associated with the possible impediment to emergency plans.

6.4 Mineral Resources

The project site is not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to Figure 8: Imperial County Existing Mineral Resources of the Conservation and Open Space Element of the General Plan (County of Imperial 2016), no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. Therefore, the proposed project would not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of California nor would the proposed project result in the loss of availability of a locally important mineral resource.

Based on a review of the California Department Division of Oil, Gas, and Geothermal Resources Well Finder, there is one idle geothermal well (Well No. 02591491) located in the northwest quarter of the project parcel (California Department of Oil, Gas, and Geothermal Resources n.d.). This geothermal well would be avoided by the proposed project. Implementation of the proposed project would not impact geothermal wells.

6.5 Noise

The Imperial County Title 9 Land Use Ordinance, Division 7, Chapter 2, Section 90702.00 - Sound level limits, establishes one-hour average sound level limits for the County's land use zones. Industrial operations are required to comply with the noise levels prescribed under the general industrial zones. Therefore, the project is required to maintain noise levels below 75 decibels (dB) (averaged over one hour) during any time of day. The project would be expected to comply with the Noise Element of the General Plan which states that construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB, when averaged over an eight hour period, and measured at the nearest sensitive receptor. Construction equipment operation is also limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. Compliance with Imperial County's standards for construction noise levels would result in less than significant noise impacts during project construction.

Groundborne vibration and groundborne noise could originate from earth movement during the construction phase of the proposed project Construction of the proposed project may require post driving and vibratory rollers and has the potential to result in temporary vibration impacts on structures and humans. However, the project site is in a generally rural area and surrounded by relatively undisturbed desert lands. Sensitive receptors located within one mile of the project site consist of a few scattered rural homes west of the site. There are no sensitive receptors within 1,500 feet of the project site boundary. The project would be expected to comply with all applicable requirements for long-term operation, as well as with measures to reduce excessive groundborne vibration and noise to ensure that the project would not expose persons or structures to excessive groundborne vibration. No further analysis is warranted.

The project site is not located within two miles of a public airport or private airstrip. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels and no impact would occur.

6.6 Population and Housing

Development of housing is not proposed as part of the project. No full-time employees are required to operate the project. The project facility will be monitored remotely. It is anticipated that maintenance of the facility will require minimal site presence to perform periodic visual inspections and minor

repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, due to the nature of the facility, such actions will likely occur infrequently. Therefore, the proposed project would not result in a substantial growth in the area, as the number of employees required to operate and maintain the facility is minimal.

No housing exists within the project site and no people reside within the project site. Therefore, the proposed project would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. The proposed project would result in no impact to population and housing.

6.7 Public Services

Fire Protection. Fire protection and emergency medical services in the area are provided by the Imperial County Fire Department. The project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low. Both the access and service roads (along the perimeter of the project facility) would have turnaround areas to allow clearance for fire trucks per fire department standards (70 feet by 70 feet, and 20-foot-wide access road). While the proposed project may result in an increase in demand for fire protection service, the project would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. Based on these considerations, the project would not result in a need for fire facility expansion and a less than significant impact would occur.

Police Protection. Police protection services in the project area is provided by the Imperial County Sheriff's Department. Although the potential is low, the proposed project may attract vandals or other security risks. The increase in construction related traffic could increase demand on law enforcement services. However, the project site would be fenced with 6-foot high chain link security fence topped with barbed wire and points of ingress/egress would be accessed via locked gates. In addition, periodic on-site personnel visitations for security would occur during operations and maintenance of the proposed project, thereby minimizing the need for police surveillance. While the proposed project may result in a temporary increase in demand for law enforcement service, the project would not result in a an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered sheriff facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. The sheriff's department has indicated that an all-terrain vehicle would be needed in order to patrol the project site; however, the fenced and secure project site does not result in an increase in demand on law enforcement that would require existing or new facilities to be upgraded in order to maintain service ratios. Further, as conditions of approval of the project, the project applicant will be required to participate in the Imperial County Public Benefit Program for the life of this CUP and shall at all times be a party to a public benefit agreement in a form acceptable to County Counsel in order to pay for all costs, benefits, and fees associated with the approved project, and the applicant will be required to reimburse the Sheriff's Department for any investigations regarding theft on the Project site and related law enforcement. Approval of this public benefit agreement will be by the Board of Supervisors prior to the issuance of the first building permit. These potential impacts are less than significant. ~~This is considered a less than significant impact.~~

Schools. The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed project would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations. The proposed project would have no impact on Imperial County schools.

Parks and Other Public Facilities. No full-time employees are required to operate the project. The project facility will be monitored remotely. It is anticipated that maintenance of the facility will require minimal site presence to perform periodic visual inspections and minor repairs. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities are not expected. The project is not expected to have an impact on parks, libraries, and other public facilities.

6.8 Recreation

The project site is not used for formal recreational purposes. Also, the proposed project would not generate new employment on a long-term basis. As such, the project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the project does not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

6.9 Utilities and Service Systems

Wastewater Facilities. The project would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project site, such as O&M buildings; therefore, there would be no wastewater generation from the proposed project. The proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities.

Storm Water Facilities. The proposed project will involve the construction of drainage control facilities within the project site as shown on Figure 2-4 Preliminary Site Plan, ~~which are identified in the project site plan~~, and included in the project impact footprint, of which environmental impacts have been evaluated. Otherwise, the project does not require expanded or new storm drainage facilities off-site (i.e., outside of the project footprint) because the proposed solar facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events, and therefore, would not require the construction of off-site storm water management facilities. Water from solar panel washing would continue to percolate through the ground, as a majority of the surfaces within the project site would remain pervious. The proposed project would not require or result in the relocation or construction of new or expanded storm water facilities beyond those proposed as part of the project and evaluated in the EIR.

Water Facilities. The proposed project is not anticipated to result in a significant increase in water demand/use during operation; however, water will be needed for solar panel washing and dust suppression. During operation, water would be trucked to the project site from a local water source. Therefore, the proposed project would not require or result in the relocation or construction of new or expanded water facilities.

Power, Natural Gas, and Telecommunication Facilities. The proposed project would involve construction of power facilities and would include a fiber optic connection. However, these are components of the project as evaluated in the EIR. The proposed project would not otherwise generate the demand for or require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities that would in turn, result in a significant impact to the environment.

Solid Waste Facilities. Solid waste generation would be minor for the construction and operation of the project. Solid waste would be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Niland Solid Waste Site (13-AA-0009) located in Niland. The Niland Solid Waste Site has approximately 318,669 cubic yards of remaining capacity and is estimated to remain in operation through 2056 (CalRecycle n.d.). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the project.

Additionally, because the proposed project would generate solid waste during construction and operation, the project would be required to comply with state and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP would contain provisions for recycling and diversion of Imperial County construction waste policies.

Further, when the proposed project reaches the end of its operational life, the components would be decommissioned and deconstructed. When the project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The project components would be deconstructed and recycled or disposed of safely, and the site could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure. Commercially reasonable efforts would be used to recycle or reuse materials from the decommissioning. All other materials would be disposed of at a licensed facility. A less than significant impact is identified for this issue.

6.10 Wildfire

According to the Draft Fire Hazard Severity Zone Map for Imperial County prepared by the California Department of Forestry and Fire Protection, the project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Therefore, no impact is identified for wildfire.

7 Alternatives

7.1 Introduction

The identification and analysis of alternatives is a fundamental concept under CEQA. This is evident in that the role of alternatives in an EIR is set forth clearly and forthrightly within the CEQA statutes. Specifically, CEQA §21002.1(a) states:

> *"The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."*

The CEQA Guidelines require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines §15126.6(a)). The CEQA Guidelines direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. The discussion of alternatives need not be exhaustive. Furthermore, an EIR need not consider an alternative whose implementation is remote and speculative or whose effects cannot be reasonably ascertained.

Alternatives that were considered but were rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion that such alternatives were infeasible.

Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (CEQA Guidelines §15126.6(e)(2)).

7.2 Criteria for Alternatives Analysis

As stated above, pursuant to CEQA, one of the criteria for defining project alternatives is the potential to attain the project objectives. Established objectives of the project applicant for the proposed project include:

- Construct, operate and maintain an efficient, economic, reliable, safe and environmentally sound solar-powered electricity generating facility.
- Help meet California's Renewable Portfolio Standard (RPS) requirements, which require that by 2030, California's electric utilities are to obtain 50 percent of the electricity they supply from renewable sources.

- Generate renewable solar-generated electricity from proven technology, at a competitive cost, with low environmental impact, and deliver it to the local markets as soon as possible.
- Develop, construct, own and operate the Wister Solar Energy Facility, and ultimately sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to meet California's RPS goals.
- Utilize a location that is in close proximity to an existing switching station and powerlines.
- Minimize and mitigate any potential impact to sensitive environmental resources within the project area.

7.3 Alternatives Considered but Rejected

7.3.1 Alternative Site

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the proposed project would be avoided or substantially lessened by constructing the proposed project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the project proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

With respect to the proposed project, no significant, unmitigable impacts have been identified. With implementation of proposed mitigation, all potentially significant environmental impacts will be mitigated to a level less than significant.

The Applicant investigated the opportunity to develop the project site in the general project area and determined that the currently proposed project site is the most suitable for development of the solar facility. An alternative site was considered and is depicted on Figure 7-1. As shown, this site is located southeast of the project site on privately-owned agricultural lands. The site, located on APN 025-600-027, comprises approximately 126 acres of land.

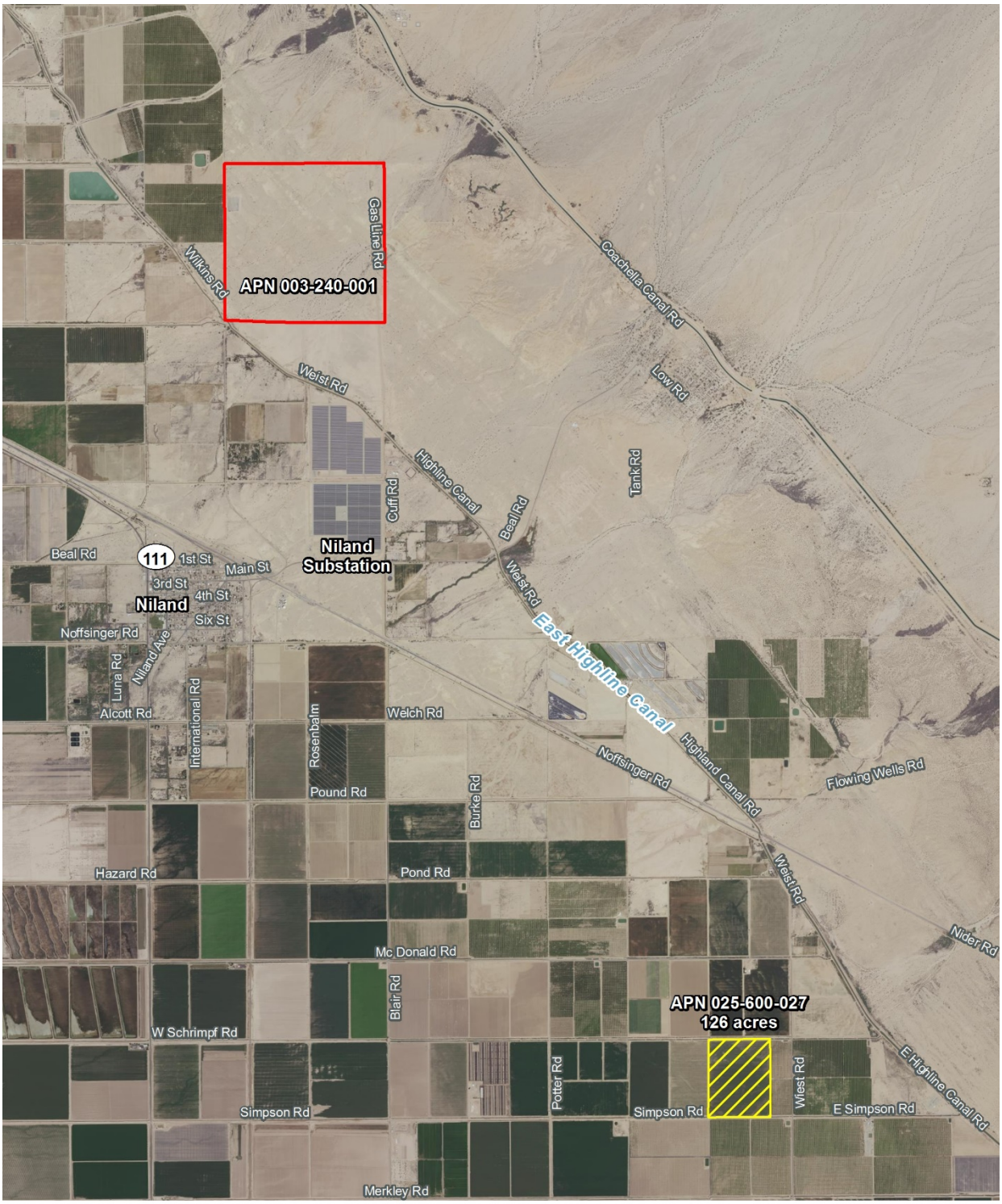
However, this site was rejected from detailed analysis for the following reasons:

- The alternative location site, as compared to the proposed project site, is located on agricultural land. According to the farmland maps prepared by the California Department of Conservation (2017), the alternative site is designated as Prime Farmland and Farmland of Statewide Importance. Therefore, compared to the proposed project, the alternative site would result in potentially significant impacts associated with conversion of Important Farmland to non-agricultural uses.
- Burrowing owls were not present on the project site during the biological surveys. As the proposed project is not within the IID Service District, no IID canals or drains (which are very attractive to burrowing owls) are present within the project site. Compared to the proposed project site, the alternative site is located entirely on agricultural fields and surrounded on all sides by agricultural fields. Agricultural fields provide habitat for burrowing owl. Irrigation canals and drains are commonly used as burrowing nesting sites in the Imperial Valley. It is anticipated that the potential for burrowing owl to occur on the alternative site during construction and operations is greater compared to the proposed project site.

- No significant, unmitigated impacts have been identified for the proposed project. Construction and operation of the proposed project at this alternative location would likely result in similar impacts associated with the proposed project, or additional impacts (conversion of Important Farmland to non-agricultural uses) that are currently not identified for the project at the currently proposed location.

As such, the County considers this alternative location infeasible and rejects further analysis of this alternative because of the factors listed above.

Figure 7-1. Alternative Site



7.3.2 Original Site Plan Submittal

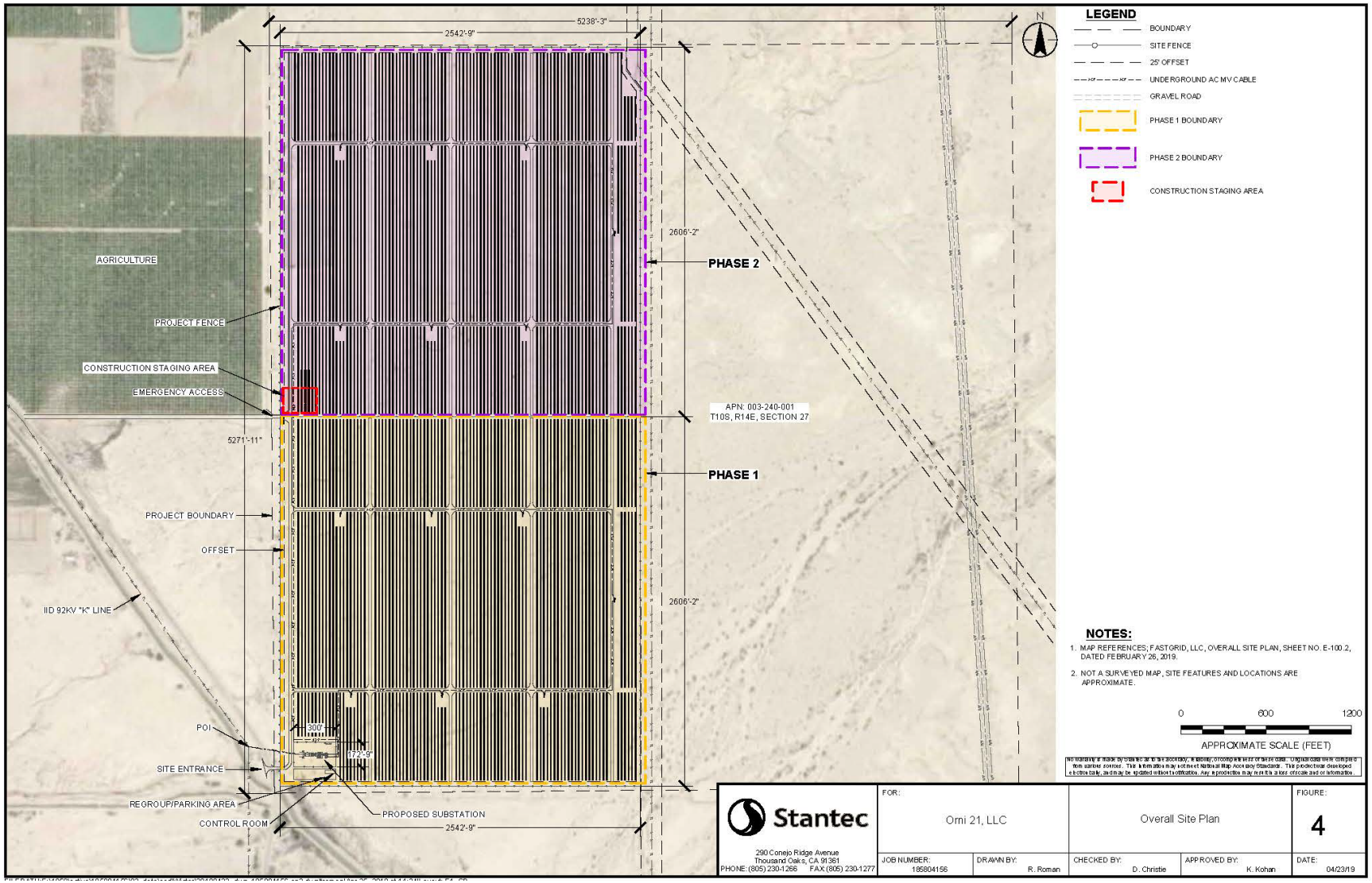
The project applicant originally proposed to construct and operate a 40 MW solar energy facility on approximately 300 acres within the western portion of the larger 640-acre project site parcel. The originally-proposed project was contemplated to be constructed in two phases (Figure 7-2). Each phase would have produced 20 MW of energy and cover approximately 146 acres. A Power Purchase Agreement (PPA) for 20 MW to San Diego Gas & Electric (SDG&E) was secured by the project applicant for the first phase of the project. The second 20 MW phase would not be constructed until the time that an additional PPA is secured. The remaining portion of the property would remain undeveloped in order to protect sensitive environmental resources. (Note: The project was subsequently modified to a 20 MW solar energy facility on an approximately 100-acre site as described in Section 2 Project Description).

Although this alternative would result in an increased power production capacity and greater GHG emission offset compared to the proposed project, the County rejects the Original Site Plan Submittal from further analysis due to increased biological resources impacts, increased jurisdictional waters impacts, and potential disturbance to known and unknown cultural resources.

As shown on Figure 3.4-1 (Section 3.4, Biological Resources), arrow weed thicketoccur in the southwest portion of the project site (Phase I development area as shown on Figure 7-2). As shown on Figure 3.4-2 (Section 3.4, Biological Resources), the Phase I development area contains numerous braided ephemeral drainage channels, which could be considered federally and state jurisdictional. Based on this context, the Original Site Plan Submittal has the potential to impact a sensitive vegetation community and increased impacts on potentially jurisdictional waters compared to the proposed project. Further this alternative has the potential to disturb portions of a known cultural resource site.

This page is intentionally blank.

Figure 7-2. Original Site Plan



This page is intentionally blank.

7.4 Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (PRC Section 15126). According to Section 15126.6(e)(1), "the specific alternative of 'no project' shall also be evaluated along with its impact." Also, pursuant to Section 15126.6(e)(2); "The 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published, … at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."

The No Project/No Development Alternative assumes that the project, as proposed, would not be implemented and the project site would not be further developed with a solar energy project. The No Project/No Development Alternative would not meet a majority of the project objectives.

7.4.1 Environmental Impact of Alternative 1: No Project/No Development Alternative

Aesthetics and Visual Resources

Under the No Project/No Development Alternative, the project site would not be developed and would continue to be undeveloped, partially disturbed land. The No Project/No Development Alternative would not modify the existing project site or add construction to the project site' therefore, there would be no change to the existing condition of the site. Under this alternative, there would be no potential to create a new source of light or glare associated with the PV arrays. As discussed in greater detail in Section 3.2, Aesthetics and Visual Resources, the proposed project would result in a less than significant impact associated with introduction of new sources of light and glare. Under the No Project Alternative, no new sources of light, glare, or other aesthetic impacts would occur. Under this alternative, light, glare, and aesthetic impacts would be less compared to the project as the existing visual conditions would not change.

Air Quality

Under the No Project/No Development Alternative, there would be no air emissions associated with project construction or operation, and no project- or cumulative-level air quality impact would occur. Therefore, no significant impacts to air quality or violation of air quality standards would occur under this alternative. Moreover, this alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors.

As discussed in Section 3.3, Air Quality, the proposed project would not exceed the ICAPCD's significance thresholds for emissions of ROG, CO, NOx, and PM_{10} during both the construction and operational phases of the project. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust.

This alternative would result in less air quality emissions compared to the proposed project, the majority of which would occur during construction.

Biological Resources

Under the No Project/No Development Alternative, existing biological resource conditions within the project site would largely remain unchanged and no impact would be identified. Unlike the proposed project which requires mitigation for biological resources including burrowing owl, other migratory birds, and potential jurisdictional waters, this alternative would not result in construction of a solar facility that could otherwise result in significant impacts to these biological resources. Compared to the proposed project, this alternative would avoid impacts to biological resources.

Cultural Resources

The proposed project would involve ground-disturbing activities that have the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. Under the No Project/No Development Alternative, the project site would not be developed and no construction-related ground disturbance would occur. Therefore, compared to the proposed project, this alternative would avoid impacts to cultural resources.

As discussed in Section 3.5, Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites on the project site. Therefore, the project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource. Impacts to tribal cultural resources under the No Project/No Development Alternative are similar to the proposed project.

Geology and Soils

Because there would be no development at the project site under the No Project/No Development Alternative, no grading or construction of new facilities would occur. Therefore, there would be no impact to project-related facilities as a result of local seismic hazards (strong ground shaking), soil erosion, and paleontological resources. In contrast, the proposed project would require the incorporation of mitigation measures related to strong ground shaking, soil erosion, and paleontological resources to minimize impacts to a less than significant level. Compared to the proposed project, this alternative would avoid significant impacts related to local geology and soil conditions and paleontological resources.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, there would be no GHG emissions resulting from project construction or operation or corresponding impact to global climate change. The No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006). While this alternative would not further implement policies (e.g., SB X1-2) for GHG reductions, this alternative would also not directly conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This alternative would not create any new GHG emissions during construction but would not lead to a long-term beneficial impact to global climate change by providing renewable clean energy. For the proposed project, a less than significant impact was identified for construction-related GHG emissions, and in the long-term, the project would result in an overall beneficial impact to global climate change as the result of creation of clean renewable energy, that does not generated GHG emissions. Compared to the proposed project, while the No Project/No Development Alternative would not result in new GHG emissions during

construction, it would be less beneficial to global climate change as compared to the proposed project. Further, the construction emissions (amortized over 20 years) associated with the project would be off-set by the beneficial renewable energy provided by the project, negating any potential that the No Project/No Development alternative would reduce construction-related GHG emissions.

Hydrology/Water Quality

The No Project/No Development Alternative would not result in modifications to the existing drainage patterns or volume of storm water runoff as attributable to the proposed project, as the existing site conditions and on-site pervious surfaces would remain unchanged. In addition, no changes with regard to water quality would occur under this alternative. Compared to the proposed project, from a drainage perspective, this alternative would avoid changes to existing hydrology. Compared to the proposed project, this alternative would not result in the placement of structures within a 100-year flood zone. Under this alternative, there would be no water demand and no groundwater well would be constructed. This alternative would have less of an impact associated with hydrology/water quality as compared to the proposed project.

Land Use Planning

As discussed in Section 3.9, Land Use Planning, the proposed project would not physically divide an established community or conflict with applicable plans, policies, or regulations.

Under the No Project/No Development Alternative, the project site would not be developed and continue to be undeveloped, partially disturbed land. Current land uses would remain the same. No General Plan Amendment, Zone Change, CUP, or Variance would be required under this alternative. No existing community would be divided, and no inconsistencies with planning policies would occur. Because no significant Land Use and Planning impact has been identified associated with the proposed project, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed project.

Transportation/Traffic

There would be no new development under the No Project/No Development Alternative. Therefore, this alternative would not generate vehicular trips during construction or operation. For these reasons, no impact would occur and this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Although the proposed project would result in less than significant transportation/traffic impacts, this alternative would avoid an increase in vehicle trips on local roadways, and any safety related hazards that could occur in conjunction with the increase vehicle trips and truck traffic, primarily associated with the construction phase of the project.

Utilities and Service Systems

The No Project/No Development Alternative would not require the expansion or extension of existing utilities, since there would be no new project facilities that would require utility service. No solid waste would be generated under this alternative. The proposed project would not result in any significant impacts to existing utilities or solid waste facilities. Compared to the proposed project, this alternative would have less of an impact related to utilities and solid waste facilities.

Conclusion

Implementation of the No Project/No Development Alternative would generally result in reduced impacts for a majority of the environmental issues areas considered in Chapter 3, Environmental Analysis when compared to the proposed project. A majority of these reductions are realized in terms of significant impacts that are identified as a result of project construction. However, this alternative would not realize the benefits of reduced GHG emissions associated with energy use, which are desirable benefits that are directly attributable to the proposed project.

Comparison of the No Project/No Development Alternative to Project Objectives

The No Project/No Development Alternative would not meet a majority of the objectives of the project. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006).

7.5 Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands

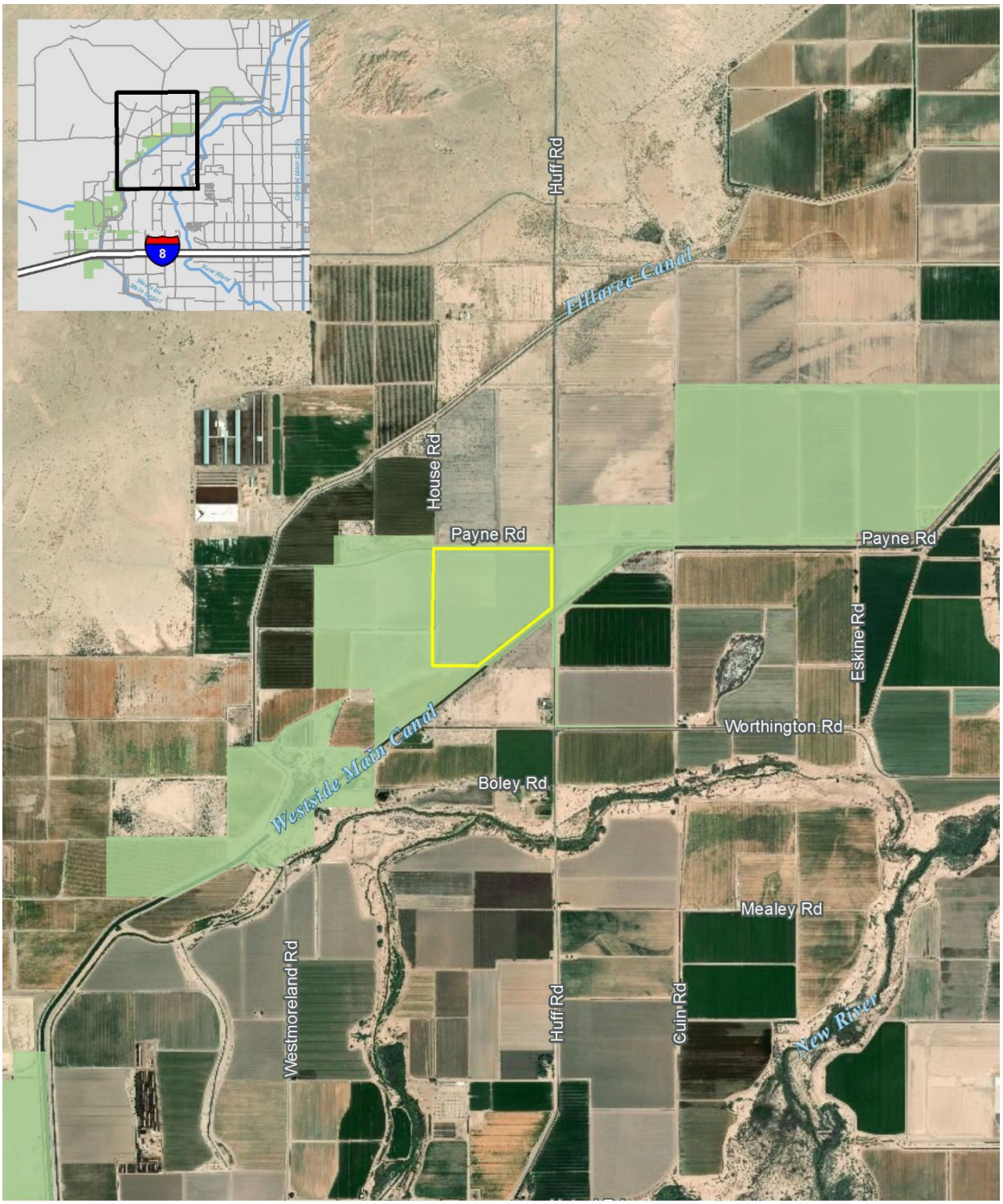
In certain cases, an evaluation of an alternative location in an EIR is necessary. Section 15126.6(f)(2)(A) of the CEQA Guidelines states, "Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR."

The purpose of this alternative is to develop the proposed project within the existing boundary of County's RE Overlay Zone. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of renewable energy facilities while minimizing the impact on other established areas.

As shown on Figure 7-3, the Alternative 2 project site is located entirely within the RE Overlay Zone. Alternative 2 would involve the construction and operation of a 20 MW solar energy facility and associated infrastructure on approximately 100 acres within a 130-acre parcel (APN 034-260-036) located approximately 4 miles northeast of the Dixieland area in unincorporated Imperial County. The Alternative 2 project site is designated as Agriculture under the County's General Plan and zoned A-3 (Heavy Agriculture).

Similar to the proposed project, Alternative 2 would require approval of a CUP to allow for the construction and operation of a solar project. Compared to the proposed project, the Alternative 2 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. The A-3 zone allows a maximum height limit of 120 feet for non-residential structures. No Variance would be required under this alternative because the proposed height of the transmission towers (70 feet) would not exceed 120 feet.

Figure 7-3. Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands



7.5.1 Environmental Impact of Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands

Aesthetics and Visual Resources

Compared to the proposed project site, the Alternative 2 project site is surrounded by agricultural lands. Similar to the proposed project, this would alter the existing visual character of the project site by changing the existing land use at the project site from undeveloped to a solar facility. The Alternative 2 project site is located approximately 3.5 miles northwest of the Naval Air Facility El Centro. Because of the proximity of the Naval Air Facility El Centro, there is a potential that this alternative could reflect significant levels of glare or glint upwards in a manner that could affect flight operations. Compared to the proposed project, this alternative could result in greater glare or glint impacts.

Air Quality

Similar to the proposed project, a 20 MW solar energy facility would be constructed on approximately 100 acres of land. Based on this consideration, this alternative would generate air emissions similar to the proposed project. As discussed in Section 3.3, Air Quality, the proposed project would not exceed the ICAPCD's significance thresholds for ROG, CO, NOx, and PM_{10} during construction and operation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. This alternative would result in similar air quality emissions as the proposed project. Similar to the proposed project, this alternative would result in temporary odor emissions from construction equipment.

Biological Resources

As discussed in Section 3.4, Biological Resources, burrowing owls were not present on the project site during the biological surveys. As the proposed project site is not within the IID Service District, no IID canals or drains (which are very attractive to burrowing owls) were present on site. Compared to the proposed project, the Alternative 2 site is located entirely on agricultural fields and surrounded on all sides by agricultural fields. Agricultural fields provide habitat for burrowing owl. Irrigation canals and drains are commonly used as burrowing nesting sites in the Imperial Valley. Mitigation would still be required for impacts to burrowing owl; however, the overall number of burrowing owl locations potentially impacted would be greater because their potential to occur on the Alternative 2 site is significantly higher than the proposed project site. Compared to the proposed project, development of this site would have greater impacts on burrowing owl.

Cultural Resources

This alternative would require the construction of supporting infrastructure (i.e., transmission towers, substation) that would require ground disturbance and therefore, has the potential to result in cultural and tribal cultural resources impacts. Compared to the proposed project, although this alternative would attempt to avoid cultural resources to the extent feasible, depending on the route of the proposed gen-tie line, this alternative could result in greater impacts on cultural and tribal cultural resources.

Geology and Soils

Grading and construction of new facilities, such as the solar facility and gen-tie line, would still occur under this alternative. Similar to the proposed project, this alternative would result in potentially significant impacts related to strong ground shaking, soil erosion, and paleontological resources and would require the incorporation of mitigation measures to minimize these impacts to a less than significant level. This alternative would result in similar geology and soil and paleontological resources impacts as the proposed project.

Greenhouse Gas Emissions

This alternative would result in the same power production capacity as the proposed project; hence, the overall benefits of the project to global climate change through the creation of renewable energy would be the same. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This alternative would contribute similar and desirable benefits to reductions in global climate change through the production of renewable energy.

Hydrology/Water Quality

With implementation of the proposed mitigation measures, potential hydrology/water quality impacts under this alternative would be similar to those associated with the proposed project. Similar to the proposed project, no impacts would result from flooding and facilities will not be placed within floodplains.

Land Use Planning

Similar to the proposed project, Alternative 2 will require approval of a CUP to allow for the construction and operation of a solar project. However, the Alternative 2 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. No Variance would be required under this alternative because the proposed height of the transmission towers (70 feet) would not exceed the 120 feet height limit of non-residential structures in the A-3 Zone. Because this alternative would not require a General Plan Amendment, Zone Change, or Variance, Land Use Planning impacts are anticipated to be less than the proposed project.

Transportation/Traffic

This alternative would result in a similar level of construction and operation-related vehicle and truck trips as compared to the proposed project. However, the increase in vehicular traffic was identified as a less than significant impact for the proposed project. In this context, Alternative 2 would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed project. As with the proposed project, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation/traffic as the proposed project.

Utilities and Service Systems

During construction of this alternative, impacts would be similar to the proposed project in terms of water demand (for dust control) and solid waste generation. Similar to the proposed project, Alternative 2 would require similar levels of water demand and energy for the operation of the solar facility. As with the proposed project, panel washing and other maintenance would be required. This alternative would have similar water demands and associated impacts related to utilities and service systems.

Conclusion

As shown on Table 7-1, this alternative would result in reduced land use impacts compared to the proposed project. This alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics and visual resources, biological resources, cultural resources, and tribal cultural resources.

Comparison of Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands to Project Objectives

Alternative 2 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics and visual resources, biological resources, cultural resources and tribal cultural resources. Because the Alternative 2 site is located on agricultural lands, this alternative would result in the conversion of agricultural land to non-agricultural uses. Compared to the proposed project, this alternative would result in additional impacts (conversion of agricultural land to non-agricultural uses) that are currently not identified for the project at the currently proposed location. Further, the project applicant does not own, or otherwise control this property.

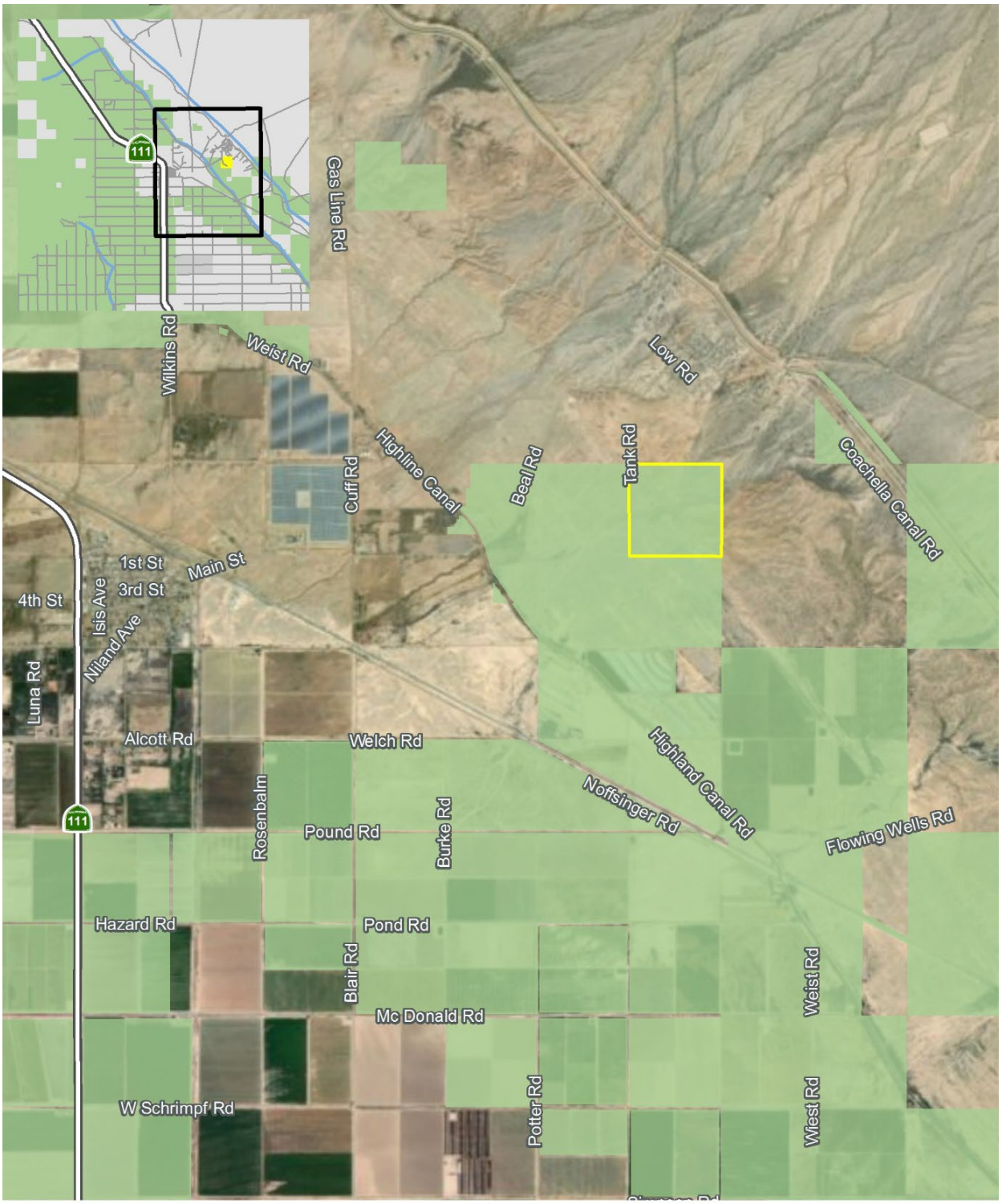
7.6 Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands

The purpose of this alternative is to develop the proposed project within the existing boundary of the County's RE Overlay Zone. As shown on Figure 7-4, the Alternative 3 project site is located entirely within the RE Overlay Zone. Alternative 3 would involve the construction and operation of a 20 MW solar energy facility and associated infrastructure on approximately 100 acres within a 161-acre parcel (APN 021-190-003) located approximately 0.5 mile south of Slab City. The Alternative 3 project site is located on undeveloped desert land. Existing transmission lines traverse the southwest corner of the project site.

The Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. The Alternative 3 project site is designated as Recreation under the County's General Plan and zoned General Agricultural with a renewable energy overlay (A-2-RE).

Similar to the proposed project, Alternative 3 will require approval of a CUP to allow for the construction and operation of a solar project. Compared to the proposed project, the Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. The A-2-RE zone allows a maximum height limit of 120 feet for non-residential structures. No Variance would be required under this alternative because the proposed height of the transmission towers (70 feet) would not exceed 120 feet.

Figure 7-4. Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands



7.6.1 Environmental Impact of Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands

Aesthetics and Visual Resources

Similar to the proposed project site, the Alternative 3 project site is located on undeveloped desert land. However, the Alternative 3 project site is located in closer proximity (approximately 0.5 mile) to Slab City and Salvation Mountain. Slab City is a former military facility that now serves as the site of an informal community for artists, travelers, and winter-time RV campers. Salvation Mountain is an outdoor art project at the western entrance to Slab City. Both attract tourists and sight-seers. Therefore, the project components would be more readily visible to more people compared to the proposed project. Compared to the proposed project, this alternative could result in greater aesthetics impacts.

Air Quality

Similar to the proposed project, a 20 MW solar energy facility would be constructed on approximately 100 acres of land. Based on this consideration, this alternative would generate air emissions similar to the proposed project. As discussed in Section 3.3, Air Quality, the proposed project would not exceed the ICAPCD's significance thresholds for ROG, CO, NOx, and PM_{10} during construction and operation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. This alternative would result in similar air quality emissions as the proposed project. Similar to the proposed project, this alternative would result in temporary odor emissions from construction equipment.

Biological Resources

As discussed in Section 3.4, Biological Resources, burrowing owls were not present on the project site during the biological surveys. As the proposed project site is not within the IID Service District, no IID canals or drains (which are very attractive to burrowing owls) were present on site. Compared to the proposed project site, the Alternative 3 site is located on the fringe of agricultural land. Agricultural fields provide habitat for burrowing owl. Irrigation canals and drains are commonly used as burrowing nesting sites in the Imperial Valley. Mitigation would still be required for impacts to burrowing owl; however, the overall number of burrowing owl locations potentially impacted would be greater because their potential to occur on the Alternative 3 site is higher than the proposed project site. Compared to the proposed project, development of this site would have greater impacts on burrowing owl. Further, this alternative has the potential to impact other sensitive plant and animals species associated with a relatively undisturbed desert setting.

The Alternative 3 site also contains desert washes and multiple braided channels. These features could be considered potentially jurisdictional waters. Similar to the proposed project, consultation would be required with USACE and CDFW to avoid or minimize impacts upon federally and state jurisdictional drainage features. This alternative would result in similar impacts related to potentially jurisdictional waters as the proposed project.

Cultural Resources

This alternative would require the construction of supporting infrastructure (i.e., transmission towers, substation) that would require ground disturbance and therefore, has the potential to result in cultural and tribal cultural resources impacts. While this alternative may avoid the specific impacts on the proposed project site, this alternative would also require the construction of supporting infrastructure that has the potential to result in cultural resources impacts. Compared to the proposed project, although this alternative would attempt to avoid cultural resources to the extent feasible, depending on the route of the proposed gen-tie line, this alternative could result in greater impacts on cultural and tribal cultural resources.

Geology and Soils

Grading and construction of new facilities, such as the solar facility and gen-tie line, would still occur under this alternative. Similar to the proposed project, this alternative would result in potentially significant impacts related to strong ground shaking, soil erosion, and paleontological resources and would require the incorporation of mitigation measures to minimize these impacts to a less than significant level. This alternative would result in similar geology and soil and paleontological resources impacts as the proposed project.

Greenhouse Gas Emissions

This alternative would result in the same power production capacity as the proposed project; hence, the overall benefits of the project to global climate change through the creation of renewable energy would be the same. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This alternative would contribute similar and desirable benefits to reductions in global climate change through the production of renewable energy.

Hydrology/Water Quality

As discussed in Section 3.8, Hydrology/Water Quality, the proposed eastern access road that would connect to Gas Line Road is located in a 100-year flood zone (0.01 percent annual chance) (Zone A). The proposed eastern access road would not involve the addition of structures which could impede or redirect flood flows. In addition, the proposed access road would be constructed with an all-weather surface allowing runoff to continue to percolate into the ground. Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, and impacts would be less than significant.

According to the FEMA FIRM (06025C0450C), a portion of the Alternative 3 project site contains an area mapped as Zone A. Alternative 3 could place structures (i.e., PV arrays, substation, or transmission towers) within a 100-year flood zone and result in the redirection of flood flows on the project site. The Alternative 3 site also contains desert washes and multiple braided channels. Implementation of this alternative could potentially result in the modification of the existing drainage patterns and the volume of storm water runoff on the project site. Compared to the proposed project, this alternative would result in greater impacts related to hydrology/water quality.

Land Use Planning

Similar to the proposed project, Alternative 3 will require approval of a CUP to allow for the construction and operation of a solar project. Compared to the proposed project, the Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. No Variance would be required under this alternative because the proposed height of the transmission towers (70 feet) would not exceed the 120 feet height limit of non-residential structures in the A-2-RE Zone. Because this alternative would not require a General Plan Amendment, Zone Change, or Variance, Land Use Planning impacts are anticipated to be less than the proposed project.

Transportation/Traffic

This alternative would result in a similar level of construction and operation-related vehicle and truck trips as compared to the proposed project. However, the increase in vehicular traffic was identified as a less than significant impact for the proposed project. In this context, Alternative 3 would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed project. As with the proposed project, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation/traffic as the proposed project.

Utilities and Service Systems

During construction of this alternative, impacts would be similar to the proposed project in terms of water demand (for dust control) and solid waste generation. Similar to the proposed project, Alternative 3 would require similar levels of water service and energy for the operation of the solar facility. As with the proposed project, panel washing and other maintenance would be required. This alternative would have similar water demands and associated impacts related to utilities and service systems.

Conclusion

As shown on Table 7-1, this alternative would result in reduced land use impacts compared to the proposed project. This alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics and visual resources, cultural resources, tribal cultural resources, and hydrology/water quality.

Comparison of Alternative 3: Development within Renewable Energy Overlay Zone – Desert Land to Project Objectives

Alternative 3 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics and visual resources, cultural resources, tribal cultural resources, and hydrology/water quality. Further, the project applicant does not own, or otherwise control this property.