

SAN BERNARDINO COUNTY

INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

PROJECT LABEL:

APN:	3098-311-11
Applicant:	Mr. Ricardo Graf SunEdison, Authorized Representative of SunE CREST 1, LLC and SunE CREST 2, LLC 600 Clipper Drive Belmont, CA 94002 (415) 852-8344
Community:	Phelan
Location:	North of Duncan Road, south of Union Pacific Railroad tracks, east of Greystone Road
Project No:	P201300252
Staff:	Chris Conner, Senior Planner
Rep:	Mr. Jeremy Krout EPD Solutions 450 Newport Center Drive, Suite 300 Newport Beach, CA 92660
Proposal:	Conditional Use Permit to establish an approximately 3.2-megawatt solar photovoltaic electricity generation facility on 25 acres.

USGS Quad: Phelan
Lat/Long: 34°28'26"N/117°34'10"W

T, R, Section: T5N R7W Sec. 36

Thomas Bros P4383/GRID: B-7

Community Plan: Phelan/Pinon Hills
LUZD: PH/IN
Overlays: FP2, FS-2, Biotic Resources

PROJECT CONTACT INFORMATION:

Lead agency: County of San Bernardino
Land Use Services Department
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

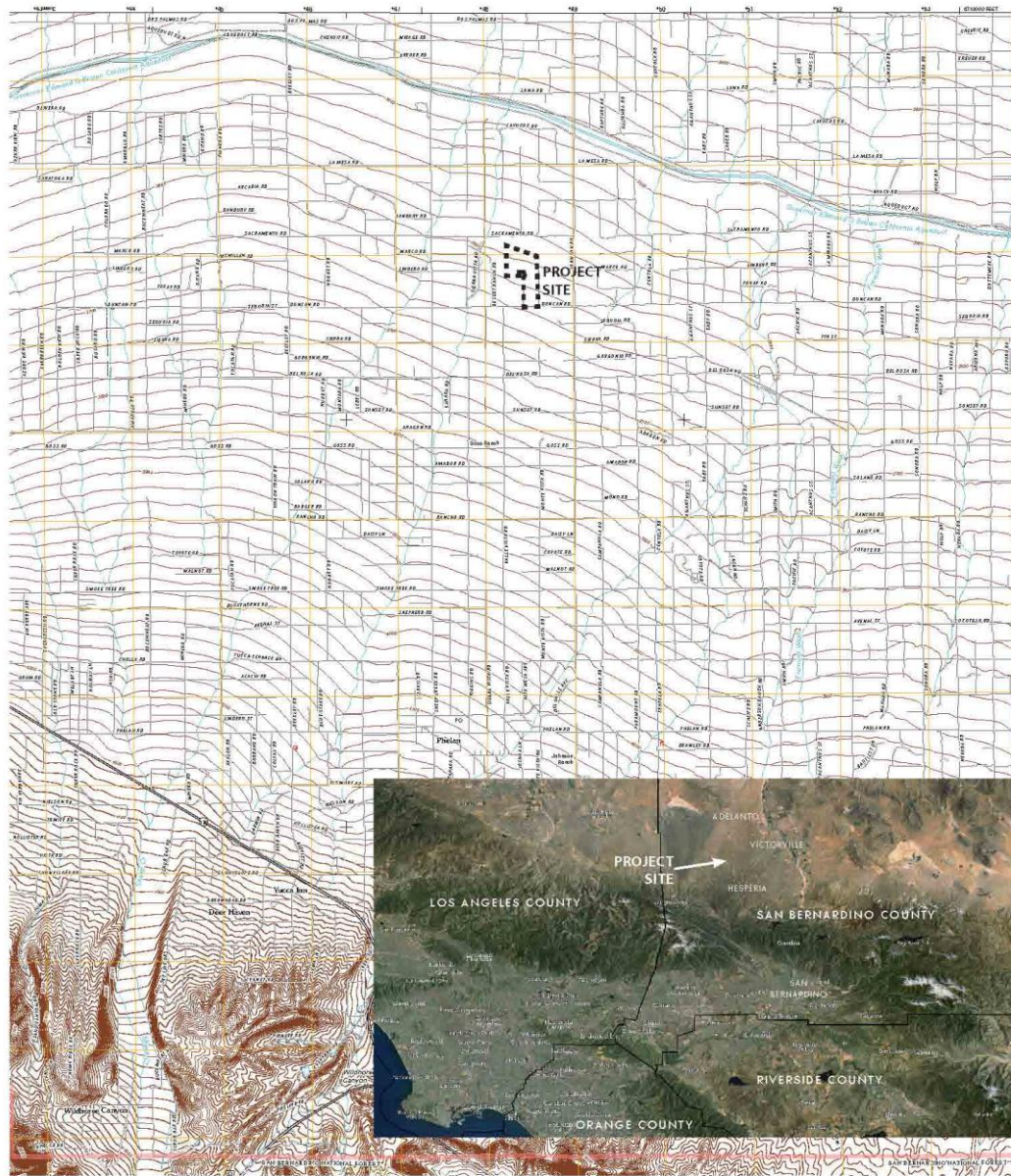
Contact person: Chris Conner, Senior Planner
Phone No: (909) 387-4425 **Fax No:** (909) 387-3223
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PROJECT DESCRIPTION:

SunEdison, authorized representative of SunE CREST 1, LLC and SunE CREST 2, LLC (applicant) proposes to construct and operate the Duncan Road Solar (Project) facility, a 3.2-megawatt (MW) photovoltaic (PV) solar energy generation facility on approximately 15 acres (60%) of a 25-acre parcel owned by the Snowline Joint Unified School District (Snowline JUSD). The project site is located north of Duncan Road, east of Greystone Road, and south of Union Pacific Railroad right-of-way in the Phelan community in unincorporated San Bernardino County (County).

The project area is situated within Section 36, Township 5 North, Range 7 West, S.B.B.&M. of the Phelan, CA USGS 7.5-minute topographic quadrangle at approximately Lat/Long 34°28'26"N/117°34'10"W (See **Figures 1 and 2**). Project site and surrounding area photographs are provided in **Figure 3**.

FIGURE 1: Vicinity Map



Base map: USGS 7.5' Phelan Quadrangle

FIGURE 2: Local Area Map

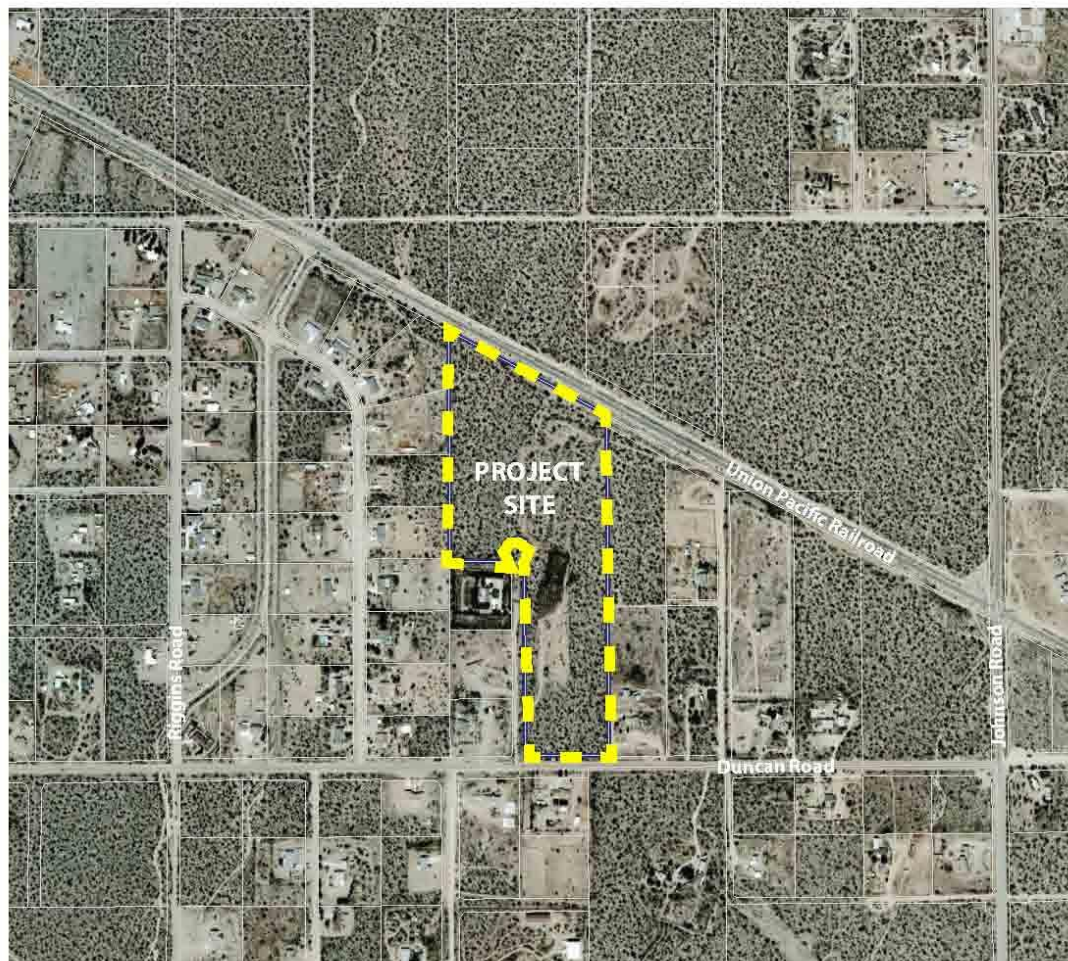


FIGURE 3: Site and Surrounding Photographs



Photo 1: Onsite views, looking northwest from Duncan Road.



Photo 2: Looking southeast from Duncan Road, showing adjacent residence.



Photo 3: Looking north from Duncan Road, showing existing rural residential neighborhood with unimproved roads.



Photo 4: Looking south from project site at the Greystone Road cul-de-sac, showing desert vegetation.



PROJECT SETTING

Regional Setting

The project site is located in the Mojave Desert region of San Bernardino County. The Mojave Desert comprises the County's Desert Planning Region, which contains 93 percent of San Bernardino County's land area. The Desert Planning Region consists of an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes. The local area of the project is the unincorporated community of Phelan. Land uses in this area consist primarily of vacant land interspersed with rural residential development. Other uses include small-scale commercial development, support services such as schools, and other public facilities.

Major transportation routes in the region include:

- State Route (SR) 18. This roadway, running east-west, is 2.5 miles north of the project site. It is a paved two-lane roadway with no curbs, sidewalks, or streetlights. The roadway is identified in the General Plan as a Major Arterial Highway.
- SR-138. This roadway, generally running northwest to southeast, is located 4.25 mile southwest of the project site. Near the project site, it is a paved, four-lane undivided highway. Paved shoulders are present, but there are no sidewalks, curbs, or streetlights. The roadway is identified in the General Plan's Circulation and Transportation map as a Major Arterial Highway; this roadway classification is defined by the Development Code as a six-lane roadway with a minimum right-of-way of 120 feet.

The nearest freeway to the project site is Interstate 15 (I-15), located 14 miles to the southeast via SR-138. In addition to major roadways, the region contains numerous paved and unpaved local streets providing access to individual parcels.

There are no airports in the project vicinity. Gray Butte Field, a small, private airstrip, is located about 8 miles to the northwest and Southern California Logistics Airport is 12.5 miles to the northeast.

Local Setting

The area immediately surrounding the project site primarily consists of vacant land with desert vegetation, rural residential development, and Union Pacific Railroad tracks. A total of 18 single-family residences are located within 500 feet of the project parcel.

Most roadways in the project vicinity are unimproved. Duncan Road, which runs along the southern edge of the site, is paved. This roadway is designated in the Phelan/Pinon Hills Community Plan Circulation Map as a Major Arterial Highway, and provides a connection to SR-18 and SR-138 via Sheep Creek Road and Johnson Road. There are no designated bicycle facilities in the project vicinity. San Bernardino Associated Governments long-range planning shows no such facilities planned or proposed in the area.

Public transportation services in the project vicinity are limited. The Victorville Valley Transit Authority operates limited service in the Phelan area. There are no fixed transit routes in the vicinity of the project site, but "deviated" service from fixed routes is available by reservation. Such service provides access to regional destinations such as Victorville and Hesperia.

The project site is owned by and located within the Snowline JUSD. Local schools serving the site include Phelan Elementary School, 3 miles to the south, and Pinon Mesa Middle School and Serrano High School, both 4 miles to the south.

Fire protection for the project site is provided by Division 2 of the San Bernardino County Fire Department (SBCFD). The nearest fire station is Phelan Station 10, located 3.5 miles southwest of the project site. This station houses one Medic Ambulance and one Medic Engine (Type 1). Pinon Hills Station 13, located 5 miles southwest of the site, houses one Type 4 Brush Patrol.

Police protection for the project site is provided by the San Bernardino County Sheriff-Coroner Department (SBCSD). The Phelan Substation, located 3 miles south of the project site, serves local area. The nearest medical facilities to the project site are Desert Valley Hospital and Victor Valley Hospital, each about 15 miles east in Victorville.

The project site is located within the Phelan Pinon Hills Community Services District (CSD). This CSD provides water service to 6,700 customers in a 128-square-mile service area. No sewer services are available in the project vicinity. All local properties use septic systems.

Existing Site Land Uses and Conditions

The site consists of one parcel covering about 25 acres. The site is currently vacant with no physical improvements. There are no structures or paved drives on the site. Human disturbance is evident in the form of mechanical disturbance of soil, vegetation removal, deposition of sod and soil, off-road vehicle tracks, domestic dog “diggings” (dug out burrows), and trash.

One paved roadway, Duncan Road, borders the site. An unimproved but dedicated right-of-way for Greystone Road is present along the southerly portion of the site’s western edge. No local streets have improvements such as curbs, sidewalks, or street lighting.

The site slopes gently downward to the north, with an elevation change of about 41 feet (from 3,643 feet to 3,602 feet) over a distance of 0.35 mile. The site is bisected by a drainage averaging 1 foot deep. The soil type underlying the site is Cajon sand which generally consists of very deep, somewhat excessively drained soils on alluvial fans and river terraces. Plant communities in the project area include a combination of Creosote Bush Scrub and Joshua Tree Woodland.

According to data from the California Department of Conservation’s Farmland Mapping and Monitoring Program, the project site is classified as Grazing Land, which is not an Important Farmland category. The project site is not protected by Williamson Act or Farmland Security Zone contracts.

The applicable Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (No. 06071C6450H, effective August 28, 2008) indicates the site is outside the 100-year floodplain, but within a 500-year floodplain (Zone X). Consistent with this designation, the site has an overlay of FP2 (Flood Plain Safety Overlay) in the County General Plan Land Use Plan’s Hazard Overlays Map.

California Department of Forestry and Fire Protection (CAL FIRE) mapping shows the site to have a Moderate wildland fire hazard.

Existing General Plan Land Use Zoning Designations

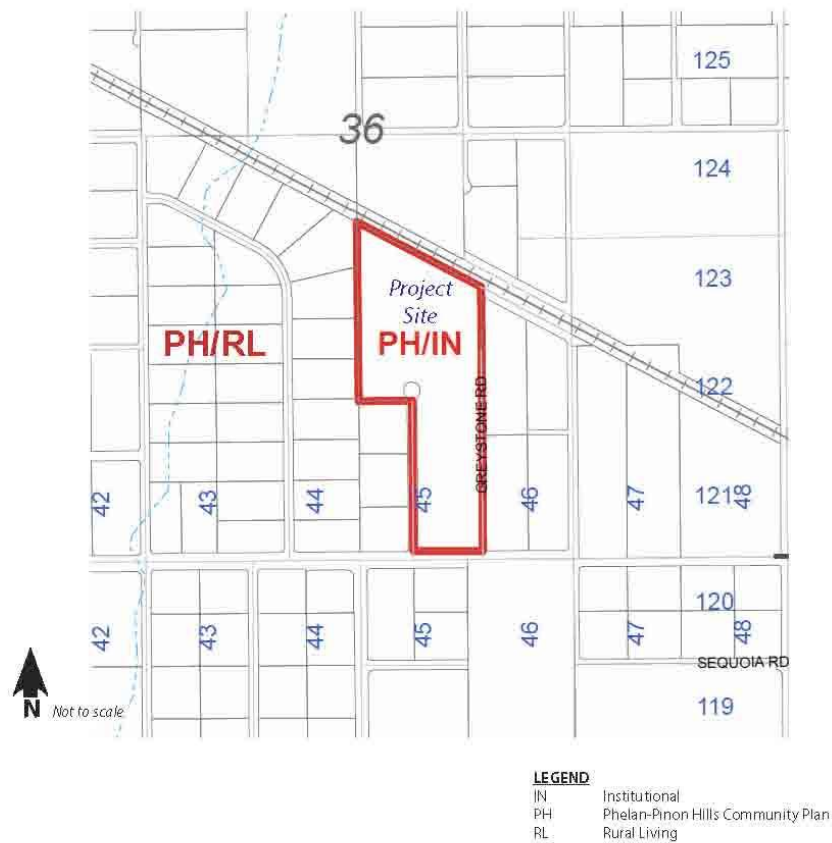
Land uses on the project site and surrounding parcels are governed by the Phelan/Pinon Hills Community Plan. Community plans are part of the General Plan, and allow for the establishment of focused goals, policies, and land uses for distinct regions of the County. The site’s land use zoning

designation is IN (Institutional). The IN district is intended to provide land for public facilities and public agency uses. There is currently an internal inconsistency within the Development Code as to the permissibility of solar power development within the IN zone. Subject to a Development Code Amendment currently being processed in conjunction with other Development Code amendments currently in-progress, solar energy generation facilities will be conditionally permitted in IN districts.

As shown in **Table 1** and **Figure 4**, parcels surrounding the project site are within the RL (Rural Living) district. The RL district is primarily intended for residential land use development, and also conditionally permits commercial solar power generation.

Table 1: Existing Land Use and Land Use Zoning Districts		
Location	Existing Land Use	Land Use Zoning District
Project Site	Vacant land	IN (Institutional)
North	Railroad; vacant lands	RL (Rural Living)
South	Rural residential; vacant lands	RL (Rural Living)
East	Rural residential; vacant lands	RL (Rural Living)
West	Rural residential; vacant lands	RL (Rural Living)

FIGURE 4: Existing Land Use Zoning Designations



PROJECT OVERVIEW

The proposed Duncan Road Solar project is a 3.2-megawatt solar PV electricity generation facility on a 25-acre parcel. Once constructed, the facility would produce enough electricity to serve over 1,200 homes. Implementation of the project requires the approval of a CUP to permit a renewable energy facility.

Overview of Solar Technology

Solar cells, also called *PV cells*, convert sunlight into electricity. PV gets its name from the process of converting light (photons) to electricity (voltage), which is called the *PV effect*.

PV cells are located on *panels*, which may be mounted at a fixed angle facing south or on a tracking device that follows the sun, allowing them to capture the most sunlight. When panels are mounted on tracking devices, they are referred to as *trackers* or *tracker blocks*. The combination of solar panels into a single system creates a *solar array*. For large electric utility or industrial applications, hundreds of solar arrays are interconnected to form a large, utility-scale PV system.

Traditional solar cells are made from silicon, are usually flat-plate, and are generally the most efficient. Second-generation solar cells are called thin-film solar cells because they are made from amorphous silicon or non-silicon materials such as cadmium telluride. No panels incorporating cadmium telluride are proposed on the project site. Thin-film solar cells use layers of semiconductor materials only a few micrometers thick. Because of their flexibility, thin film solar cells can double as rooftop shingles and tiles, building facades, or the glazing for skylights.

Third-generation solar cells are being made from a variety of new materials besides silicon, including solar inks using conventional printing-press technologies, solar dyes, and conductive plastics. Some new solar cells use plastic lenses or mirrors to concentrate sunlight onto a very small piece of high-efficiency PV material. The PV material is more expensive, but because so little is needed, these systems are becoming cost-effective for use by utilities and industry. However, because the lenses must be pointed at the sun, the use of concentrating collectors is limited to the sunniest parts of the country.

The amount of the sun's heat absorbed by a solar panel is similar to the amount of the sun's heat absorbed by the earth. On the other hand, solar panels store less heat than the earth. A solar panel is thin – the glass is approximately 3 millimeters (0.12 inches) in thickness – lightweight, and surrounded by airflow (because it's mounted above the ground). Therefore, heat dissipates quickly from a solar panel. The normal operating condition temperature for solar panels would be 20 degrees Celsius (°C) or 68 degrees Fahrenheit (°F) above ambient temperature, and so a typical summer day at 40°C (104°F) results in panel temperatures of approximately 60°C (140°F). When accounting for irradiance, wind, and module type, it is expected that the peak module temperatures in the summer would be between 65°C and 70°C (149 and 158°F) and the peak module temperatures in the winter would be between 35°C and 40°C (95 and 104°F). Although the panels would be hot to the touch, they would not noticeably affect the temperature of the surrounding area; temperatures below the trackers would be nearly the same as ambient temperatures in the ordinary shade.

Project Objectives

The applicant's objectives for the proposed project are to:

-
- Develop a solar power generation project to help meet the increasing demand for clean, renewable electricity.
 - Develop a solar power generation project that will help California meet its statutory and regulatory goal of increasing renewable power generation.
 - Develop a solar power generation project that contributes to the California Renewables Portfolio Standard goal of 33 percent of California energy coming from renewable sources by the year 2020.
 - Locate project facilities in an area that optimizes desirable solar project characteristics with minimum potential for environmental impacts.
 - Minimize the length of project generation-tie (gen-tie) distribution lines to optimize connection to the electrical grid with minimum potential for environmental impacts and land use conflicts.
 - Allow efficient use of lands owned by the Snowline Joint Unified School District, and create a source of revenue in support of its educational mission.
 - Develop a project that utilizes a reliable and proven solar technology with minimal use of natural resources.
 - Provide a range of job opportunities related to renewable energy generation.

PROJECT FEATURES

Major project features would include the following (see **Figure 5**):

Solar Field

A solar field would be the primary feature of the proposed project. The total disturbed area of the site, inclusive of the solar field, access roads, and other features, would be less than 15 acres, or about 60 percent of the 25-acre site. Solar panels would be organized in rows, with each row separated by about 15 feet (from post to post). Either fixed panels, which do not rotate with the sun, or trackers, which rotate to maximize sun exposure, could be used. Generally, panels would be approximately 8 to 12 feet in height. A cross-section of typical fixed and tracker panel layouts is provided on Figure 5.

Inverters and Switchgear

Individual PV panels are connected together in series to create a “string” to carry direct current (DC) electricity. Strings of DC current run to inverters mounted on small concrete equipment pads distributed across the site. The inverters take the DC output and convert it to alternating current (AC) electricity. AC current produced by the inverters would be transported to the local power distribution network. Existing distribution lines are present along Duncan Road; the project would connect directly to these lines, with no off-site distribution line extension required. On-site, power would run through an extension of the overhead powerline, or via underground conduit, as determined by utility company requirements.

Perimeter Fencing and Access Roads

Eight-foot-tall chain link fencing is proposed along the perimeter of the project site. Access gates would be provided at the site’s entry from Duncan Road, with an emergency access point on Greystone Road.

Duncan Road is a paved roadway along the project frontage, and would be the project access road during construction and operations. On- and off-site access roads will be paved with an aggregate base from the Duncan Road entry point. Within the site, a 26-foot-wide perimeter access road would be constructed along the project project's fenceline. This 26-foot width will consist of 20 feet of aggregate base and an additional 6 feet of open space before the start of equipment and solar panels. Other interior access routes would be 20 feet in width. Roadways within the site would consist of gravel, an aggregate base, or native materials with a soil stabilization material, if necessary.

Lighting

Very limited lighting is proposed on the project site. Manually controlled lights would be installed at equipment pads. No other lighting is planned. Cutoffs would be employed to prevent spillover onto neighboring properties.

Stormwater Facilities

With development of the proposed facilities, there would be a less than one percent reduction in pervious site acreage. Fencing and solar panel supports would have little influence on stormwater flows and the proposed site grading would not alter or concentrate the stormwater flows through the site. The project has been designed to avoid ephemeral drainages identified in the project's jurisdictional delineation. Therefore, the project is anticipated to have very limited impact on site drainage. Water would be permitted to follow current courses and flow through the site. Current drainage patterns are generally towards the northeast. No onsite detention facilities are planned.

Other Infrastructure

Because the project site would not house any permanent employees, no onsite restroom facilities are proposed. Therefore, no wastewater would be produced and no septic system or other disposal facility would be required.

No water service is proposed at the site. Water required during construction would be obtained from local fire hydrants, with the approval of the Phelan Pinon Hills CSD. Water requirements during operations will be negligible (i.e., for occasional cleaning of solar panels) and would be trucked to the site as needed.

BEST MANAGEMENT PRACTICES/PROJECT DESIGN FEATURES

Various attributes and features of the project serve to minimize negative impacts on local land uses. These include:

Construction Process

Disruption to the community is minimized through placement of the site access point on an existing paved roadway, Duncan Road. Construction hours will be limited to daytime hours; no overnight work is expected.

Residential Buffers

The project, which only covers a portion of the 25-acre site, is located to create buffers from nearby residences with setbacks significantly larger than required. Perimeter access roads 26 feet in width also serve to increase buffers between project equipment and structures on neighboring parcels.

Solar Technology – Glare and Lighting

The project uses solar panels that have a low profile (typically 9 feet, generally no more than 12 feet in height at the highest point during the day) to minimize visual impacts. These solar panels produce about the same amount of glare as windows on homes.

Nighttime lighting impacts are minimized by including only small lighting features, equipped with on/off switches or motion detectors. Lighting impacts from such fixtures would be similar to those of domestic fixtures on local homes.

Noise Reduction

The only noise-producing project feature—the inverters—are placed away from site boundaries to ensure off-site areas do not experience noise levels exceeding County standards.

Biology and Hydrology

Site plans preserve existing jurisdictional waters, with the only impacts to such features being small crossing points. In addition, minimal paving is used to preserve existing site hydrology. Site selection plays an important role in biological protection; the selected sites are not known to contain any protected species.

FIGURE 5: Site Plan

Duncan Road Solar
Initial Study/Mitigated Negative Declaration

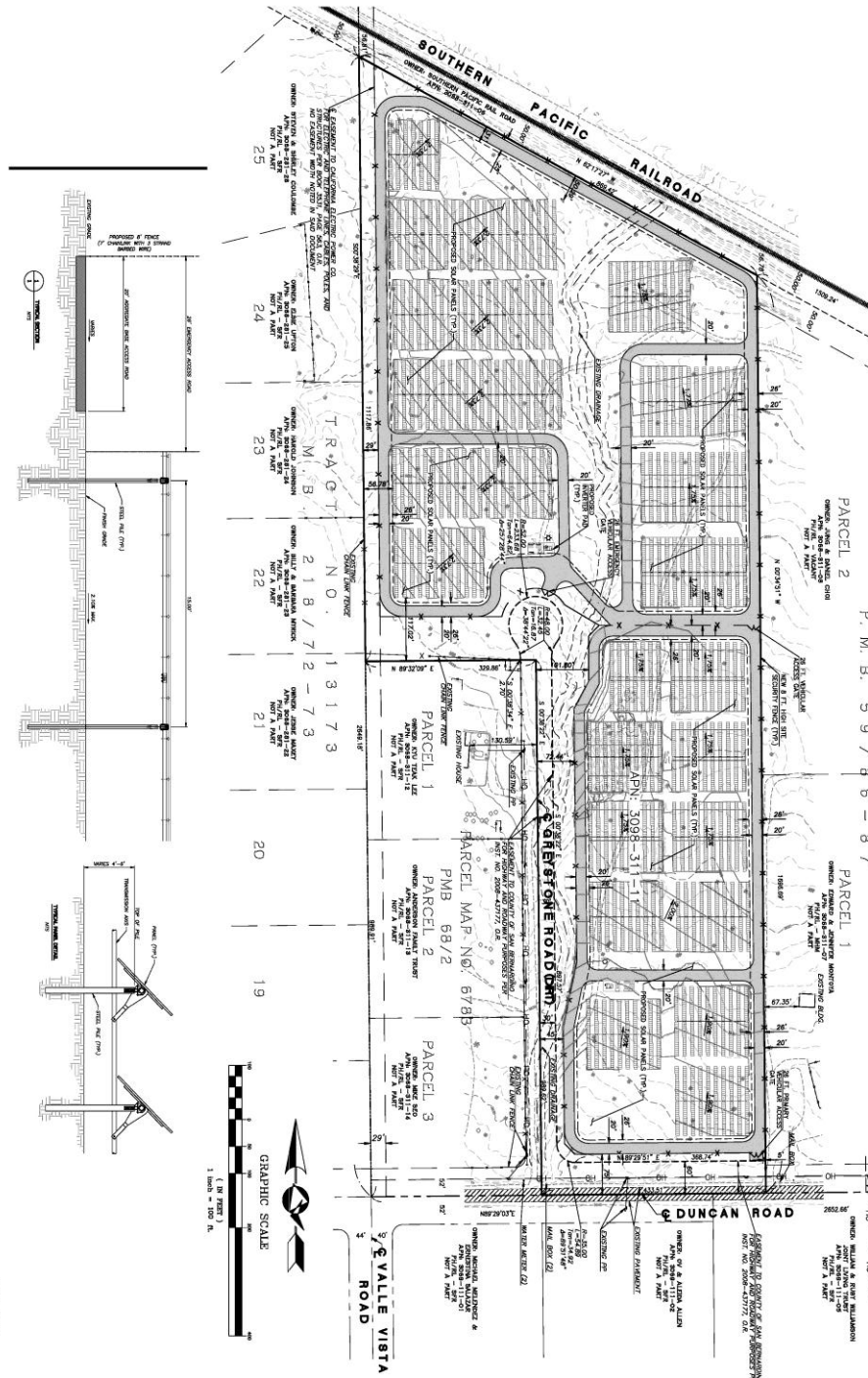


Figure 5
Site Plan

CONSTRUCTION

Site Preparation/Grading

The site is mostly flat, with a slight downward slope towards the north. Grubbing and grading would occur on the site to achieve the required surface conditions. As the site is already largely flat, grading would be limited to approximately 13,000 cubic yards of cut and fill. The site's cut and fill would balance and there would be no import or export of materials necessary. No buildings are presently located on-site; therefore, no demolition would be required.

Following grading, temporary fencing would be placed around the site. This would allow for materials and equipment to be securely stored on the site.

Construction Access Routes and Laydown Areas

Construction vehicles would access the project site from SR-138 and SR-18 via Duncan Road, which leads to Sheep Creek Road and Johnson Road, all of which are paved.

During construction, materials would be placed within the project boundaries adjacent to the then-current phase of construction. Materials would be within secured, fenced areas at all times to prevent theft or vandalism. A storage container may be used to house tools and other construction equipment. In addition, security guards would regularly monitor the site.

Portable toilet facilities would be installed for use by construction workers. Waste disposal would occur in a permitted offsite facility. Domestic water for use by employees would be provided by the construction contractor through deliveries to the site.

Construction Activities and Equipment

Construction is anticipated to occur over slightly more than 3 months. Up to 56 workers would be onsite during construction. Most workers are anticipated to commute to the site from nearby communities such as Pinon Hills and Phelan, with some traveling from more distant areas such as Victorville, Hesperia, and San Bernardino. Construction would occur during daylight hours. Workers would reach the site using existing roads, with most traveling on SR-138 or SR-18 via Sheep Creek Road and Johnson Road.

Project construction would consist of two major phases. The first phase would include site preparation, grading, and preparation of staging areas and onsite access routes, and the second phase would involve assembly of solar panels and construction of electrical interconnection facilities.

Placement of solar panels could require the placement of 6-inch driven pipe piles approximately 6 to 10 feet into the ground.

During construction, a variety of equipment and vehicles would be operating on the project site. **Table 2** provides a list of the type and number of equipment and vehicles for each construction phase. All equipment and vehicles would comply with the noise requirements of Title 8 of the San Bernardino County Code.

Construction Phasing

Construction of the project site is expected to occur in two phases over about 4 months. Phase 1 involves site preparation and Phase 2 includes PV system installation. Phase durations, equipment, and staffing are further described in **Table 2**.

Table 2: Construction Phasing

Phase		Duration	Equipment	Staffing
1	Site Preparation	1.5 months	Graders (2) Dozer Tractors/Loaders/Backhoes (2) Water Truck	20
2	PV System Installation	2.5 months	Trenchers (3) Welders (3) Forklift, rough-terrain (3) Generator set Tractors/Loaders/Backhoes (2)	56
<i>Total</i>		<i>4 months</i>		

OPERATIONS

The project facilities would be automated to allow for operation without staff being present. By nature, solar power generation projects operate during daylight hours, 365 days per year. Staff would visit the site to provide maintenance services and ensure proper operation. Maintenance staff and security personnel would visit the site every one to two days. Activities would be monitored remotely by staff at an offsite location.

Washing of the solar panels, which may be necessary to maintain panel efficiency, would occur approximately two times per year. Washing would require an increase in temporary staffing onsite and the use of water trucks. Trucks would obtain a supply of water from offsite sources. Less than 1 acre-foot of water would be required per year for panel cleaning activities. A portion of the water used in cleaning would evaporate into the atmosphere; the remainder would remain on the site and percolate underground. Negligible amounts of water used in panel washing would flow offsite.

Decommissioning

Should operations at the site be terminated, the facility would be decommissioned. Most parts of the proposed system are recyclable. Panels typically consist of silicon, glass, and an aluminum frame. Tracking systems typically consist of steel and concrete, in addition to motors and control systems. All of these materials can be recycled. Numerous recyclers for the various materials to be used on the project site operate in San Bernardino and Riverside Counties. Metal, scrap equipment, and parts that do not have free flowing oil may be sent for salvage. Equipment containing any free flowing oil would be managed as waste and would require evaluation. Oil and lubricants removed from equipment would be managed as used oil – a hazardous waste in California. Decommissioning would comply with federal, state, and local standards and regulations that exist at the time of project shutdown, including the requirements of San Bernardino County Development Code Section 84.29.060.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

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- Mojave Desert Air Quality Management District
 - Snowline Joint Unified School District

EVALUATION FORMAT

This initial study is prepared in compliance with the California Environmental Quality Act (CEQA) pursuant to Public Resources Code Section 21000, et seq. and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of an Initial Study is guided by Section 15063 of the State CEQA Guidelines. This format of the study is presented as follows. The project is evaluated based on its effect on 17 major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact
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Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors.

1. **No Impact:** No impacts are identified or anticipated and no mitigation measures are required.
2. **Less than Significant Impact:** No significant adverse impacts are identified or anticipated and no mitigation measures are required.
3. **Less than Significant Impact with Mitigation Incorporated:** Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are: (List of mitigation measures)
4. **Potentially Significant Impact:** Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts, which are (List of the impacts requiring analysis within the EIR).

At the end of the analysis the required mitigation measures are restated and categorized as being either self- monitoring or as requiring a Mitigation Monitoring and Reporting Program.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below will be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use/ Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION shall be prepared.
<input checked="" type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there shall not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION shall be prepared.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature (prepared by Christopher Conner, Senior Planner)

Date

Signature: (David Prusch, Supervising Planner)
Land Use Services Department/Planning Division

Date

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
I. AESTHETICS - Will the project				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located within the view-shed of any Scenic Route listed in the General Plan):

- a) **Less than Significant Impact.** General Plan Open Space Element Policy OS 5.1. states that a feature or vista can be considered scenic if it:
- Provides a vista of undisturbed natural areas,
 - Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed, or
 - Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

The site is within the community of Phelan, which consists largely of rural residential development interspersed with vacant land. Other land uses include commercial and institutional facilities, paved roadways, and powerlines. The site is not part of a vista of natural areas, as surrounding areas are generally flat and intervening landscapes and manmade structures limit views. More distant vistas from higher-elevation areas in the Angeles National Forest are not significantly impacted due to the low height of the proposed solar panels and other project features. As such, views of undisturbed natural areas are not significantly affected by the project.

The project site is vacant and mostly flat, with no landforms of note. There are no unique or unusual features on the site that could dominate views of the area. Therefore, there are no unique or unusual features on the site that could comprise an important or dominant position in the viewshed.

Finally, the site does not offer distant vistas that provide relief from less attractive nearby features. The proposed project would directly alter the existing view of the project site from adjacent uses and roadways by developing about 15 acres of vacant land with solar panels and ancillary equipment. However, the site is flat and contains no significant geological or vegetation features that could be considered scenic. The solar equipment on site, consisting of solar panels and associated electrical equipment, would maintain a low profile – generally

up to 12 feet in height. Other project features would include access drives, chainlink fencing, and a power distribution line. None of the proposed onsite equipment would obstruct any viewsheds in the area; offsite distribution lines would be consistent in height and design with existing power distribution lines adjacent to area roadways, and would therefore not cause any significant change in views.

For the reasons described above, impacts related to a substantial adverse effect on a scenic vista are less than significant.

- b) **Less than Significant Impact.** The proposed project would not damage scenic resources, including those within a designated scenic highway. There are no State-designated scenic routes in the project vicinity and there are no scenic or historic resources onsite. Although undeveloped, there are no large trees or natural rock outcroppings onsite. The vegetation on the site and along the perimeter is sparse and is not unique to the immediate area and therefore is not a scenic resource.

SR-138, located 4.25 miles southwest of the project site, is depicted on the General Plan's Open Space Element Map as a County-designated scenic route. Due to the substantial distance of the site from this roadway, the flat topography of the area, and the low height of project facilities, the project site would not be visible from the highway. Therefore, the project would have a less than significant impact related to substantial damage to scenic resources within a state scenic highway.

- c) **Less than Significant Impact.** Implementation of the proposed project would alter the existing visual character of the project site. Proposed project facilities have heights which are similar to or lower than those of existing development in the Phelan area, including single-family residences and powerlines. The proposed project would have a low profile (with a typical height of up to 12 feet for solar panels) and minimal lighting and, therefore, would not substantially degrade the existing visual character or quality of the site and its surroundings. The current visual character of the project site consists of flat lands surrounded by sparse rural residential development, and vegetation communities such as Creosote Bush Scrub and Joshua Tree Woodland. There is some evidence of human disturbance on the site, including mechanical disturbance of soil, vegetation removal, deposition of sod and soil, off-road vehicle tracks, domestic dog "diggings" (dug out burrows), and trash.

Photographs of typical solar PV power plant facilities are provided in **Figure 6**. While the precise design of panel systems varies by manufacturer and model, and is subject to modification as technologies evolve, these figures provide an accurate indication of the systems that would be used on the project site. Panels and associated onsite equipment would have a profile much lower than that of a single-story building.

This analysis of aesthetics impacts relies in part on visual simulations of the proposed project. The project's viewshed, which extends approximately two miles from the site boundary, includes areas up to 300 feet higher in elevation. However, due to the low profile of site facilities, it is local viewers from nearby residential areas that would be most affected by changes in site aesthetics.

The viewpoints used in the simulations are mapped on **Figure 7**. **Figure 8a** shows the pre-

development view from Viewpoint Location #1, a residential subdivision west of the site. The pre-development viewpoint shows manmade modifications to the landscape, including residential development and dirt roads. A simulation of the proposed project is provided in **Figure 8b**. This view, which is typical of views from nearby residential areas, shows solar panels as small features in the distance, almost entirely concealed by natural desert vegetation. Due to the low height of project facilities, no structures would stand out on the horizon or significantly modify the landscape. Overall, the simulation reveals that nearby viewpoints in the project's viewshed would observe only minor visual changes as a result of project implementation.

Figure 9a shows the pre-development view from Viewpoint Location #2, southeast of the site along Duncan Road. This viewpoint best represents views from areas to the south and along Duncan Road. The pre-development view shows existing improvements including a paved roadway and powerlines. A simulation of the proposed project is provided in **Figure 9b**. The project from this viewpoint would be clearly visible but, due to the low height of project facilities, not substantially out-of-scale with location vegetation and development. Large setbacks reduce visual impacts.

Overall, the project would be similar in scale to existing development, and would largely be hidden from view of adjacent residences by natural vegetation common to the area. Significant vegetation has been planted along the frontage of the closest residence, 12228 Greystone, which is located on the western side and at the end of Greystone Road. This vegetation screens the project site from view and would have a less than significant impact on visual character when viewed from this residence. With approval of the CUP, the proposed project would be consistent with the County's zoning requirements and development standards relative to the setbacks and height of the project. The proposed project would not have a substantial adverse effect on the visual character or quality of the site or its surroundings; impacts would be less than significant and no mitigation is required.

FIGURE 6: Typical Views of Solar Fields



FIGURE 7: Viewshed Map

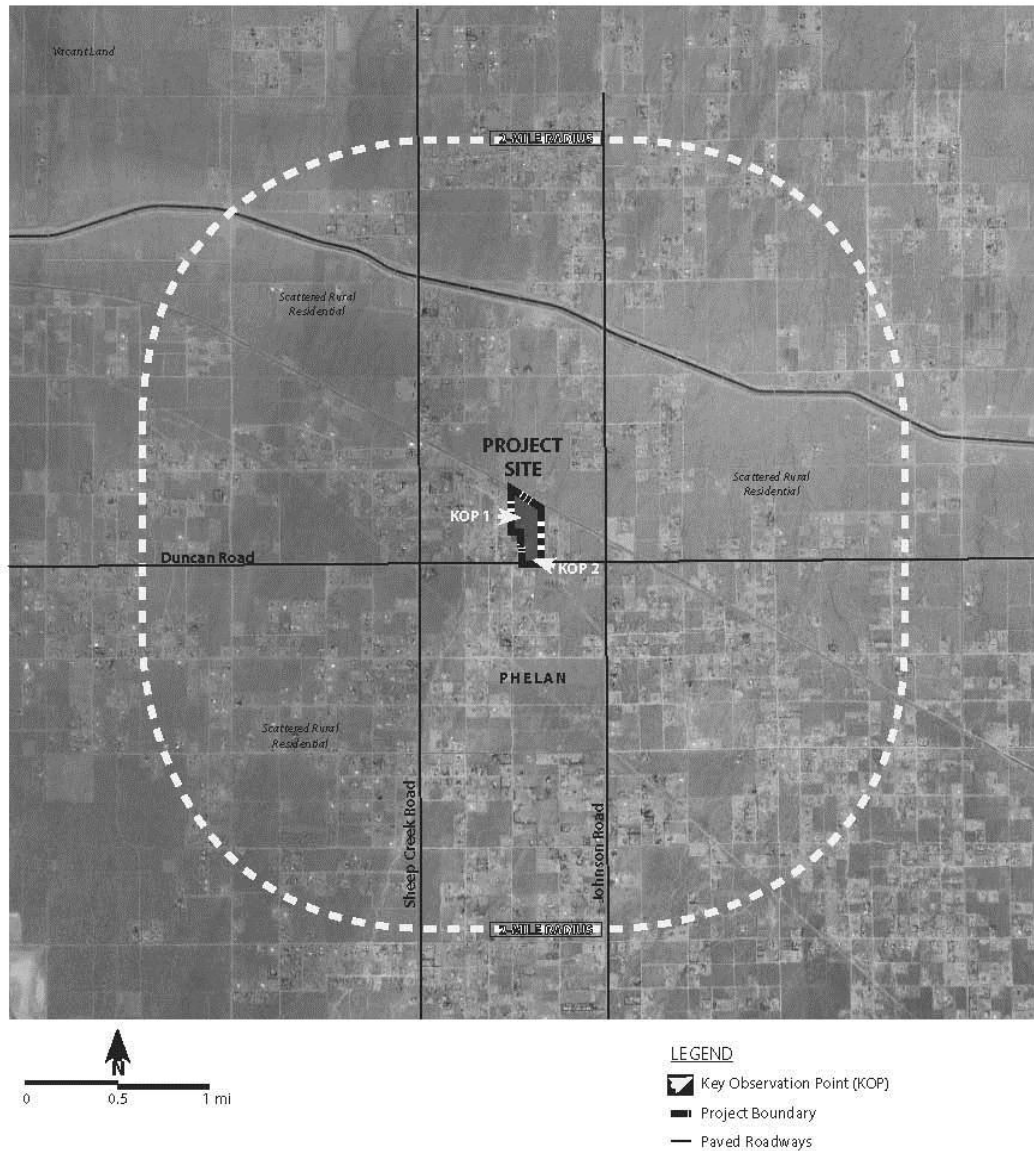


FIGURE 8a/b: Photo Simulations – Location 1



Figure 8a LOCATION 1: Existing view from residences west of the site, along Desert Ranch Road.



Figure 8b LOCATION 1: Simulated view from residences west of the site, along Desert Ranch Road.

FIGURE 9a/b: Photo Simulations – Location 2



Figure 9a LOCATION 2: Existing view looking west along Duncan Road towards the project site.



Figure 9b LOCATION 2: Proposed view looking west along Duncan Road towards the project site.

- d) **Less than Significant Impact with Mitigation Incorporated.** The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The project uses dark photovoltaic solar cells, which would track the sun to maximize solar exposure to the panels.

Regarding nighttime lighting conditions and daytime glare conditions, “light” refers to artificial light emissions, or the degree of brightness, generated by a given source. The Illuminating Engineering Society of North America defines “glare” as the sensation produced by luminance in the visual field that is sufficiently greater than the luminance to which the eye has adapted to cause annoyance, discomfort, or loss of visual performance and visibility.

Lighting

Construction of the proposed project would generally occur during daytime hours, and could occur as late as 7:00 p.m. in order to meet the construction schedule. No overnight construction would occur. In the event that work is performed between dusk and 7:00 p.m., the construction crew would only use the minimum illumination needed to perform the work safely. All lighting would be directed downward and shielded to focus illumination on the desired work areas only, and to prevent light spillage onto adjacent properties. As applicable, work in the solar field areas and on the distribution lines at night would be performed using battery or gas-powered light stands that would be directed to the active work area. Because lighting would be shielded and focused downward and lighting used to illuminate work areas would be turned off by 7:00 p.m., the potential for lighting to adversely impact any residents is minimal. As a result, the project would not be anticipated to adversely impact nighttime views in the project area.

As described under “Project Features,” above, the proposed project would include manually controlled lights at equipment pads. No other lighting is planned. Cutoffs would be employed to prevent spillover onto neighboring properties. If improperly designed or oriented, such lighting may result in light trespass that falls outside the boundaries of the project site. Under particularly adverse conditions, spillover lighting causes annoyance, discomfort, or loss in visual performance because of its intensity, direction, or source type and visibility.

Impacts resulting from lighting would be minimized through compliance with all development standards, Zoning Ordinance standards, and the goals, policies, and implementation measures of the General Plan. San Bernardino County Ordinance No. 3900 regulates glare, outdoor lighting, and night sky protection. Nighttime lighting associated with the proposed project would be subject to County approval and compliance with San Bernardino County requirements. Lighting would be directed toward the ground from low elevation poles (less than 14 feet in height). All lights would be shielded so that there is no upward directed light. In addition, the implementation of Mitigation Measure AES-1 would minimize the potential for spillover lighting to adversely affect residents and motorists. With implementation of the standard conditions discussed above, as well as Mitigation Measure AES-1, the project would not have substantial adverse impacts related to lighting; impacts would be less-than-significant.

Glare

Most of the project's construction activities are planned to occur during daylight hours. Increased truck traffic and the transport of the solar arrays and construction materials to the project site would temporarily increase glare conditions during construction. However, this increase in glare would be minimal and temporary. Construction activity would occur on focused areas of the site as construction progresses and any sources of glare would not be stationary for a prolonged period of time. Additionally, the surface area of construction equipment would be minimal compared to the scale of the project site. Therefore, construction of the proposed project would not create a new source of substantial glare that would affect daytime views in the area. Impacts would be less than significant during the construction period.

During operations, the reflection of sunlight would be the primary potential producer of glare off the glass surfaces of the solar panels in the proposed project.

A solar panel comprises numerous solar cells. A solar cell differs from a typical reflective surface in that it has a microscopically irregular surface designed to trap the rays of sunlight for the purposes of energy production. The intent of solar technology is to increase efficiency by absorbing as much light as possible (which further reduces reflection and glare).

As described in under "Project Features," above, some or all of the project's panels could be mounted on trackers. Trackers allow the panels to follow the sun in its path from east to west across the southern sky as the day progresses. These devices orient the solar panels perpendicular to the incident solar radiation, thereby maximizing solar cell efficiency and potential energy output. Some of these tracking devices use GPS, which enables the tracking to be extremely accurate, and are capable of positioning the array so that the incident rays would be at or very near a surface normal (perpendicular angle). During midday conditions, when the sun is high in the sky, the law of reflection indicates that the reflected ray would be at an equally low angle and reflected in a direction toward the light source or back into the atmosphere away from receptors on the ground. When the sun is low on the horizon (near dawn or dusk), the sun's angle in the sky is low; however, reflected rays would still be directed away from ground-level receptors.

The panels would not be expected to cause extreme visual discomfort or impairment of vision for residents because the panels are designed to absorb as much sunlight as possible and therefore would have minimal reflectivity. The type of glare that could be expected in the most extreme conditions, when the sun is low in the sky, is a level of veiling reflection that may cause viewers to be less able to distinguish levels of contrast, but not cause a temporary loss of vision. Additionally, for most residents, glare effects would be further reduced by intervening elements in the immediate viewshed, such as vegetative screening created existing vegetation, and other homes or structures, which would obstruct views of the panels. Therefore, the proposed project would result in less-than-significant impacts related to glare for residences in the project vicinity.

Similarly, and also due to their low reflectivity, the panels would not be expected to cause visual impairment for motorists on area roadways. Effects on eastbound motorists would likely be greatest in the early evening hours, when the sun is at its lowest arc in the western

horizon. Glare would have its greatest impact on westbound travelers in the early morning hours, when the sun is rising in the east. Nonetheless, regardless of their position relative to the sun and the time of day, the panels would not be expected to cause visual impairment for motorists. Mitigation Measure AES-2 requires panels to incorporate anti-reflective and diffusion coating technologies that would reduce fugitive glare and spectral highlighting and increase the efficiency of the electrical-generation facility. With the implementation of this mitigation measure, impacts to motorists from glare are further reduced. The proposed project would result in less-than-significant impacts related to glare affecting motorists.

Because of the inherently low reflectivity of PV panels and with implementation of Mitigation Measures AES-1 and AES-2, in addition to compliance with the standards of the Zoning Ordinance, General Plan, and Development Standards of San Bernardino County, glare impacts would be less-than-significant.

Significance: Possible significant adverse impacts have been identified or are anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

AESTHETICS MITIGATION MEASURES:

AES-1 *Lighting Requirements. The area of illumination from any lighting will be confined to within the site boundaries to minimize impacts to night sky views from surrounding properties. On-site lighting will be fully shielded, diffused, or directed in a manner to avoid glare directed at adjacent properties, roadways or any light spill into any wildland areas surrounding the site that might affect nocturnal animals. No light will project onto adjacent roadways in a manner that interferes with on-coming traffic. All lighting will be limited to that necessary for maintenance activities, security, and safety purposes. All signs proposed by this project will only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign or by direct stationary neon lighting.*

AES-2 *Anti-Reflective/Diffusion Coatings. Solar panels and hardware shall be designed to minimize glare and spectral highlighting. To the extent feasible, emerging technologies shall be utilized that introduce diffusion coatings and nanotechnological innovations that will effectively reduce the refractive index of the solar cells and protective glass. These technological advancements are intended to make the solar panels more efficient at converting incident sunlight into electrical power, but have the tertiary effect of reducing the amount of light that escapes into the atmosphere in the form of reflected light, which would be the potential source of glare and spectral highlighting. The developer shall submit for review and gain approval of technical specifications for the proposed coatings or other proposed methods to reduce glare and spectral highlighting prior to issuance of building permits.*

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Will the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located in the Important Farmlands Overlay):

- a) **No Impact.** The Farmland Mapping and Monitoring Program of the California Department of Conservation is charged with mapping Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance (Farmland) across the state. The

project would not convert Farmland, as shown on the FMMP maps, to non-agricultural use, since the proposed project is not designated as such. There is no impact and no further analysis is warranted.

- b) **No Impact.** The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. The current General Plan land use designation for the project area is IN, which allows the development of renewable energy generation facility with a CUP (Development Code Section 82.06). The proposed project area is not under a Williamson Act contract. There is no impact and no further analysis is warranted.
- c) **No Impact.** The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. The proposed project area is currently vacant land, which has never been designated as forest land or timberland. No rezoning of the project site would be required as the proposed energy facility is compatible with the current zoning designation of IN. There is no impact and no further analysis is warranted.
- d) **No Impact.** The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The proposed project site is vacant and covered with desert vegetation. There is no impact and no further analysis is warranted.
- e) **No Impact.** The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use. The current General Plan land use designation for the project area is IN, which allows the development of renewable energy generation facility with a CUP (Development Code Section 82.06). There is no impact and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
III. AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district might be relied upon to make the following determinations. Will the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	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 ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SUBSTANTIATION: (Discuss conformity with the Mojave Air Quality Management Plan, if applicable):					

- a) **Less than Significant Impact.** Giroux & Associates prepared an Air Quality Impact Analysis (AQIA) for the project in June 2013. The AQIA evaluates emissions from construction and operations, focusing on criteria air pollutants, hazardous emissions, and greenhouse gases (GHG). The full report, with baseline emissions data, analysis methodologies and emissions modeling output, is included as Appendix A.

The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. The project site is in the Victor Valley portion of the Mojave Desert Air Basin (MDAB) and under the air quality planning jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The Victor Valley area is designated "non-attainment" for State and federal ambient air quality standards (AAQS) for ozone (O₃) and inhalable particulate matter (PM-10).

From 2007 to 2011, the O₃ standards were exceeded up to 73 days per year at the Phelan monitoring station, while PM-10 standards (at the closest monitoring station, in Victorville) were exceeded on fewer than five days per year. PM-2.5 thresholds have not been exceeded in recent years, but the region formally remains in non-attainment for this pollutant. The Mojave Air Quality Management Plan (AQMP) provides a program for obtaining attainment status for those monitored air pollution standards. The AQMP bases existing and future air pollution emissions on employment and residential growth projections, as derived from local and regional General Plans and other projections. While the proposed project is not identified specifically in the General Plan, it would not generate new homes or significant employment opportunities that will change the County's

projections.

Attainment of ozone standards is most strongly linked to air quality improvements in upwind communities; the AQIA attributes the majority ozone pollution in the MDAB to sources outside the air basin. PM-10 and PM-2.5, however, is affected by construction, unpaved road travel, open fires and/or agricultural practices. Therefore, in order to limit the production of fugitive dust during implementation of the proposed project, construction activities would be conducted in accordance with MDAQMD Rules 403 - *Fugitive Dust* and 403.2 - *Fugitive Dust Control for the Mojave Desert Planning Area*. This includes using water trucks to minimize the production of visible dust emissions to 20 percent opacity in areas of where grading or vegetation removal occurs, within the staging areas, and on any unpaved roads utilized during project construction.

Over its lifetime, the proposed project would not violate the regulations set forth by the MDAQMD *Rule Book* or *CEQA and Federal Conformity Guidelines*. Electricity generation via the use of photovoltaic systems does not generate chemical emissions that would negatively contribute to air quality. The proposed project is designed to limit the amount of vegetation that would be removed and grading required for access, which would limit fugitive dust generated during the life of the project.

Given that the proposed project would not alter the population or employment projections considered during the development of the AQMP, and considering the minor emissions attributable to the proposed project during operation (refer to discussion in Item III.b below), impacts associated with AQMP consistency would be less than significant.

- b) **Less than Significant Impact with Mitigation Incorporated.** The proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Air quality impacts would include construction exhaust emissions generated from diesel- and gasoline-powered equipment construction equipment, vegetation clearing, grading, construction worker commuting, and construction material deliveries (including the delivery of solar panels from out-of-state locations). Fugitive dust emissions include particulate matter and are a potential concern because the project is in a non-attainment area for PM-10 and PM-2.5, as well as ozone.

The AQIA calculated on-site grading and construction equipment emissions and construction crew commuting and truck delivery emissions using the CalEEMod computer model (version 2011.1.1). The EMFAC2011 program was used for estimating emissions from on-road vehicles during operations. The AQIA uses the following MDAQMD-adopted numerical emissions thresholds as indicators of potential impacts:

Carbon Monoxide (CO)	548 pounds/day	100 tons/year
Nitrogen Oxides (NO _x)	137 pounds/day	25 tons/year
Sulfur Oxides (SO _x)	137 pounds/day	25 tons/year
Reactive Organic Gases (ROG)	137 pounds/day	25 tons/year
Particulate Matter (PM-10)	82 pounds/day	15 tons/year
Particulate Matter (PM-2.5)	82 pounds/day	15 tons/year

Following is a summary of the AQIA's construction equipment fleet assumptions and

emissions calculations for both phases of construction activity.

Phase 1: Site Preparation and Grading, 1.25-Month Duration

- 1 Dozer
- 2 Loaders/backhoes
- 2 Graders
- 1 Water truck
- 10 Construction worker vehicles
- 38 truck deliveries per day (20 miles round trip)

Phase 2: Equipment Installation and Distribution Lines, 2.5-Month Duration

- 3 Trenchers
- 3 Welders
- 2 Rough Terrain Forklifts
- 1 Generator Set
- 2 Loaders/Backhoes
- 28 Construction worker vehicles
- 11 Truck deliveries per day (20 miles round trip)
- 10 Truck deliveries per day (100 miles round trip) – solar panels

The AQIA determined all criteria pollutants generated by the project would be well below their respective thresholds (see Tables 5 and 6 of the AQIA for detailed emissions calculations). In compliance with MDAQMD Rule 403, because the region is in non-attainment for particulate matter emissions, the use of Best Available Control Measures (BACMs) is required even if a project does not exceed thresholds. BACMs for the project consist of enhanced dust control mitigation measures (see Mitigation Measure AQ-2); with these measures, PM-10 and PM-2.5 emissions would be reduced by about 40 percent. As noted in Item III.a above, all required dust abatement measures would be consistent with MDAQMD Rule 403.2 - *Fugitive Dust Control for the Mojave Desert Planning Area*.

Mitigation Measures AQ-1 and AQ-3, which describe standard County requirements imposed on conditional use permits, would further ensure that emissions from increased vehicle trips would have less-than-significant air quality impacts.

On an annual basis, none of the criteria pollutants would exceed the MDAQMD thresholds (with or without the recommended mitigation). **Table 3**, below, provides detailed calculations.

**Table 3. Construction Activity Emissions (tons/year)
4-month duration**

Activity	ROG	NO _x	CO	SO ₂	PM-10	PM-2.5
Phases 1 and 2						
Unmitigated	0.2	1.5	1.0	0.0	0.3	0.1
w/Fugitive Dust Mitigation*	0.2	1.5	1.0	0.0	0.2	0.1
MDAQMD Threshold	25	25	100	25	15	15
Exceeds Threshold?	No	No	No	No	No	No
Source: Giroux & Associates, 2013.						
*enhanced fugitive dust control measures are incorporated into Mitigation Measure AQ-2.						

The project would generate negligible air emissions during operations because the facility would be automated and would require minimal onsite personnel. Periodic repairs, equipment cleaning, and site monitoring would be conducted, but no permanent staff would be onsite. Solar panels and associated equipment would have an operating life of several decades; therefore, replacement of panels would be very infrequent. The solar panels may be cleaned twice annually, requiring a work crew and light trucks (5 or fewer vehicles). Maintenance and security personnel would visit the site regularly (generally, every few days). For a conservative estimate, the AQIA assumes one visit per day to the site. Based on these factors, operational traffic associated with the project would be minimal.

The AQIA used those factors and commuting distances to calculate operational emissions for cleaning and security. **Table 4**, below, depicts annual operational activity emissions. The table shows that operational emissions are negligible. All criteria pollutants would be less than one percent of their respective MDAQMD daily and annual thresholds and are less than significant. No mitigation is necessary for operational air emissions.

Following the termination of operations, decommissioning activities, as discussed in the Project Overview section above, would result in ground-disturbing activities similar to those occurring during construction, but would be of a significantly shorter duration. Activities would include the removal and recycling of solar panels and associated equipment, and the restoration of disturbed soil and revegetation of the site with native vegetation. Accordingly, the emissions and applicable control strategies for decommissioning would be similar to those for construction.

Table 4. Operational Activity Emissions (tons/year)

Activity	ROG	NO _x	CO	SO ₂	PM-10	PM-2.5
Cleaning, Security, and Maintenance						
1 site visit per day, 50-mile round trip	0.003	0.009	0.084	0.000	0.000	0.000
MDAQMD Threshold	25	25	100	25	15	15
Exceeds Threshold?	No	No	No	No	No	No
Source: Giroux & Associates, 2013.						

Based on the above analysis, project construction and operations would neither violate any air quality standard nor contribute substantially to an existing or projected air quality violation. Mitigation Measures AQ-1 through AQ-3 are required to achieve compliance with regional air quality regulations and the County's CUP implementation requirements. With application of this mitigation measure, impacts are less than significant.

- c) **Less than Significant Impact.** The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). As previously discussed in Items III.a and III.b, the project's contribution to criteria pollutants during the temporary construction period would be localized and mitigated to below a level of significance. As also indicated, operational activities would generate insubstantial quantities of air pollutants that are not deemed cumulatively considerable. Since no other sources of potential long-term air emissions would result, impacts would be less than significant.
- d) **Less than Significant Impact.** The proposed project would not expose sensitive receptors to substantial pollutant concentrations (see Items III.a through III.c regarding criteria pollutants). The project's construction and operations would not result in any significant air pollutant emissions, and nearby sensitive receptors (consisting of residences) would not be significantly impacted by such emissions.

With regard to potentially hazardous air emissions, electricity generation via the use of photovoltaic systems does not generate chemical emissions that would negatively affect air quality. Small amounts of hazardous air pollutants are contained in the diesel exhaust of the construction equipment to be used to prepare the site and install the solar panels. Diesel exposure risk is calculated based on a 70-year lifetime with the receptor located outdoors permanently. Student exposure to construction equipment exhaust emissions will only be for several months with very limited outdoor exposure. An existing solar plant is located much closer to the campus and was installed while the school was operational. The combination of limited exhaust particulate emissions, brief student exposure and generally good daytime desert dispersion conditions renders hazardous emissions impacts as less-than-significant.

For those reasons, impacts are less than significant and an assessment of potential human health risks attributable to emissions of hazardous air pollutants is not required.

- e) **Less than Significant Impact.** The proposed project would not create objectionable odors that would affect a substantial number of people. Electricity generation via the use of photovoltaic systems does not generate emissions that would negatively contribute to air quality or produce objectionable odors. Potential odor generation associated with the proposed project would be limited to short-term construction sources such as diesel exhaust; however, no significant odor impacts are anticipated due to the short-term duration of such emissions, as well as the intervening distance to sensitive receptors. Odor generation impacts would be less than significant and no further analysis is warranted.

SIGNIFICANCE: Possible significant adverse impacts have been identified or are anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level considered less than significant:

AIR QUALITY MITIGATION MEASURES:

AQ-1 *AQ/Operational Mitigation. Operation of all off-road and on-road diesel vehicles/equipment will comply with the County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)], including but not limited to:*

- a) Equipment/vehicles will not be left idling for periods in excess of five minutes.*
- b) Engines will be maintained in good working order to reduce emissions.*
- c) Onsite electrical power connections will be made available where feasible.*
- d) Ultra low-sulfur diesel fuel will be utilized.*
- e) Electric and gasoline powered equipment will be substituted for diesel powered equipment where feasible.*
- f) Signs will be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.*
- g) All transportation refrigeration units (TRUs) will be provided electric connections.*

AQ-2 *AQ/Dust Control Plan. The developer will prepare, submit, and obtain approval from San Bernardino County Planning of a Dust Control Plan (DCP) consistent with Mojave Desert Air Quality Management District guidelines and a letter agreeing to include in any construction contracts/subcontracts a requirement that project contractors adhere to the requirements of the DCP. The DCP will include the following elements to reduce dust production:*

- a) Exposed soils and haul roads will be watered three (3) times per day to reduce fugitive dust during all grading/construction activities. Inactive areas will be treated with soil stabilizers such as hay bales or aggregate cover.*
- b) Street sweeping will be conducted when visible soil accumulations occur along site access roadways to remove dirt dropped by construction vehicles.*
- c) Site access driveways and adjacent streets will be washed daily, if there are visible signs of any dirt track-out at the conclusion of any workday.*
- d) Construction vehicle tires will be washed prior to leaving the project site.*

-
- e) *All trucks hauling dirt away from the site will be covered, and speeds on unpaved roads will be reduced below 15 miles per hour.*
 - f) *During high wind conditions (i.e., wind speeds exceeding 25 mph), areas with disturbed soil will be watered hourly and activities on unpaved surfaces will cease until wind speeds no longer exceed 25 mph.*
 - g) *Storage piles that are to be left in place for more than three working days will either be sprayed with a non-toxic soil binder, covered with plastic or revegetated.*

AQ-3 AQ – Installation. *The developer will submit for review and obtain approval from County Planning of evidence that all air quality mitigation measures have been installed properly and that specified performance objectives are being met to the satisfaction of County Planning and County Building and Safety.*

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
IV. BIOLOGICAL RESOURCES - Will the project:				
a) Have substantial adverse effects, 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc...) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SUBSTANTIATION: (Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database <input checked="" type="checkbox"/>): Burrowing owl				

a) **Less than Significant Impact with Mitigation Incorporated.**

Biological Resource Surveys

AMEC Environment & Infrastructure, Inc. (AMEC) conducted general biological investigations of the project site to identify and document any biological resources that might be adversely affected by construction or operation of the project. The Biological Resources Assessment (BRA) study area included the full 26-acre project site. Surveys were conducted in April 2013. Additional areas, including buffers, were analyzed as part of focused surveys. Focused surveys were conducted for desert tortoise and rare plants (with results included in the BRA) and for burrowing owl and Mohave ground squirrel (with results in separate reports). These reports are further described below.

The purpose of the general survey was to identify potential habitat for any threatened, endangered, or otherwise sensitive plant and wildlife species that may occur in the study areas. Appendix C, *Wildlife and Plant Species Observed During Surveys*, of the BRA lists all plant and wildlife species observed by AMEC biologists in the study area. AMEC also identified biological resources by researching plant and wildlife databases and through literature reviews. As a result of the initial surveys, follow-up focused surveys were conducted for several species, as described separately below. The BRA was prepared in April 2013, and the complete report with detailed findings and recommendations is included in Appendix B. In addition, the following reports, with detailed findings and recommendations, are included in Appendix B: Focused Surveys for Burrowing Owl, dated July 2013; Mohave Ground Squirrel Survey, dated August 2013; and a Jurisdictional Delineation Report, dated June 2013. The results of all the surveys are summarized as applicable for Items IV.a to IV.f.

Plant Communities

The plant community present throughout the BRA study area is an intergrade of Creosote Bush Scrub and Joshua Tree Woodland, dominated by creosote bush, white bur-sage, Joshua tree, peach thorn, and cheesebush. Photographs of on-site plant communities are provided in the BRA.

The plant communities discussed above are composed of numerous plant species. Plant species observations and identifications were completed during the field investigations for the BRA study area. Appendix C of the BRA lists all plant species observed in the study area.

Special Status Plants

Sensitive Plant Species

Sensitive plants include those listed, or candidates for listing, by the U.S. Fish & Wildlife Service (USFWS) and California Department of Fish & Wildlife (CDFW), and species considered sensitive by the California Native Plant Society (CNPS) (particularly Lists 1A, 1B, and 2).

No sensitive plant species were observed within the project site during the general biological field investigations or during focused surveys for rare plants. Most rare plants known from the surrounding area lack appropriate habitat at the project site, and would not be expected to occur on the site. The project site is not in a proposed or final critical habitat area for listed plants. The BRA lists 10 rare plants occurring in the vicinity of the project site based on a literature review and records search. Only one of these species, white pygmy-poppy (*Canbya candida*), is considered to have any probability (low) of occurrence on the project site.

It is noted that precipitation in general has been very low this year in the Phelan area, with just 0.16 inches of rainfall recorded for March, and none recorded for April. This represents approximately 15 percent of the average rainfall total of 1.08 inches for March and April in the project area. Germination of annual plants has been negatively affected by the lack of rain. The BRA, however, concludes that there is very little chance white pygmy-poppy

occurs onsite, and on a site this small and disturbed no population of significance would be expected to occur. This plant is not state or federally listed as threatened or endangered. Therefore, no significant impacts to rare plants are anticipated and no mitigation measures are required.

Regulated Plant Species

The San Bernardino County Development Code, Title 8, Chapter 88.01, *Plant Protection and Management*, implements and augments provisions of the California Desert Native Plants Act (California Food and Agricultural Code Section 80000 et seq.), which is intended to regulate the harvesting of desert native plants and require the transplantation of plants from development sites. The County code requires compliance with the Act before the issuance of a development permit or approval of a land use application that would result in removal of the regulated species.

Development Code Section 88.01.030 states:

The provisions in this Chapter, except those of Section 88.01.090 (Tree Protection From Insects and Disease) shall not apply to the removal of regulated trees or plants that may occur in the following situations:

(b) Government owned lands. Removal from lands owned by the United States, State of California, or local government entity, excluding Special Districts (i.e., Special Districts shall be subject to the provisions of this Division.).

Accordingly, the project site, which is owned by the Snowline JUSD (a local government entity) is exempt from the requirements of the County's Plant Protection and Management Ordinance.

Sensitive Wildlife Species

General Wildlife Inventory

The natural communities identified in the BRA serve as part of a functional habitat unit for a variety of wildlife species, both within the study areas and as part of the regional ecosystem. Wildlife species observations and identifications were completed during the field investigations for the BRA. Appendix C of the BRA lists all wildlife species observed in the study area, including sensitive wildlife species. Sensitive wildlife species include those species listed as endangered or threatened under the federal Endangered Species Act (FESA) or the California ESA (CESA), candidates for listing by USFWS or CDFW, and special species of concern to the CDFW.

BRA Table 2 lists 14 sensitive wildlife species identified in database records as occurring within the site vicinity. Eight of these species are deemed to be absent from the project site, generally because of the lack of appropriate habitat. There is a low possibility that six sensitive species could occur onsite (or periodically utilize the site for foraging): coast horned lizard, burrowing owl, loggerhead shrike, pallid San Diego pocket mouse, western mastiff bat, and Mohave ground squirrel.

Marginal habitat for the coast horned lizard and pallid San Diego pocket mouse exists onsite, but even if present, impacts to any populations on this small, disturbed lot would be insignificant. The western mastiff bat would not be expected to roost on the project site, but

has a low potential to occasionally forage over the site. Loggerhead shrike has a low potential to nest on the site, and a moderate potential to occasionally forage on the site. Burrowing owl and Mohave ground squirrel are discussed in more detail below. The only one of these species formally listed as threatened or endangered by state or federal agencies is Mohave ground squirrel (listed by the state as Threatened), although all are considered “Species of Concern” by the CDFW.

No other sensitive bird, reptile, or mammal species were detected during the survey efforts. No naturally occurring native fish populations or amphibians occur in the study areas.

Desert Tortoise

Desert tortoise (*Gopherus agassizii*) is a federal and State Threatened species. The BRA study area is not located in USFWS-designated critical habitat for the desert tortoise. The nearest designated USFWS critical habitat is approximately 20 miles to the north.

AMEC performed a USFWS protocol focused survey for the desert tortoise on the site and no tortoises or sign were observed. Biologists also performed three belt transect rings spaced at 200, 400, and 600 meters from the perimeter of the project to determine if tortoises were present in the immediate project. No tortoises or their sign were encountered during these “Zone of Influence” surveys. The presence of busy paved roads, residential development, and a railroad line, together with the fragmented nature of the habitat around the project site, make it unlikely that a desert tortoise would wander onto the project site from adjacent lands. Based on the results of the focused survey, desert tortoise is not present on the project site, or in the immediate vicinity. The project would therefore not impact desert tortoise, and no mitigation measures are required.

It is noted that USFWS submitted a comment letter (dated July 19, 2013) on this project, which recommended mitigation against common ravens if the construction and operation of the solar facilities had the potential to increase raven populations. Common ravens prey on desert tortoise populations. No mitigation is required to control common raven populations at the project site. The project would not increase the raven population, as the proposed solar panels are a maximum of 12 feet in height and become hot during the day, which makes them unattractive to common ravens. Ravens prefer to nest and perch in taller structures, which widely available in the area—including existing power lines, residences, and plants such as Joshua trees. Additionally, because the site would be unmanned, no food would be consumed or disposed of on the site during operations. During construction, crews would be required to maintain the site in a clean condition with all food waste properly disposed of in sealed container. For these reasons, no mitigation is required to control common raven populations.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a species of special concern and its burrow sites are protected. Protocol surveys (detailed in Appendix C) were conducted from April through June 2013, which is during the peak breeding season (February 1 through August 31).

A protocol level habitat assessment for the burrowing owl was conducted by AMEC on April 9 and 10, 2013. The habitat assessment was conducted on foot, visually inspecting and mapping all areas of the site and adjacent areas (a 500 foot buffer around the site) for

components of burrowing owl habitat (i.e., sparsely vegetated areas with appropriate sized burrows or man-made structures suitable for burrowing owl use). The first of four focused surveys was conducted concurrent with the habitat assessment. Straight line transects spaced 10 meters apart on the project site and 20 meters apart in the buffer area were walked throughout suitable areas of the site and buffer area in order to identify occupiable habitat. Global positioning system (GPS) units pre-loaded with transect route coordinates were used by surveyors to navigate along each survey transect line. Burrows suitable for burrowing owl occupation were recorded by GPS, and closely monitored and inspected during each subsequent visit for evidence of burrowing owl use (i.e., whitewash, pellets, feathers, and other adornments).

Focused surveys detected no burrows potentially suitable for burrowing owl occupation within the project site. Six potential burrows were identified to the east of the project site, including four in the buffer zone and two beyond the buffer zone. No burrowing owls or evidence thereof (i.e., whitewash, pellets, feathers, tracks, prey remains, egg shell fragments, nest adornment materials, etc.) were observed on-site or on adjacent properties surveyed during any of the survey visits, or during the "Zone of Influence" transects walked up to 600 meters around the site (during the focused desert tortoise surveys)

The results of the breeding season focused survey indicate that burrowing owls do not currently occupy the site or immediately adjacent areas. However, because the area continues to provide suitable shelter and nesting habitat for burrowing owls, the potential remains for the species to occur on or adjacent to the site in the future. In accordance with the CDFW's *Staff Report on Burrowing Owl Mitigation* (2012), a "take avoidance survey" for the burrowing owl should be conducted no less than 14 days prior to the initiation of ground disturbance activities and a final survey should also be conducted within 24 hours prior to ground disturbance. If no burrowing owls are detected during the take avoidance surveys, implementation of ground disturbance activities could proceed without further consideration of this species. If burrowing owls are detected during the take avoidance survey, avoidance and minimization measures would then be required, under the guidance of the CDFW. With the implementation of Mitigation Measures BIO-1, which requires pre-construction burrowing owl surveys, and BIO-2, which requires preparation of a burrowing owl management plan in coordination with CDFW, the potential for impacts to burrowing owl would be reduced to below a level of significance.

Mohave Ground Squirrel

Protocol surveys for the Mohave ground squirrel were conducted from April through July 2013 by EREMICO Biological Services, which is authorized to conduct such surveys under a Memorandum of Understanding with CDFW.

To determine presence of Mohave ground squirrels on the project site, a visual survey was conducted, followed by a trapping survey. The visual survey was conducted by walking a meandering transect through the project site. The purpose of this survey was to unobtrusively search for Mohave ground squirrels, to evaluate the habitat for its potential to support this squirrel, and to select the site for the trapping grid. The Mohave ground squirrel presence-or-absence trapping study was conducted using the CDFW's standardized survey guidelines, as further described in the Mohave Ground Squirrel Survey report, located in Appendix B of this IS. As required by the survey guidelines, three separate trapping periods

were conducted, totaling 10,100 trap-hours. No Mohave ground squirrels were trapped during any of the trapping periods. Based on these results, it is concluded the project would have a less than significant impact on Mohave ground squirrel, and no mitigation measures are required.

- b) **Less than Significant Impact.** The site does not contain any riparian habitat. Vegetation on the site is an intergrade of Creosote Bush Scrub and Joshua Tree Woodland. Creosote Bush Scrub is considered a secure habitat that is not at risk. Joshua Tree Woodland has a State sensitivity ranking of S3.2 (Vulnerable), and as such is considered a “Special Concern” community under CEQA. However, because Joshua Tree Woodland on this site is an intergrade (ecotone) with Creosote Bush Scrub, and has been subjected to a variety of disturbances and impacts (such as the spread of invasive species, human activity, and adjacent development), the expression of this plant community on the site does not meet the standard as presented by the CDFW for classifying this habitat as a “High Priority” vegetation type because it does not “exemplify high quality, sustainable, old growth characteristics” (CDFW, 2013). Therefore, modification or loss of a small amount of this quality of habitat would not be expected to constitute a significant impact under CEQA. The impact is less than significant.
- c) **Less Than Significant Impact.** AMEC assessed the BRA study area to determine whether any waters and/or wetlands exist on the site that could potentially be under the jurisdiction of the federal government, through the U.S. Army Corps of Engineers (USACE). A Jurisdictional Delineation (JD) Report was prepared for the project, and is provided in Appendix B of this IS. The JD identified one drainage on the site. The on-site drainage likely flows for less than 3 months per year, and would therefore be classified as a non-relatively permanent waterway by the USACE. The on-site drainage flows into El Mirage Dry Lake, approximately 10 miles north of the study area. El Mirage Dry Lake is an intrastate dry lake. The published recreational uses of El Mirage Dry Lake are limited to a few non-water related activities (no recreational navigation) including hiking, rock hounding, wildlife watching, off-roading, and ultra-light and other aircraft activity. El Mirage Dry Lake is not a traditionally navigable waterway, nor does it fall within any of the categories of waters affecting interstate or foreign commerce, as defined by 33 CFR 328.3(a)(3). Because the drainages are not relatively permanent, have no downstream connectivity to a traditionally navigable waterway, and have no nexus to interstate or foreign commerce, they do not meet the requirements to qualify as Waters of the U.S. The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, and no mitigation measures are required.
- d) **Less than Significant Impact with Mitigation Incorporated.** While some native wildlife species, especially those particularly tolerant of human disturbances, may occasionally breed on the site, no native wildlife have established nursery or breeding colonies on the site. No naturally occurring native fish populations are present within the project site because the project site has no standing water or significant hydrological drainages where water would be present for an extended period of time.

Wildlife Corridors

The project area offers limited utility as a wildlife corridor. The general vicinity of the site includes residential and institutional development and infrastructure that prevents substantial wildlife movement. Nonetheless, the following project design features will minimize impacts to wildlife movement, specifically bobcat, within the BRA study area:

- **Lighting:** The project has been designed to minimize night lighting. All outdoor lighting, including street lighting, will be provided in accordance with the Night Sky Protection Ordinance and will only be provided as necessary to meet safety standards. Outdoor lighting will be shielded or directed away from neighboring properties to minimize off-site impacts.
- **Noise:** The projected increases in noise will be reduced to the maximum extent practicable during construction activities. During all grading on-site, the construction contractors will equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent possible. The construction contractor will place all stationary construction equipment so that emitted noise is directed away from off-site locations. In addition, all construction work would occur during daylight hours only.
- **Human and Vehicular Disturbances:** Operations and maintenance of the solar facilities will only occur on occasion and during daylight hours. Vehicles will only be operated on existing roads and reduced speed limits will be observed to minimize the risk of wildlife-vehicle collisions.
- **Dust:** Standard construction-related BMPs, such as dust control, will be implemented.

Nesting Birds

The study area has the potential to support nesting birds due to the presence of shrubs and ground cover. Disturbing or destroying active nests during construction would be a violation of the Migratory Bird Treaty Act (MBTA). In addition, nests and eggs are protected under Fish and Game Code Section 3503. Thus, the removal of vegetation during the breeding season is considered a potentially significant impact. Nesting activity typically occurs from February 15 to August 31.

In order to avoid potentially significant impacts during construction, the project will be mitigated in one of two ways: 1) habitat avoidance by removing vegetation outside of the nesting season, or 2) if construction is to occur during the nesting season, avoidance of active nests as deemed appropriate by a qualified biologist during construction monitoring. The implementation of these measures, detailed in Mitigation Measure BIO-3, would reduce this impact to a level that is less than significant.

Foraging Raptors

Although there is no raptor nesting habitat on the project site, the study area may support foraging habitat for a number of raptor species. However, in light of the amount of habitat that remains available for this species within the region, removal of foraging habitat represents a less than significant impact to regional raptor populations.

e) **Less Than Significant Impact.** The San Bernardino County General Plan (Conservation Element and Open Space Element) sets forth the following policies relevant to the protection of natural resources:

1. Encourage the greater retention of existing native vegetation for new development projects to help conserve water, retain soil in place and reduce air pollutants.

Project Consistency: As described further in the project description section above, the project would not require regular use of water during operations. Water use could be required for occasional panel washing (approximately two times per year), resulting in less than 1 acre-foot of water consumed. During construction, dust control measures (see Mitigation Measure AQ-2) would be employed to reduce fugitive dust during grading and other ground disturbance activities. During operations, potential sources of dust would be limited to onsite roadways within the site; however, these would consist of gravel, an aggregate base, or native materials with a soil stabilization material; therefore, dust and air pollutants would be contained and limited to less than significant levels. As described above in Section IV.b., the County's decommissioning requirements in Chapter 84.29 of the County's Development Code, Renewable Energy Generation Facilities, Decommissioning Requirements (Section 84.29.6060) state that native plants must be salvaged prior to construction and transplanted and the site must be revegetated subsequent to decommissioning with native plants.

2. Require future land development practices to be compatible with the existing topography and scenic vistas, and protect the natural vegetation.

Project Consistency: The project site is relatively flat and does not contain scenic vistas. The project will not require will not significant manipulation of the existing site grades that will be inconsistent with the surrounding topography. See response to IV.e.1. above regarding protection of the natural vegetation.

3. Require retention of existing native vegetation for new development projects, particularly Joshua trees, Mojave yuccas and creosote rings, and other species protected by the Development Code and other regulations.

Project Consistency: See response to IV.e.1. above regarding protection of native vegetation. Plants protected by the California Desert Native Plants Act are afforded removal and relocation protections under the County Development Code, Title 8, Chapter 88.01, *Plant Protection and Management*. The County specifically exempts from these requirements for public agency projects. Insofar as the project will comply with the County Development Code and any permit conditions, development of the proposed project would not conflict with the General Plan, local policies or ordinances protecting biological resources.

4. Reduce disturbances to fragile desert soils as much as practicable in order to reduce fugitive dust.

Project Consistency: See response to IV.e.1. and 2. above regarding preventing fugitive dust emissions and the limited grading activities proposed onsite.

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5. Ensure that Off-Highway Vehicle use within the plan area and in the surrounding region is managed to protect residential uses and environmentally sensitive areas.

Project Consistency: Off-Highway Vehicle use will not be permitted on the project site; this will be enforced with the installation of security fencing around the project perimeter.

- f) **No Impact.** The project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. The study area is within the Western Mojave Plan boundary; however that plan currently applies only to federal Bureau of Land Management (BLM) lands and not to the study areas. The project site is also within the planning area of the Desert Renewable Energy Conservation Plan; however, this Habitat Conservation Plan and Natural Community Conservation Plan is still in development and has not been adopted. The project will have no significant impact relating to Habitat Conservation Plans, Natural Community Conservation Plans, and Recovery Plans. There would be no take of critical habitat and, therefore, no land use conflict with existing management plans would occur.

SIGNIFICANCE: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

BIOLOGICAL RESOURCES MITIGATION MEASURES:

BIO-1 *Burrowing Owl Mitigation – Pre-Construction Surveys.* Within 14 days prior to ground disturbance, the Applicant will retain a qualified biologist to conduct burrowing owl surveys within the area to be disturbed. The survey will be performed by walking parallel transects spaced no more than 20 meters apart, and will be focused on detecting burrows that are occupied, or are suitable for occupation, by the burrowing owl. The results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, will be submitted to the County of San Bernardino and the California Department of Fish & Wildlife (CDFW) within 14 days following completion of the surveys. If active burrows are detected, the following take avoidance measures will be implemented:

- If burrowing owls are observed using burrows on-site during the non-breeding season (September through January, unless determined otherwise by a qualified biologist based on field observations in the region), occupied burrows will be left undisturbed, and no construction activity will take place within 300 feet of the burrow where feasible (see below).
- If avoiding disturbance of owls and owl burrows on-site is infeasible, owls will be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with protocols established in CDFW's Staff Report on Burrowing Owl Mitigation (2012). Specifically, exclusion devices, utilizing one-way doors, will be installed in the entrance of all active burrows. The devices will be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows will then be excavated by hand and/or mechanically and refilled to prevent reoccupation. Exclusion will

continue until the owls have been successfully excluded from the disturbance area, as determined by a qualified biologist.

- Any active burrowing owl burrows detected on-site during the breeding season (February through August, unless determined otherwise by a qualified biologist based on field observations in the region), will not be disturbed. Construction activities will not be conducted within 300 feet of an active on-site burrow at this season.

BIO-2 Burrowing Owl Mitigation – Management Plan. Prior to issuance of a grading permit, a habitat management plan for the burrowing owl will be developed. The plan will include provisions for protecting foraging habitat and replacing any active burrows from which owls may be passively evicted as allowed by Mitigation Measure BIO-1. At a minimum, the plan will include the following elements:

- If occupied burrows are to be removed, the plan will contain schematic diagrams of artificial burrow designs and a map of potential artificial burrow locations that would compensate for the burrows removed.
- All active on-site burrows excavated as described in Mitigation Measure BIO-1 will be replaced with suitable natural or artificial burrows within the preservation areas approved by the County of San Bernardino.
- Measures prohibiting the use of rodenticides during the construction process if any active on-site burrows are identified.
- The plan will ensure that adequate suitable burrowing owl foraging habitat is provided in proximity to natural or artificial burrows within off-site mitigation areas.

The Burrowing Owl Management Plan will be submitted to the County of San Bernardino and the California Department of Fish and Wildlife for review and approval prior to issuance of a grading permit for the Project.

BIO-3 Nesting Bird Mitigation – Pre-Construction Surveys. Within 30 days prior to vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season (February through August, unless determined otherwise by a qualified biologist based on observations in the region), the Applicant will retain a qualified biologist to determine if active nests of species protected by the Migratory Bird Treaty Act or the California Fish and Game Code are present within or adjacent to the disturbance zone or within 100 feet (300 feet for raptors) of the disturbance zone. The surveys will be conducted no more than seven days prior to initiation of disturbance work within active project areas. If ground disturbance activities are delayed, then additional pre-disturbance surveys will be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. If ground disturbance will be phased across the project site, pre-disturbance surveys may also be phased to conform to the development schedule.

If active nests are found, clearing and construction within 100 feet of the nest (or a lesser distance if approved by the U.S. Fish & Wildlife Service) will be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist. Avoidance buffers will be established in the field with highly visible construction fencing or flagging, and

construction personnel will be instructed on the sensitivity of nest areas. A qualified biologist will serve as a construction monitor during those periods when construction activities will occur near active nests to ensure that no inadvertent impacts on these nests occur.

The results of pre-construction nesting bird surveys, including graphics showing the locations of any nests detected, and documentation of any avoidance measures taken, will be submitted to the County of San Bernardino and California Department of Fish & Wildlife within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
V. CULTURAL RESOURCES - Will the project				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check if the project is located in the Cultural ☒ or Paleontologic ☐ Resources overlays or cite results of cultural resource review):

- a) **Less than Significant Impact with Mitigation Incorporated.** BCR Consulting (BCR) prepared a Cultural Resources Assessment (CRA) for the 25-acre project site in May 2013. The purpose was to identify and document any cultural resources that might be located in the project's area of potential effect (APE) and to evaluate such resources pursuant to National Historic Preservation Act (NHPA) Section 106, CEQA, and the County's General Plan. The Cultural Assessment identified historic or archaeological properties by means of pedestrian survey and research in appropriate historical and archaeological archives. The full report, with detailed findings and recommendations, is included as Appendix D.

Literature Review and Records Search

BCR conducted a cultural resources records search and literature review at the California Historic Resources Information System (CHRIS) San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California. Additional research was conducted at the Phelan Memorial Library. BCR also reviewed databases for the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and documents and inventories published by the California Office of Historic Preservation, including California Points of Historical Interest, California Historical Landmarks, Listing of National Register Properties, and the Inventory of Historic Structures.

The records search revealed that five cultural resources studies have previously been conducted within a one-mile radius of the site, including one that covered the project site. These studies identified three historic-period cultural resources. No resources were found on the project site; the nearest identified resource was a transmission line 0.5 mile south of the site.

NAHC Records Search and Consultation

BCR commissioned a Sacred Lands File (SLF) records search through the Native American Heritage Commission (NAHC), which is the State's trustee agency for the protection and preservation of American Indian cultural resources. The SLF search did not indicate the presence of American Indian or prehistoric cultural resources (including properties, places, or archaeological sites) in the vicinity of the project site.

An SLF is not an exhaustive inventory of sacred places; thus, NAHC provides a list of culturally affiliated tribes and individuals that may have knowledge of the religious and cultural significance of the properties in the APE. In compliance with State and federal mandates, BCR initiated consultation with the 11 listed tribes and interested American Indian consulting parties by requesting information regarding American Indian or prehistoric resources (archaeological sites, sacred lands, or artifacts) that may be affected by the proposed project. As of September 15, 2013, BCR had received one response from the American Indian community. Daniel McCarthy, Director of the Cultural Resources Management Department of the San Manuel Band of Mission Indians, responded via email on May 15, 2013, requesting a copy of the CRA when completed. The CRA was sent to Mr. McCarthy on June 13, 2013. No additional comment has been received from the San Manuel Band.

Pedestrian Field Survey

To identify any previously unrecorded archaeological resources and to determine the potential for buried archaeological deposits, BCR performed pedestrian field surveys of the project site on May 13, 2013. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across 100 percent of the project site, where accessible. No resources were identified during the field survey.

Conclusion

Based on the lack of historical resources on the site, as determined by records searches and field surveys, the project would not cause a substantial adverse change in the significance of a historical resource.

- b) **Less than Significant Impact with Mitigation Incorporated.** The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 (see Item V.a above). Records searches and field surveys in support of the CRA identified no archaeological resources on the site; therefore, the effects of the project on such resources are not considered a significant effect on the environment (CEQA Guidelines §15064.5(c)(4)). Mitigation measures require the applicant to retain on-call a qualified archaeologist. In the event of the discovery of buried cultural resources, the project archaeologist would be brought on-site to monitor ground-disturbing activities and excavations and temporarily redirect activities from the vicinity of the find in order to evaluate the significance of the resource and to provide proper management recommendations. See Mitigation Measures CR-1 and CR-2 below.
- c) **Less than Significant Impact with Mitigation Incorporated.** BCR assessed impacts to paleontological resources in the CRA dated May 2013. Appendix C to the CRA contains the results of a paleontology records check prepared by the Natural History Museum of Los Angeles County, Vertebrate Paleontology Section (L.A. County Museum). The purpose of

this records check was to determine the likelihood of any onsite paleontological resources being found and to determine the potential for disturbance of undiscovered resources during construction, pursuant to CEQA and the County's General Plan.

The project site slopes downward to the north, with an elevation change of 41 feet (from 3,643 feet to 3,602 feet) over a distance of 0.35 mile. The site is bisected by a drainage averaging 1 foot deep. There are no unique geologic features on or adjacent to the project site.

Surficial deposits in the proposed project area consist of younger Quaternary Alluvium, primarily derived as fan deposits from the San Gabriel Mountains to the south. At relatively shallow depth in this area, however, there are older Quaternary deposits that are exposed in the major drainages. Deeper excavations may encounter terrestrial Late Pleistocene vertebrate fossils. According to the L.A. County Museum, the closest vertebrate fossil localities in deposits similar to these occur at various locations about 25 miles northwest of the proposed project area, along Rancho Road/Avenue S from the community of Little Rock east. These localities are from pipeline excavations in the Quaternary Alluvium and older Quaternary sediments that produced a fauna of small fossil vertebrates including gopher snake (*Pituophis*), kingsnake (*Lampropeltis*), leopard lizard (*Gambelia wislizenii*), cottontail rabbit (*Sylvilagus*), pocket mouse (*Chaetodipus*), kangaroo rat (*Dipodomys*), and pocket gopher (*Thomomys*).

Surface grading or very shallow excavations in the uppermost few feet of the younger Quaternary Alluvium exposed in the proposed project area are unlikely to uncover significant vertebrate fossils. Deeper excavations in those areas that extend into older Quaternary deposits are more likely to encounter significant fossil vertebrate remains. The CRA, therefore, recommends any substantial excavations in the project area be monitored to allow for recovery of fossil remains discovered. Project-related ground-disturbing activities, such as grading and trenching, have the potential to impact buried paleontological resources. Therefore, the project would, at a minimum, be subject to Mitigation Measure PR-1, which involves pre-grading preparation of a paleontological monitoring plan by a qualified, County-approved paleontologist.

If grading or excavation activities reach depths of two meters or more (5.5 to 6 feet), then Mitigation Measures PR-2 to PR-3 would be implemented to identify, evaluate, and recover paleontological resources. The mitigation measures are consistent with the recommendations set forth by the L.A. County Museum, and their implementation would reduce impacts to paleontological resources to a level that is less than significant.

- d) **Less than Significant Impact with Mitigation Incorporated.** Field surveys conducted as part of the CRA did not encounter any evidence of human remains. The project site is not located on or near a known cemetery, and no human remains are anticipated to be disturbed during the construction phase. Mitigation Measure CR-3 ensures that, in accordance with applicable regulations, construction activities would halt in the event of discovery of human remains, and consultation and treatment would occur as prescribed by law.

SIGNIFICANCE: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

CULTURAL RESOURCES MITIGATION MEASURES:

CR-1 Construction Monitoring. A qualified archaeologist will be retained by the Applicant/landowner and approved by the reviewing agencies prior to the commencement of the project. The archaeologist will be on-call to monitor ground-disturbing activities and excavations on the project site following identification of potential cultural resources by project personnel.

CR-2 Resource Evaluation and Disposition. If archaeological resources are encountered during implementation of the project, ground-disturbing activities will be temporarily redirected from the vicinity of the find. The archaeologist will be allowed to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment that may include the development and implementation of a data recovery investigation or preservation in place. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the California Historic Resources Information System (CHRIS) San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California. The archaeologist will prepare a final report about the find to be filed with the Applicant/landowner and the CHRIS-SBAIC. The report will include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The Applicant, in consultation with the Lead Agency and archaeologist, will designate repositories in the event that resources are recovered.

CR-3 Human Remains. If human remains are encountered unexpectedly during construction excavations and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance will occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action will be taken in dealing with the remains. The landowner will then undertake additional steps as necessary in accordance with CEQA Guidelines Section 15064.5(e) and PRC Section 5097.98.

PALEONTOLOGICAL RESOURCES MITIGATION MEASURES:

PR-1 Pre-Construction Responsibilities. A qualified paleontologist will be retained by the Applicant and approved by the County of San Bernardino prior to the implementation of the Proposed Project to execute a paleontological monitoring plan. A qualified paleontologist is defined here as a paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists. The paleontologist will:

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1. Review the grading study and coordinate with project engineers to become familiar with the proposed depths and patterns of grading across the project site.
 2. Enter into a repository agreement with an accredited institution (such as the San Bernardino County Museum) before grading operations commence to ensure that an appropriate facility has been selected to curate any fossils encountered during the monitoring program.

PR-2 Construction Monitoring. A paleontological monitor, supervised by the paleontologist, will monitor all project-related ground-disturbing activities that reach two meters (5.5 to 6 feet) or more in depth. Pile driving is not considered a ground-disturbing activity for the purposes of this mitigation measure. If fossils are found during ground-disturbing activities, the paleontological monitor will be empowered to halt those activities within 25 feet of the find to allow evaluation of the find and determination of appropriate treatment.

PR-3 Resource Collection and Disposition. The paleontological monitor and/or the paleontologist will collect all significant fossils encountered. All significant fossils will be stabilized and prepared to a point of identification and permanent preservation. The paleontologist will prepare a final report on the monitoring. If fossils were identified, the report will contain an appropriate description of the fossils, treatment, and curation. A copy of the report will be filed with the Applicant, the County of San Bernardino, and the San Bernardino County Museum, and will accompany any curated fossils.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
VI. GEOLOGY AND SOILS - Will the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 181-B of the California Building Code (2001) creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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 wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located in the Geologic Hazards Overlay District):

- a) i) **No Impact.** The proposed project site is not located within an Alquist-Priolo Earthquake Fault Zone. While the potential for onsite ground rupture cannot be totally discounted (e.g., unmapped faults could conceivably underlie the project corridor), the likelihood of such an occurrence is considered low due to the absence of known faults within the site. There is no impact related to the exposure of persons or structures to rupture of a known earthquake fault.
- ii) **Less than Significant Impact.** The project site is within a seismically active region and is potentially subject to strong ground acceleration from earthquake events along major regional faults. The nearest identified fault line to the project site is the San Andreas Fault (located about 9 miles southwest of the site), which is capable of generating significant

seismic activity.

The proposed project would not include any habitable structures. Nonetheless, the design of any structures on-site would incorporate measures to accommodate projected seismic loading, pursuant to existing California Building Code (CBC) and local building regulations. Specific measures that may be used for the proposed project include proper fill composition and compaction; anchoring (or other means of for securing applicable structures); and the use of appropriate pipeline materials, dimensions, and flexible joints. Based on the incorporation of applicable measures into project design and construction, potential project impacts associated with strong seismic ground shaking would be less than significant.

iii) **Less than Significant Impact.** Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. Other types of seismic-related ground failure include ground rupture (as discussed in Section VI.a.i), landslide (as discussed in Section VI.a.iv), dynamic ground subsidence (or settlement), and lateral spreading.

Loose granular soils are most susceptible to liquefaction, and the phenomenon is generally restricted to saturated or near-saturated soils at depths of less than 50 feet. As detailed in the Geotechnical Investigation prepared for the project by Geocon West (see Appendix D), the soils underlying the site include artificial fill underlain by Holocene Age alluvial deposits consisting of sand, silt, clay, and gravel. A review of water well data indicates groundwater levels are 650 feet beneath the ground surface. Due to the depth of groundwater below the site, the site is not considered to be susceptible to liquefaction. The potential project impacts associated with liquefaction would be less than significant and no further analysis is warranted.

iv) **No Impact.** The proposed project would not have any risks associated with landslides. Landslides are the downslope movement of geologic materials. The stability of slopes is related to a variety of factors, including the slope's steepness, the strength of geologic materials, and the characteristics of bedding planes, joints, faults, vegetation, surface water, and groundwater conditions. The project area is relatively flat terrain where landslides have not historically been an issue; therefore, no significant impacts are anticipated with respect to seismic-related (or other) landslide hazards, and no further analysis is warranted.

b) **Less than Significant Impact.** Construction activities could result in substantial soil erosion if the sites are not properly designed. The potential impacts of soil erosion would be minimized through implementation of Development Code requirements. Specifically, the applicant would prepare a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. The SWPPP would prescribe temporary Best Management Practices (BMPs) to control wind and water erosion during and shortly after construction of the project. The impact on soil erosion is less than significant and no further analysis is warranted.

c) **Less than Significant Impact.** The Geotechnical Investigation indicates that site soils typically consist of artificial fill underlain by Holocene Age alluvial deposits consisting of

sand, silt, clay, and gravel. As part of the project, artificial fill would be removed from the site. From a geotechnical standpoint, the site is suited for driven pier foundations to support the structures associated with the proposed solar array. During construction, the geotechnical engineer would provide on-site observation of site preparation and grading, fill placement and foundation installation, thus ensuring that geotechnical conditions are as anticipated and that the contractor's work meets with the criteria in the approved plans and specifications.

Overall, adherence to the Geotechnical Investigation recommendations and implementation of San Bernardino County Development Code grading standards, as applicable, would minimize the potential impact of on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. General Plan Geologic Hazards Overlay mapping (EHFHC, Victorville/San Bernardino) for the project area indicates that the area is not expected to be subject to landslide or liquefaction. The impact of geologic instability is therefore less than significant and no further analysis is warranted.

- d) **Less than Significant.** Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals and can adversely affect the structural integrity of facilities. In general, compliance with Building Code requirements would minimize potential impacts to project facilities. Alluvium on the site, below the artificial fill to be removed from the project area, is typically medium dense to very dense. These soils are determined in the Geotechnical Investigation to be non-expansive. Prior to placing any fills or constructing any overlying improvements, exposed soils would be scarified and compacted according to Geotechnical Investigation specifications.

The lack of housing or permanent employees on the site ensures that risks to human safety would be minimal. Therefore, impacts would be less than significant and no further analysis is warranted.

- e) **No Impact.** The project does not propose to use septic tanks or alternative wastewater disposal systems; therefore, no impacts are would occur. No further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
VII GREENHOUSE GAS EMISSIONS - Will the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** The project would not generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment. In September 2006, the State enacted the Global Warming Solutions Act (Assembly Bill 32), which was created to address greenhouse gases emitted by human activity and implicated in global climate change. The Act requires that the greenhouse gas (GHG) emissions in California be reduced to 1990 levels by 2020. This is part of a larger plan in which California hopes to reduce its emissions to 80 percent below 1990 levels by 2050.

Additionally, through the California Climate Action Registry (CCAR, now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e., from the project site itself and from activities directly associated with operations) and indirect sources (i.e., not directly associated with the project, but impacted by its operations). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

As discussed in Section III (Air Quality) of this document, the proposed project's primary contribution to air emissions is attributable to construction activities, including the delivery of PV panels, support structures and other project equipment to the site. Project construction would result in GHG emissions from construction equipment, panel and project equipment deliveries, and construction workers' personal vehicles traveling to and from the site. Construction-related GHG emissions vary depending on the level of activity, length of the construction period, specific construction operations, types of equipment, and number of personnel.

The primary emissions that would result from the proposed project occur as carbon dioxide (CO₂) from gasoline and diesel combustion, with more limited vehicle tailpipe emissions of nitrous oxide (N₂O) and methane (CH₄), as well as other GHG emissions related to vehicle cooling systems. To account for variations in the effectiveness of these gases on climate change, a measure called CO₂-equivalent (CO₂e) is used.

Pursuant to Section 15064.4 of the State CEQA Guidelines, the treatment of GHG emissions follows a process of quantification of project-related GHG emissions,

determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. The AQIA used the CalEEMod and EMFAC2011 computer models to quantify construction-period and operational GHG emissions. Modeling predicts construction activities would generate 162 metric tons CO₂e emissions.

For screening purposes, the temporary construction activity GHG emissions were compared to the chronic operational emissions in the ARB's interim thresholds. The screening level operational threshold is 7,000 metric tons (MT) of CO₂e per year. Construction activities generating a total of 162 MT per year are well below this threshold and are considered less than significant.

Operational-period emissions would be produced through vehicle travel for panel cleaning, maintenance, and security. The AQIA calculates those emissions at about 8 metric tons of CO₂e per year. However, during its operational life, the project would fully offset its operational GHG emissions. The offset effect of solar power results from the displacement of electrical power production that would otherwise occur at fossil-fueled power plants that necessarily generate GHGs alongside electricity. As designed, the 3.2-MW rated plant, with a typical 20 percent solar capacity factor, would annually produce 5,600 megawatt-hour (MW-HR) of electrical energy. The generation of 1 MW-HR of electricity in California produces an average of 0.331 MT of CO₂e. The offset created by 5,600 MW-HR per year from a solar power facility would be 1,854 MT CO₂e. Subtracting the project's operational GHG emissions yields a net GHG benefit of over 1,846 MT CO₂e per year. Therefore, the project would reduce regional GHG emissions during operations, and GHG impacts are considered beneficial.

- b) **Less than Significant Impact.** The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. In December 2011, the County Board of Supervisors adopted a Greenhouse Gas Emissions Reduction Plan (GHG Reduction Plan). The GHG Reduction Plan states that "[w]ith the application of the GHG performance standards, projects that are exempt from CEQA and small projects that do not exceed 3,000 MTCO₂e per year will be considered to be consistent with the Plan and determined to have a less than significant individual and cumulative impact for GHG emissions." (p. 4-5). Applicable performance standards are identified in Appendix F of the GHG Reduction Plan. As noted in Appendix F, these performance standards apply to all projects and are included as Conditions of Approval when discretionary approvals are granted. Therefore, all applicable performance standards will be included in the Conditions of Approval for the project. In addition, as described in Item VII.a., the project is well below the 3,000 MTCO₂e per year screening threshold.

Because the project will be required to comply with all applicable performance standards identified in the GHG Reduction Plan, and GHG emissions would not exceed the 3,000 MTCO₂e per year screening threshold, the project is determined to be consistent with the County's GHG Reduction Plan.

No significant adverse impacts are identified or anticipated and no mitigation measures are required

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
VIII HAZARDS AND HAZARDOUS MATERIALS - Will the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	For a project within the vicinity of a private airstrip, will the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** The proposed project is not expected to result in impacts from hazards and hazardous materials with respect to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This is because the proposed project would not involve the routine transport, use, or disposal of significant amounts of hazardous materials as defined by the Hazardous Materials Transportation Uniform Safety Act. During construction, the proposed project would involve the transport of general construction materials (i.e., concrete, wood, metal, fuel, etc.) as well as the materials necessary to construct the proposed PV arrays.

Construction activities would involve the use of hazardous materials such as fuels and greases for the fueling and servicing of construction equipment. Such substances may be stored in temporary storage tanks/sheds that would be located on the project site. Although these types of materials are not acutely hazardous, they are classified as hazardous materials and create the potential for accidental spillage, which could expose workers. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out accordance with federal, state, and County regulations. No extremely hazardous substances (i.e., governed under Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. As needed, Material Safety Data Sheets for all applicable materials present on-site would be made readily available to on-site personnel as required by the SBCFD Hazardous Materials Division. During construction of the facility, non-hazardous construction debris would be generated and disposed of in local landfills. Sanitary waste would be managed using portable toilets, with waste being disposed of at approved sites.

The PV panels and inverters would produce no waste during operation. PV panels are in a solid and non-leachable state; broken PV panels would not be a source of pollution to stormwater.

The nearest designated truck route to the site is SR-138, 2.5 miles north of the site Sheep Creek Road or Johnson Road.

The project would be required to comply with federal, state, and county laws, ordinances, and regulations; therefore, the project would result in less-than-significant impacts related to the creation of significant hazards through the routine transport, use, or disposal of hazardous materials.

- b) **Less than Significant Impact.** The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. With the exception of construction-related materials such as fuels, lubricants, adhesives, and solvents, the proposed project would not generate or require the use or storage of significant quantities of hazardous substances. The toxicity and potential release of these materials would depend on the quantity of material, type of storage container, safety protocols used on the site, location and/or proximity to residences, frequency and duration of spills or storage leaks, and the reactivity of hazardous substances with other materials. Therefore, a complete list of all materials used on-site, how the materials would be transported, and in what form they would be used would be recorded to maintain safety and prevent possible environmental contamination or worker exposure. Compliance with regulations and standard protocols during the storage, transportation, and usage of any hazardous materials would ensure no substantial impacts would occur. The PV panels used in the proposed project are environmentally sealed collections of PV cells that require no chemicals and produce no waste materials. There is no a battery backup component, thus minimizing the need for transporting, using, or disposing of the hazardous materials that may be associated with the project. As such, there is a less-than significant impact associated with creating a significant hazard to the public or the environment.

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- c) **No Impact.** There is no school located within ¼ mile of the project. The nearest schools are 3 miles to the south. There would be no impact related to hazardous emissions or the handling of hazardous materials near schools resulting from implementation of the project.
- d) **No Impact.** The project site is not located on a known site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The proposed project would not create a significant hazard to the public or the environment. Therefore, the project would result in a less than significant impact associated with hazardous materials sites.
- e) **No Impact.** The proposed project area is not located in the vicinity of any public or public use airport. The site is not within the boundaries of an airport land use plan. The nearest public or public use airport is Southern California Logistics Airport, 12.5 miles to the northeast. The project would result in no safety hazards for people residing or working in the project area as a result of proximity to an airport.
- f) **No Impact.** The proposed project area is not located within the vicinity of a private airstrip; therefore, it would not result in a safety hazard for people residing or working in the project area. The nearest private airstrip is Gray Butte Field, located approximately 8 miles to the north of the project site. There is no impact and no further analysis is warranted.
- g) **No Impact.** Activities associated with the proposed project would not impede existing emergency response plans for the project site and/or other land uses in the project vicinity. The project would not result in any closures of existing roadways that might have an effect on emergency response or evacuation plans in the vicinity of the project site. In addition, all vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Accordingly, implementation of the proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. There is no impact and no further analysis is warranted.
- h) **Less than Significant Impact.** The project site is not within an area of high or very high fire hazard, as determined by CAL FIRE. However, any development, along with the associated human activity, in previously undeveloped areas increases the potential of the occurrence of wildfires in the region. Although vegetation on the project site consists of native grasses and shrubs, species of non-native plants (noxious weeds) included on the weed list of the California Department of Food and Agriculture may occur in the project area. In addition to posing a major threat to biological resources, the spread of noxious weeds can result in increased fire frequency by providing sufficient fuel to carry fires. As a condition of project approval, the developer will comply with San Bernardino County weed abatement regulations (SBCC§ 23.031-23.043) and periodically clear the site of all non-complying vegetation, including weeds such as Russian thistle (tumbleweed, *Salsola tragus*), London rocket (*Sisymbrium irio*), redstem filaree (*Erodium cicutarium*), foxtail chess (*Bromus madritensis*), and cheatgrass (*Bromus tectorum*). The project will also conform to the requirements of the Safety Element of the General Plan and the applicable portions of the San Bernardino County Code (primarily Title 2, Division 3, "Fire Protection and Explosives and Hazardous Materials"). Through compliance with these standards, the risks associated with wildfires on the project site are reduced to below a level of significance. No further analysis is

warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
IX	HYDROLOGY AND WATER QUALITY - Will the project:				
a)	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level, which will not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that will result in substantial erosion or siltation on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Place within a 100-year flood hazard area structure which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j)	Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** Operation of the project would not require the regular use of water or produce any form of wastewater. Waste Discharge Requirements (issued by the Lahontan Regional Water Quality Control Board) are not applicable to the project. The project would result in less-than-significant impacts related to the violation of any water quality standards.
- b) **Less than Significant Impact.** Operation of the proposed project would require minimal amounts of water, limited to cleaning of solar panels up to two times per year, using a total of less than 1 acre-foot of water per year. The project will not house permanent employees, nor include onsite restrooms. The project would also create a very small amount of imperviousness—less than 1 percent of the site would be made impervious as a result of the project. Therefore, since the project would not use substantial amounts of groundwater or create large, impermeable surfaces, it would not cause depletion of groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Groundwater aquifer volume and recharge would not be significantly impacted by the implementation of the project.
- c) **Less than Significant Impact.** The project site includes a small drainage, as shown in Figure 3 of the Jurisdictional Delineation Report (Appendix B), running in a north-south direction. This drainage varies from 2 to 3 feet in width across the project site. To minimize any potential for encroachment on the drainage, a buffer is provided in the site plan totaling 30 feet in width. This buffer area is protected from development, with the exception of narrow access road (26-foot width) and fence crossing points. As described in the Hydrology Report, the project would not otherwise result in any noteworthy change in the drainage pattern of the site, with a negligible (0.5 percent) increase in imperviousness and no substantial structures modifying stormwater flows. The project not result any substantial alteration to the drainage pattern of the site or area, nor would it cause any substantial erosion or siltation on- or off-site.
- d) **Less than Significant Impact.** As described in c.), above, the project site includes a small drainage, which the proposed project avoids. The project would not otherwise result in any noteworthy change in the drainage pattern of the site, with a negligible (0.5 percent) increase in imperviousness and no substantial structures modifying stormwater flows. The Hydrology Report also calculates the runoff generated by the project to be 0.05 acre-feet, which is deemed to be negligible. The project not result any substantial alteration to the drainage pattern of the site or area, nor would it result in any substantial increase in runoff that could cause flooding on-or off-site.
- e) **Less than Significant Impact.** The project site is in a rural area with no developed storm & drainage system. As calculated in the Hydrology Report, site imperviousness would increase only slightly (from 0 percent to 0.5 percent) and runoff from the site would increase a negligible 0.05 acre-feet. Additionally, the project would not contain elements that would cause runoff to be polluted or otherwise degrade the quality of storm waters. The project
- f)

would have a less than significant impact related to the capacity of storm drainage systems and the quality of waters leaving the site.

- g) **No Impact.** The proposed project is a solar energy generation facility, and would not include any housing. Therefore, there would be no impact related to the placement of housing within a FEMA-delineated 100-year flood zone. No further analysis is warranted.
- h) **No Impact.** The proposed project is in Zone X on FEMA map number 06071C6450H and not within a 1 percent annual chance (100-year) flood hazard area. The nearest FEMA-delineated 100-year floodplain is over 2 miles to the west. There would be no impact related to impedance or redirection of flood flows within that 100-year flood zone.
- i) **Less than Significant Impact.** The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, because the project site is not within any identified path of a potential inundation flow that might result in the event of a dam or levee failure or that might occur from a river, stream, lake or sheet flow situation. There is no impact and no further analysis is warranted.
- j) **No Impact.** The project site would not be subject to inundation by seiche, tsunami, or mudflow. A tsunami is a series of ocean waves generated in the ocean by an impulsive disturbance. Due to the inland location of the proposed project, tsunamis are not considered a threat. A seiche is an oscillating surface wave in a restricted or enclosed body of water generated by ground motion, usually during an earthquake. Inundation from a seiche can occur if the wave overflows a containment wall or the banks of a water body. No impacts are expected to occur because the project is not adjacent to any marine or inland water bodies. The soils in the project area are well-drained, the terrain is relatively flat, and mudflows have not historically been an issue in the proposed project area. No further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
X. LAND USE AND PLANNING - Will the project:					
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The project would not physically divide an established community, because the project is located in an unincorporated part of the County that has sparse residential development and would occupy an area that is currently vacant. The project would not require the abandonment or relocation of any public rights-of-way, nor would it create an impediment for residents in the project area. Therefore, there would be no impact related to the dividing of an established community. No further analysis is warranted.
- b) **No Impact.** The project site's land use zoning district is IN. According to Development Code Section 82.06.040, electrical power generation is a conditionally permitted use in this district. Therefore, approval of the CUP included in the project application would allow the project to be consistent with its land use zoning designation. There are no other applicable plan adopted for the purpose of avoiding or mitigating an environmental effect that govern land use at the site. There is no impact and no further analysis is warranted.
- c) **No Impact.** The project area is within the boundaries of the West Mojave Plan. The West Mojave Plan is a federal land use plan amendment to the Bureau of Land Management's California Desert Conservation Area (CDCA) Plan that presents a comprehensive strategy to conserve and protect sensitive plants and animals and the natural communities of which they are a part. The West Mojave Plan is applicable only to BLM-administered public lands within the West Mojave Plan area. Although the study area is within the West Mojave Plan area, it is not encompassed within BLM lands; therefore, future development would not be subject to the requirements of the West Mojave Plan.

A West Mojave Habitat Conservation Plan (HCP) for private lands is in preparation, and has not yet been approved by local or State agencies. Should the West Mojave HCP for development on private lands be adopted prior to implementation of the project, any future development would have to be consistent with its conditions.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XI. MINERAL RESOURCES - Will the project:					
a)	Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located within the Mineral Resource Zone Overlay):

- a) **No Impact.** The project will not result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state, because there are no identified important mineral resources on the project site and the site is not within a Mineral Resource Zone Overlay. No further analysis is warranted.
- b) **No Impact.** The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan (see discussion in Item XI.a). There is no impact and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XII. NOISE - Will the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check if the project is located in the Noise Hazard Overlay District ☐ or is subject to severe noise levels according to the General Plan Noise Element ☐):

- a) **Less than Significant Impact with Mitigation Incorporated.** Sensitive noise receptors in the vicinity of the project site include residences to the west, east, and south. Without mitigation, noise generated from the proposed project could temporarily exceed standards established in the General Plan or Noise Ordinance, or applicable standards of other agencies. Specifically, construction of the proposed project may potentially create some elevated short-term construction noise impacts from construction equipment between the hours of 7 a.m. and 7 p.m. Section 83.01.080(g)(3) specifically exempts "temporary construction, maintenance, repair, or demolition activities" from County noise standards, when such activities occur between 7 a.m. and 7 p.m., excluding Sundays and federal holidays." With implementation of Mitigation Measure N-1, no significant impacts are anticipated. The mitigation measure ensures that noise generation from construction equipment/vehicle operation would be limited to daytime hours and would be localized, temporary, and transitory in nature.

Operation of the proposed project would not generate audible levels of noise or perceptible levels of vibration in the surrounding community. Onsite noises would be limited to small motors that rotate the photovoltaic panels on the single-axis tracking system, noise from inverters and pad-mounted transformers, and maintenance activities (including occasional cleaning, drive motor repair, tracker repair, electrical connection repair, and panel

replacement). The small motors used to rotate the panels would produce very low levels of noise, operate only during daylight, and be imperceptible from nearby residences. Similarly, the proposed inverters and pad-mounted transformers are small in scale and located over 200 feet from nearby residences, minimizing potential noise impacts. Maintenance activities would be infrequent and only during daylight hours. The project would not include dwellings or other development, nor would it have the potential to generate any significant number of additional vehicle trips after construction is completed.

Based on this analysis, it is concluded that the proposed project would not have a substantial adverse effect on noise during operations; impacts would be less than significant and no mitigation measures are required.

- b) **Less than Significant Impact.** Groundborne vibration and groundborne noise could originate from earth movement during the construction phase of the proposed project as well as from the operation and maintenance of the facilities. Operation of the proposed project would introduce noise that would be associated with the moving parts of the tracker panels as well as general maintenance activities associated with the facility. Noise from these operational generators would be minimal in nature and would not create a significant noise impact within the surrounding area. 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. Impacts would be less than significant.
- c) **Less than Significant Impact.** The proposed project would not create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The project would result in temporary noise increases during construction but would not create any substantial permanent increase in the ambient noise levels. Operational-period activities would include the occasional use of vehicles and the use of equipment that produce minimal noise levels at site boundaries.

Inverters would be centrally located in the solar field. The final inverter design has not yet been determined; however, uncontrolled inverter noise is expected to be up to 61 dBA at a distance of 10 meters (33 feet) from the inverters. Noise would only be produced by inverters during daytime hours, when the PV panels are producing electricity. Transformers would likely be located with the inverters. A typical inverter transformer in such an installation would be a 1,000 kVA liquid-immersed distribution transformer, which would result in average sound levels of 58 dBA at the source based on National Electrical Manufacturers Association (NEMA) requirements. While no specific transformer model has been selected, any transformer used onsite would follow the NEMA requirements, resulting in an average sound level of 58 dBA. The combined noise level of each inverter and transformer pair would drop to below 55 dBA at 100 feet, a distance which is within project boundaries or within public rights-of-way. Therefore, the combined noise of the inverters and transformers would be well below the Development Code's standard for stationary noise sources in residential areas of 55 dBA between 7 a.m. and 10 p.m. and 45 dBA between 10 p.m. and 7 a.m. (Table 83-2). Because the inverters would not be operating outside of daytime hours, there would be

virtually no operational noise during nighttime hours. Therefore, the project would not have a substantial adverse effect related to a substantial permanent increase in ambient noise levels and no mitigation measures are required.

- d) **Less than Significant Impact with Mitigation Incorporated.** Noise generated during the project's 6-month construction period could potentially result in some temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Specifically, construction of the proposed project may potentially create some elevated short-term construction noise impacts from construction equipment. Mitigation Measure N-1 would ensure that impacts are below a level of significance by limiting noise-generating activities to the hours of 7 a.m. to 7 p.m., requiring the muffling of construction equipment where feasible, and requiring that stationary construction equipment be placed in a manner so that emitted noise is directed away from sensitive receptors.

During operations, noise from the facility would occur periodically due to occasional maintenance activities, twice-annual washings, and periodic visits by security staff. These activities would produce limited amounts of noise from pickup trucks and other light vehicles; such impacts would be temporary. Additionally, operating vehicles would only be located at any single point on the site for a very limited duration. Maintenance, repair, and washing activities would occur exclusively during daylight hours.

Because these impacts are a result of temporary maintenance activities, and with implementation of Mitigation Measure N-1, which limits these temporary activities to the hours of 7 a.m. to 7 p.m., excluding Sundays and Federal holidays, they fall under the exemption provided by Section 83.01.080(g)(3) of the Development Code. Therefore, with implementation of Mitigation Measure N-1, temporary or periodic noise impacts would be less-than-significant.

- e) **No Impact.** The proposed project area is not located within the boundaries of an airport land use plan, and is not in the vicinity of an airport. The nearest airport is Southern California Logistics Airport, 12.5 miles to the northeast. Due to the distance of the airport from the project site, there would be no noise impacts from the airstrip on workers in the area.
- f) **No Impact.** The proposed project area is not located within the vicinity of a private airstrip. The nearest private airstrip is Gray Butte Field, located approximately 8 miles to the northwest of the project area. Due to the distance of the airstrip from the project site, there would be no noise impacts from the airstrip on workers in the area.

SIGNIFICANCE: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

NOISE MITIGATION MEASURES:

N-1 Noise Mitigation. The developer will submit for review and obtain approval of an agreement letter that stipulates that all construction contracts/subcontracts contain as a requirement that the following noise attenuation measures be implemented:

- a) Noise levels of any project use or activity will be maintained at or below adopted County noise standards (SBCC 83.01.080). The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.
- b) Exterior construction activities will be limited between 7 a.m. and 7 p.m. There will be no exterior construction activities on Sundays or National Holidays.
- c) Construction equipment will be muffled per manufacturer's specifications. Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment, where feasible.
- d) All stationary construction equipment will be placed in a manner so that emitted noise is directed away from sensitive receptors nearest the project site.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XIII. POPULATION AND HOUSING - Will the project:					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The proposed project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Construction is anticipated to take approximately 4 months, with a peak workforce of 56 construction workers on the site. These workers would commute to the site from nearby communities such as Pinon Hills and Phelan, with some traveling from more distant areas such as Victorville, Hesperia, and San Bernardino. There would be no permanent staffing onsite during operations. Accordingly, the proposed project would not result in any impacts to housing or related infrastructure, nor would it require construction of additional housing. The project would not result in a substantial adverse effect related to substantial population growth in the area, and no mitigation measures are required.
- b) **No Impact.** The proposed project would not displace existing housing. There would be no impact related to displacement of housing.
- c) **No Impact.** The proposed project would not displace local residents. There would be no impact related to the displacement of people.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XIV. PUBLIC SERVICES				

- a) Will the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental 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:

Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **Fire – Less than Significant Impact.** The proposed project area is serviced by the SBCFD. The nearest fire station is Phelan Station 10, located 3.5 miles southwest of the project site. This station houses one Medic Ambulance and one Medic Engine (Type 1). Pinon Hills Station 13, located 5 miles southwest of the site, houses one Type 4 Brush Patrol. This station houses one Medic Ambulance and one Medic Engine (Type 1). The proposed project would not substantially impact service ratios, response times, or other performance objectives related to fire protection. However, during construction, some public services including fire protection may be required; these would be short-term requirements and would not require increases in the level of public service offered or affect the agency's response time. The project would incorporate perimeter and internal access driveway systems that are accessible to emergency equipment. Entry gates would incorporate knock locks or similar devices to allow 24-hour access for emergency responders.

Any development, along with the associated human activity, in previously undeveloped areas increases the potential of the occurrence of wildfires. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulations would be implemented for the proposed project that would minimize the potential for fires to occur during project construction and operations. Because of the low probability and short-term nature of potential fire protection needs during construction, the proposed project would not result in significant impacts associated with fire protection.

Police Protection – Less than Significant Impact. The proposed project area and other unincorporated portions of the County are served by the SBCSD. The proposed project

would not impact service ratios, response times, or other performance objectives related to police protection. However, during construction, some public services including police protection may be required. These would be short-term requirements and would not require increases in the level of public service offered or affect the agency's response times. In order to protect against theft and vandalism, the proposed project would employ its own security patrol crews to survey the project site during construction and operation of the project. Additionally, the project would incorporate security fencing and would be remotely monitored.

Schools – No Impact. Long-term operation of the proposed facilities would place no demand on school services because it would not involve the construction of facilities that require such services and would not involve the introduction of a temporary or permanent human population into this area. There would be no impact on schools and no further analysis is warranted.

Parks – No Impact. Long-term operation of the proposed facilities would place no demand on parks because it would not involve the construction of housing and would not involve the introduction of a temporary or permanent human population into this area. There would be no impact on parks and no further analysis is warranted.

Other Public Facilities – No Impact. The proposed project would not result in an increased resident population or a significant increase in the local workforce. Based on these factors, the proposed project would not result in any long-term impacts to other public facilities and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XV. RECREATION					
a)	Will the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The proposed would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No new residences or recreational facilities would be constructed as part of the proposed project and the proposed project would not induce population growth in adjacent areas. No significant adverse impacts on recreation would result from implementation of the project and no further analysis is warranted.
- b) **No Impact.** The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. No new residences or recreational facilities would be constructed as part of the proposed project. The proposed project would not induce population growth in adjacent areas and would not increase the use of recreational facilities in surrounding neighborhoods. No significant adverse impacts on recreation would result from implementation of the project and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XVI. TRANSPORTATION/TRAFFIC – Will the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and greenways, pedestrian and bicycle paths, and mass transit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SUBSTANTIATION:				

- a) **Less than Significant Impact.** A Trip Generation Analysis was prepared for the project by RGP Planning & Development Services in June 2013 (see Appendix F). The Trip Generation Analysis reveals that the proposed project would not result in any decline in the performance of the area's circulation system. During construction, a maximum of 78 passenger car equivalent (PCE) trips per day would occur, including a combination of passenger vehicles and large trucks. This number of trips would have a minimal impact on access routes to the project site, including SR-18, SR-138, Duncan Road, and Sheep Creek Road. During operations, the project would be unmanned and would generate less than one roundtrip per day for security and maintenance purposes.

Due to the rural nature of the project area, alternative means of transportation, including mass transit and pedestrian and bicycle routes, are generally unavailable, and would therefore not be negatively impacted by the project. Because the site would be

unmanned, there would be no increase in demand for alternative means of transportation.

Therefore, the proposed project would not conflict with any applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. No significant adverse impacts on transportation or traffic would result from implementation of the project and no further analysis is warranted.

- b) **Less than Significant Impact.** As noted under impact a), above, the Trip Generation Analysis prepared for the project reveals that the proposed project would not result in any decline in the performance of the area's circulation system during either the construction or operational periods. The proposed project would therefore not conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. The proposed project would result in a less-than-significant increase in traffic in relation to the existing traffic load and capacity of the street system. At the initiation of project construction, equipment that may include water trucks, backhoes, and loaders would be mobilized to the project site using Duncan Road. This equipment would then be stored onsite for the duration of construction and used as construction progresses. During operations, the project would be unmanned and would generate very few trips per week for security and maintenance purposes. Based on these facts, no significant adverse impacts on transportation or traffic would result from implementation of the project and no further analysis is warranted.

- c) **No Impact.** The proposed project would not affect air traffic patterns. The project site is not within the vicinity of any airport. The only substantial aboveground modifications would be solar panels and associated equipment with a maximum height of approximately 12 feet.

Potential impacts associated with reflectivity and glare are discussed in Section I, above. Based on the analysis provided in Section I, the project would result in less-than-significant impacts related to glare. Therefore, no significant adverse impacts on air traffic patterns would result from implementation of the project and no further analysis is warranted.

- d) **No Impact.** The proposed project would not include design features that could affect traffic safety, nor would it cause incompatible uses to be present on local roads. Project gates would be inset in accordance with County design standards to prevent vehicle stacking into public roads. No new roads are proposed as part of this project, and no significant increase in traffic is projected during project construction or operations. Therefore, no significant adverse impacts related to roadway design features or incompatible uses would result from implementation of the project and no further analysis is warranted.

- e) **No Impact.** The proposed project would not result in inadequate emergency access to the project area. During project construction, public roads would remain open and available for use by emergency vehicles and other traffic. The proposed project would not result in any roadway closures in the vicinity of the project site. The project site would provide emergency access paths as approved by the SBCFD. The site's entry gate would be

equipped with Knox locks or similar devices to permit emergency responders to enter the site 24 hours per day. Perimeter and internal drives would be included to allow access to all points within the project site.

- f) **No Impact.** Due to the rural nature of the project area, no significant public transit, bicycle, or pedestrian facilities presently exist or are planned for implementation in the vicinity of the project site. No alternative transportation policies, plans, or programs have been designated for the proposed project area. Because the project would be unmanned during operations, project implementation would not result in an increase in demand or decline in performance for public transit, bicycle, or pedestrian facilities in the region. Therefore, the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. No significant adverse impacts would result from implementation of the project and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>		<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XVI. UTILITIES AND SERVICE SYSTEMS - Will the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded, entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The proposed project would not exceed wastewater treatment requirements of the Lahontan RWQCB. During construction, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No employees would be permanently stationed at the site, and no permanent restrooms are planned. The project would discharge uncontaminated water that is used to clean the solar panels, with no toxicants or cleaning agents used. The County General Plan defers to applicable RWQCB water control requirements, and the proposed project's water discharge does not require treatment or permitting according to the regulations of the Lahontan RWQCB.
- b) **No Impact.** The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. The project would require minimal water use, consisting of less than 1 acre-foot of water for panel cleaning per year. Because the site would not contain a permanent workforce, no toilet facilities would be required and there would be no demand for wastewater service.

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- c) **No Impact.** The proposed project would not require the construction or expansion of stormwater drainage facilities. The proposed project would discharge uncontaminated water that is used to clean the solar panels, with no toxicants or cleaning agents used. The insubstantial quantity of discharged water generated by cleaning (less than 1 acre-foot) would evaporate or be absorbed into the soils onsite. Impervious surfaces created by the project would amount to less than 1 percent of the on the project site.
 - d) **No Impact.** It is expected less than 1 acre-foot of water would be required to wash the panels each year. Water would be delivered by truck for this purpose. The project would not be served by a direct connection to any water system, or by an on-site well. Because of the negligible water supply requirements for the project (equivalent to about two single-family homes), there are no impacts associated with the need for new or expanded water supply entitlements.
 - e) **No Impact.** The proposed project would not require or result in the construction of new wastewater treatment facilities or the expansion of existing wastewater treatment facilities. Accordingly, no impacts are anticipated from implementation of the proposed project.
 - f) **Less than Significant Impact.** Less than significant impacts related to landfill capacity are anticipated from the proposed project. The proposed project largely consists of short-term construction activities (with short-term waste generation limited to minor quantities of construction debris) and would not result in long-term solid waste generation. Solid wastes associated with the proposed project would be disposed of as appropriate in local landfills or at a recycling facility. The nearest active landfill is the Victorville Sanitary Landfill, located 19 miles northeast of the project site. This landfill is not scheduled to cease operations until the year 2047.

The panels and tracking system would eventually need to be disposed of (decommissioned). Most parts of the proposed PV system are recyclable. Panels typically consist of silicon, glass, and a metal frame. Tracking systems (not counting the motors and control systems) typically consist of aluminum and concrete. All of these materials can be recycled. Concrete from deconstruction would be recycled through local recyclers. Metal and scrap equipment and parts that do not have free flowing oil would be sent for salvage. Equipment containing any free flowing oil would be managed as hazardous waste and be evaluated before disposal at a properly-permitted disposal facility. Oil and lubricants removed from equipment would be managed as used oil and disposed in accordance with applicable State hazardous waste disposal requirements.

- g) **Less than Significant Impact.** The proposed project would comply with all federal, state, and local statutes and regulation related to solid waste. The project would consist of short-term construction activities (with short-term waste generation limited to minor quantities of construction debris) and thus would not result in long-term solid waste generation. Solid wastes produced during the construction phase of this project, or during future decommission activity would be disposed of in accordance with all applicable statutes and regulations. Accordingly, anticipated impacts from the proposed project related to landfill capacity are less than significant.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE:				

- | | | | | | |
|----|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) | Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

SUBSTANTIATION:

- a) **Less than Significant Impact with Mitigation Incorporated.** As discussed in Section IV. above, without mitigation, the project could result in significant impacts to burrowing owl and nesting bird species. These species are commonly found throughout the region, including in preserved habitat areas and protected open space covering hundreds of thousands of acres. Mitigation Measures BIO-1 through BIO-3, are incorporated to reduce biological impacts on the project site to below a level of significance. With the implementation of these mitigation measures, implementation of the proposed project would not degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.
- b) **Less than Significant Impact.** Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The *CEQA Guidelines*, Section 15130 (a) and (b), states:
- (a) *Cumulative impacts shall be discussed when the project's incremental effect is*

cumulatively considerable.

- (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.*

There are currently no significant projects in the entitlement process or under development within the vicinity of the project site. Cumulative impacts would therefore be less than significant.

- c) **Less than Significant Impact.** As described in Sections I through XVI, above, prior to mitigation, the project has potentially significant impacts in the areas of aesthetics, air quality, biological resources, cultural resources, and noise. With the implementation of the mitigation measures provided in this Initial Study, these impacts are reduced to below a level of significance. There are no project impacts which remain significant and unavoidable following implementation of mitigation measures. In addition, for environmental issue areas that were not found to be significantly impacted by the project and therefore do not include mitigation measures, the implementation of project design features and County policies, standards, and guidelines would ensure that there would be no substantial adverse effects on human beings, either directly or indirectly.

Possible significant adverse impacts have been identified or anticipated and the mitigation measures outlined in the following section are required as conditions of project approval to reduce these impacts to a level below significant.

XVIII. MITIGATION MEASURES:

(Any mitigation measures which are not “self-monitoring” will have a Mitigation Monitoring and Reporting Program prepared and adopted at time of project approval. Condition compliance will be verified by existing procedure [CCRF].)

AESTHETICS

AES-1 *Lighting Requirements.* The area of illumination from any lighting will be confined to within the site boundaries to minimize impacts to night sky views from surrounding properties. On-site lighting will be fully shielded, diffused, or directed in a manner to avoid glare directed at adjacent properties, roadways or any light spill into any wildland areas surrounding the site that might affect nocturnal animals. No light will project onto adjacent roadways in a manner that interferes with on-coming traffic. All lighting will be limited to that necessary for maintenance activities, security, and safety purposes. All signs proposed by this project will only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign or by direct stationary neon lighting.

AES-2 *Anti-Reflective/Diffusion Coatings.* Solar panels and hardware shall be designed to minimize glare and spectral highlighting. To the extent feasible, emerging technologies shall be utilized that introduce diffusion coatings and nanotechnological innovations that will effectively reduce the refractive index of the solar cells and protective glass. These technological advancements are intended to make the solar panels more efficient at converting incident sunlight into electrical power, but have the tertiary effect of reducing the amount of light that escapes into the atmosphere in the form of reflected light, which would be the potential source of glare and spectral highlighting. The developer shall submit for review and gain approval of technical specifications for the proposed coatings or other proposed methods to reduce glare and spectral highlighting prior to issuance of building permits.

AIR QUALITY

AQ-1 *AQ/Operational Mitigation.* Operation of all off-road and on-road diesel vehicles/equipment will comply with the County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)], including but not limited to:

- h) Equipment/vehicles will not be left idling for periods in excess of five minutes.
- i) Engines will be maintained in good working order to reduce emissions.
- j) Onsite electrical power connections will be made available where feasible.
- k) Ultra low-sulfur diesel fuel will be utilized.
- l) Electric and gasoline powered equipment will substituted for diesel powered equipment where feasible.
- m) Signs will be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.
- n) All transportation refrigeration units (TRUs) will be provided electric

connections.

AQ-2 AQ/Dust Control Plan. The developer will prepare, submit and obtain approval from County Planning of a Dust Control Plan (DCP) consistent with MDAQMD guidelines and a letter agreeing to include in any construction contracts/subcontracts a requirement that project contractors adhere to the requirements of the DCP. The DCP will include the following elements to reduce dust production:

- h) Exposed soils and haul roads will be watered three (3) times per day to reduce fugitive dust during all grading/construction activities. Inactive areas will be treated with soil stabilizers such as hay bales or aggregate cover.
- i) Street sweeping will be conducted when visible soil accumulations occur along site access roadways to remove dirt dropped by construction vehicles.
- j) Site access driveways and adjacent streets will be washed daily, if there are visible signs of any dirt track-out at the conclusion of any workday.
- k) Construction vehicle tires will be washed prior to leaving the project site.
- l) All trucks hauling dirt away from the site will be covered, and speeds on unpaved roads will be reduced below 15 miles per hour.

BIOLOGICAL RESOURCES

BIO-1 Burrowing Owl Mitigation – Pre-Construction Surveys. Within 14 days prior to ground disturbance, the Applicant will retain a qualified biologist to conduct burrowing owl surveys within the area to be disturbed. The survey will be performed by walking parallel transects spaced no more than 20 meters apart, and will be focused on detecting burrows that are occupied, or are suitable for occupation, by the burrowing owl. The results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, will be submitted to the County of San Bernardino and the California Department of Fish & Wildlife within 14 days following completion of the surveys. If active burrows are detected, the following take avoidance measures will be implemented:

- If burrowing owls are observed using burrows on-site during the non-breeding season (September through January, unless determined otherwise by a qualified biologist based on field observations in the region), occupied burrows will be left undisturbed, and no construction activity will take place within 300 feet of the burrow where feasible (see below).
- If avoiding disturbance of owls and owl burrows on-site is infeasible, owls will be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with California Burrowing Owl Consortium (1993) protocols. Specifically, exclusion devices, utilizing one-way doors, will be installed in the entrance of all active burrows. The devices will be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows will then be excavated by hand and/or

mechanically and refilled to prevent reoccupation. Exclusion will continue until the owls have been successfully excluded from the disturbance area, as determined by a qualified biologist.

- Any active burrowing owl burrows detected on-site during the breeding season (February through August, unless determined otherwise by a qualified biologist based on field observations in the region), will not be disturbed. Construction activities will not be conducted within 300 feet of an active on-site burrow at this season.

BIO-2 Burrowing Owl Mitigation – Management Plan. Prior to issuance of a grading permit, a habitat management plan for the burrowing owl will be developed. The plan will include provisions for protecting foraging habitat and replacing any active burrows from which owls may be passively evicted as allowed by Mitigation Measure BIO-1. At a minimum, the plan will include the following elements:

- If occupied burrows are to be removed, the plan will contain schematic diagrams of artificial burrow designs and a map of potential artificial burrow locations that would compensate for the burrows removed.
- All active on-site burrows excavated as described in Mitigation Measure BIO-1 will be replaced with suitable natural or artificial burrows within the preservation areas approved by the County of San Bernardino.
- Measures prohibiting the use of rodenticides during the construction process if any active on-site burrows are identified.
- The plan will ensure that adequate suitable burrowing owl foraging habitat is provided in proximity to natural or artificial burrows within off-site mitigation areas.

The Burrowing Owl Management Plan will be submitted to the County of San Bernardino and the California Department of Fish and Wildlife for review and approval prior to issuance of a grading permit for the Project.

BIO-3 Nesting Bird Mitigation – Pre-Construction Surveys. Within 30 days prior to vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season (February through August, unless determined otherwise by a qualified biologist based on observations in the region), the Applicant will retain a qualified biologist to determine if active nests of species protected by the Migratory Bird Treaty Act or the California Fish and Game Code are present within or adjacent to the disturbance zone or within 100 feet (300 feet for raptors) of the disturbance zone. The surveys will be conducted no more than seven days prior to initiation of disturbance work within active project areas. If ground disturbance activities are delayed, then additional pre-disturbance surveys will be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. If ground disturbance will be phased across the project site, pre-disturbance surveys may also be phased to conform to the development schedule.

If active nests are found, clearing and construction within 100 feet of the nest (or a lesser distance if approved by the U.S. Fish & Wildlife Service) will be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist. Avoidance buffers will be established in the field with highly visible construction fencing or flagging, and construction personnel will be instructed on the sensitivity of nest areas. A qualified biologist will serve as a construction monitor during those periods when construction activities will occur near active nests to ensure that no inadvertent impacts on these nests occur.

The results of pre-construction nesting bird surveys, including graphics showing the locations of any nests detected, and documentation of any avoidance measures taken, will be submitted to the County of San Bernardino and California Department of Fish & Wildlife within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

CULTURAL AND PALEONTOLOGICAL RESOURCES

CR-1 Construction Monitoring. *A qualified archaeologist will be retained by the Applicant/landowner and approved by the reviewing agencies prior to the commencement of the project. The archaeologist will be on-call to monitor ground-disturbing activities and excavations on the project site following identification of potential cultural resources by project personnel.*

CR-2 Resource Evaluation and Disposition. *If archaeological resources are encountered during implementation of the project, ground-disturbing activities will be temporarily redirected from the vicinity of the find. The archaeologist will be allowed to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment that may include the development and implementation of a data recovery investigation or preservation in place. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the California Historic Resources Information System (CHRIS) San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California. The archaeologist will prepare a final report about the find to be filed with the Applicant/landowner and the CHRIS-SBAIC. The report will include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The Applicant, in consultation with the Lead Agency and archaeologist, will designate repositories in the event that resources are recovered.*

CR-3 Human Remains. *If human remains are encountered unexpectedly during construction excavations and grading activities, State Health and Safety Code*

Section 7050.5 requires that no further disturbance will occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action will be taken in dealing with the remains. The landowner will then undertake additional steps as necessary in accordance with CEQA Guidelines Section 15064.5(e) and PRC Section 5097.98.

PR-1 Pre-Construction Responsibilities. A qualified paleontologist will be retained by the Applicant and approved by the County of San Bernardino prior to the implementation of the Proposed Project to execute a paleontological monitoring plan. A qualified paleontologist is defined here as a paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists. The paleontologist will:

1. Review the grading study and coordinate with project engineers to become familiar with the proposed depths and patterns of grading across the project site.
2. Enter into a repository agreement with an accredited institution (such as the San Bernardino County Museum) before grading operations commence to ensure that an appropriate facility has been selected to curate any fossils encountered during the monitoring program.

PR-2 Construction Monitoring. A paleontological monitor, supervised by the paleontologist, will monitor all project-related ground-disturbing activities that reach two meters (5.5 to 6 feet) or more in depth. Pile driving is not considered a ground-disturbing activity for the purposes of this mitigation measure. If fossils are found during ground-disturbing activities, the paleontological monitor will be empowered to halt those activities within 25 feet of the find to allow evaluation of the find and determination of appropriate treatment.

PR-3 Resource Collection and Disposition. The paleontological monitor and/or the paleontologist will collect all significant fossils encountered. All significant fossils will be stabilized and prepared to a point of identification and permanent preservation. The paleontologist will prepare a final report on the monitoring. If fossils were identified, the report will contain an appropriate description of the fossils, treatment, and curation. A copy of the report will be filed with the Applicant, the County of San Bernardino, and the San Bernardino County Museum, and will accompany any curated fossils.

NOISE

N-1 Noise Mitigation. The developer will submit for review and obtain approval of an

agreement letter that stipulates that all construction contracts/subcontracts contain as a requirement that the following noise attenuation measures be implemented:

- a) Noise levels of any project use or activity will be maintained at or below adopted County noise standards (SBCC 83.01.080). The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.*
- b) Exterior construction activities will be limited between 7 a.m. and 7 p.m. There will be no exterior construction activities on Sundays or National Holidays.*
- c) Construction equipment will be muffled per manufacturer's specifications. Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment, where feasible.*
- d) All stationary construction equipment will be placed in a manner so that emitted noise is directed away from sensitive receptors nearest the project site.*

GENERAL REFERENCES

California Department of Conservation. (2011). *San Bernardino County Important Farmland 2010*. Map. Farmland Mapping and Monitoring Program. Available at <http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx>

California Department of Fish and Wildlife. (2013). California Wildlife Habitat Relationships Life History Accounts and Range Maps. Available at <http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx>

CEQA Guidelines, Appendix G.

County of San Bernardino. (2007, March 13). *County of San Bernardino 2007 Development Code*. Amended July 25, 2013. Available at <http://cms.sbcounty.gov/lus/Planning/DevelopmentCode.aspx>

County of San Bernardino. (2007, March 13). *County of San Bernardino 2007 General Plan*. Amended July 18, 2013. http://www.co.san-bernardino.ca.us/landuseservices/general_plan/Default.asp.

County of San Bernardino Geologic Hazards Overlays Map EHFH C (Victorville/San Bernardino).

County of San Bernardino Hazard Overlay Map FH04 B (Phelan).

County of San Bernardino Identified Hazardous Materials Waste Sites List, April 1998.

County of San Bernardino, Countywide Integrated Waste Management Plan, March 1995.

U.S. Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. Available at <http://websoilsurvey.nrcs.usda.gov/>.

U.S. Department of Homeland Security, Federal Emergency Management Agency. Flood Insurance Rate Map 06071C6450H (effective August 28, 2008). Available at <http://msc.fema.gov>.

PROJECT-SPECIFIC REFERENCES

- AMEC Environment & Infrastructure. (2013, August). General Biological Resources Assessment. Snowline School District Duncan Road Solar PV Project.
- AMEC Environment & Infrastructure. (2013, June). Jurisdictional Delineation Report. Duncan Road Photovoltaic Site.
- AMEC Environment & Infrastructure. (2013, July). Focused Surveys for Burrowing Owl. Snowline School District Duncan Road Solar PV Project.
- BCR Consulting. (2013, May 23). Cultural Resources Assessment. Duncan Road Solar Photovoltaic Installation Project.
- EREMICO Biological Services. (2013, August 5). Mojave Ground Squirrel Survey at the Snowline Unified School District Snowline II Solar PV Duncan Road Project Site.
- Geocon West. (2013, May 23). Proposed Solar PV Project, Snowline Unified School District Duncan Road Site.
- Hans Giroux & Associates. (2013, June 18). Air Quality and GHG Impact Analyses, Duncan Road Solar Project.
- RGP Planning & Development Services. (2013, June 15). Duncan Road Solar Construction Management Plan & Trip Generation Analysis.

LIST OF APPENDICES

Appendix A Air Quality and Greenhouse Gas Emissions Impact Analysis

Appendix B Biological Reports

General Biological Resources Assessment (August 2013) – *includes Desert Tortoise and Rare Plants surveys*

Jurisdictional Delineation Report (June 2013)

Focused Surveys for Burrowing Owl (July 2013)

Mojave Ground Squirrel Survey (August 2013)

Appendix C Cultural Resources Assessment – *includes Paleontological Resources letter*

Appendix D Preliminary Hydrology Report

Appendix E Construction Management Plan and Trip Generation Letter