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:	**0449-641-27 and -04**		
APPLICANT:	AGINCOURT SOLAR, LLC	***USGS Quad:***	Cougar Buttes
COMMUNITY:	LUCERNE VALLEY/ THIRD SUPERVISORIAL DISTRICT	***T, R, Section:***	T4N R1E Sec.34 NE/4 of NW/4, & S/2 of N/2 of NE/4
LOCATION:	WEST OF CAMP ROCK ROAD NORTHEAST OF STATE ROUTE (SR 18) AND SOUTH OF ROSEWOOD STREET AND NEVADA STREET	***Thomas Bros.:***	page 4572Grid: A-1
PROJECT NO:	P201200011/CUP	***Planning Area:***	Lucerne Valley Community Plan
STAFF:	NELSON MILLER	***Land Use Zoning:***	LV/RL-5 and LV/AG
REP('S):	ELLIOT MACDOUGALL	**Overlays:**	AR4 (Airport Safety Review Area 4) FS2 (Fire Safety Area 2) Bio Res (Biological Resources)
PROPOSAL:	A CONDITIONAL USE PERMIT TO BUILD AND OPERATE A 10 MEGAWATT UTILITY SCALE PHOTOVOLTAIC FACILITY ON APPROXIMATELY 65 ACRES OF THE 79.9-ACRE SITE.		

PROJECT CONTACT INFORMATION:

Lead agency: County of San Bernardino
Land Use Services Department
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San Bernardino, CA 92415-0182

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Project Sponsor: WDG Capital Partners, LP, Elliott MacDougall
PO Box 31159
Santa Barbara CA 93103

PROJECT DESCRIPTION:

The Agincourt Solar Project "Solar Project" is being developed by Agincourt Solar, LLC. (Applicant) to provide solar photovoltaic (PV) power to serve the electrical load requirements of California. The Project will generate approximately 10 megawatts (MW) alternating current (AC) photovoltaic (PV) modules on approximately 65 acres of the 79.9-acre site. The proposed Project will connect with an existing Southern California Edison (SCE) 33-kilovolt (kV) transmission line in an existing corridor that runs along Camp Rock Road. No new offsite transmission line is proposed. The electricity produced by the Solar Project will be marketed to power buyers through a long-term power purchase agreement.

The Project is designed to have a useful life of 20 to 30 years, although the life span could be extended by upgrades and refurbishments. In the event that the Solar Project is decommissioned, the facility would be removed and the site prepared for subsequent land use.

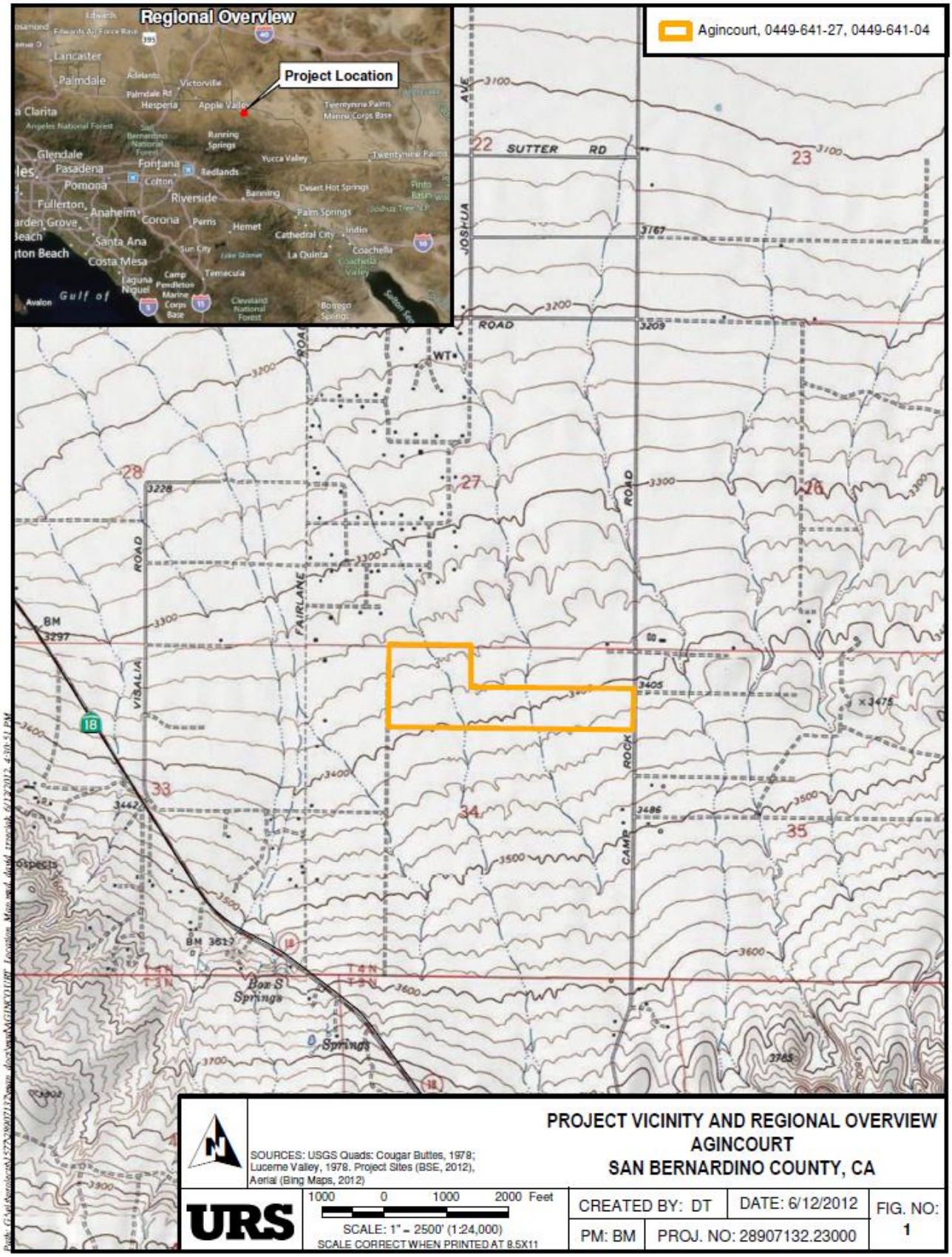
Project Location and Legal Description

The proposed Project site is situated in the western Mojave Desert, in the southern Lucerne Valley region of San Bernardino County. The site is about 5.5 miles southeast of the Lucerne Valley community. The primary access point to the Project site is from Camp Rock Road, which runs along the eastern boundary of the site. Camp Rock Road intersects State Route 18 (SR 18) approximately 1.7 miles south of the proposed Project site, see Figure 1, Location Map.

The project site includes the following Assessor Parcel Numbers (APNs):

- 0449-641-04 (40.3 acres, NE/4 of NW/4, Section 34, Township 4N, Range 1E)
- 0449-641-27 (39.7 acres, S/2 of N/2 of NE/4, Section 34, Township 4N, Range 1E, excepting County 50-foot road easement)

Figure 1 Location Map



Project Layout and Construction

The proposed 79-acre solar power generation facility would be comprised of the following major components: non-reflective PV solar module arrays mounted on fixed-tilt or single-axis trackers and a racking system supported by embedded piers. The site would also include approximately 10 inverters on small concrete pads, a switching station in an enclosure measuring approximately 200 by 200 feet an unmanned communications enclosure measuring approximately 20 by 30 feet , a Conex box for equipment storage, and buried collector lines. Concrete pads would be sized and installed to accommodate associated equipment (inverters and switchgear). The top-of-concrete elevation would be approximately 6 inches above-grade-level locally to maintain flow away from the foundation.

The site plan and typical elevation are provided in Figures 2 and 3. The layout of the solar panels would be aligned in rows in the north-south direction throughout the site. Each solar panel would be attached to embedded piers using a support structure. The rows of solar panels would be separated by access ways. Internal site circulation would include a 25-foot-wide perimeter gravel road. Maintenance roads with access to the solar panels would be improved (minimally graded, dirt or gravel). An AC/DC collection system would be installed along internal access roads to collect power from the rows of modules and deliver it to the project substation. This collection system would likely be installed in a subsurface trench, though due to shallow bedrock in some areas part or all of the collection system may be housed in an above-grade raceway suspended on stakes. Collection trenches would likely be mechanically excavated, though in some cases targeted shallow trench blasting may be required as a construction technique due to near-surface bedrock. If explosives are to be used, the applicant will be required to obtain all necessary permits and approvals through the San Bernardino County Fire Department's Hazardous Materials Division (HMD). Upon completion of the proposed Project, vegetation or dust palliatives or other best management practices would be used if needed to control wind and water erosion during operations.

The design of the proposed project site will avoid three major washes that cross the site, and Joshua trees within such washes. All other areas will have vegetation removed and be graded as needed to install project components. Minor washes will be filled in and associated flows re-directed to the larger washes through perimeter swales. Grading cuts and fills are expected to balance on site.

No off-site improvements are anticipated with the exception of the development of site access points. Typical site access will be 25 feet wide, accommodating 75-foot turning radii in both directions. The proposed site access will include a 75-foot-long drive apron and a roadway section paved with asphalt.

A six foot high chain link security fence topped with one foot of barbed wire will be installed at the property setback. Signs will be installed to achieve the appropriate safety and security as expected in a solar power plant. Proposed signage includes high voltage danger signs, site under surveillance, caution electric shock, etc. Any signs as required by the National Electrical Code will be installed.

The Project's lighting system will provide operation and maintenance personnel with illumination for both normal and emergency conditions. Lighting will be designed to provide the minimum illumination needed to achieve safety and security objectives. Lighting will be directed downward and shielded to focus illumination on the desired areas only to avoid light spillage on adjacent properties. Project lighting will be located at each inverter station and switchyard. Lighting will be no brighter than

Figure 2 Site Plan

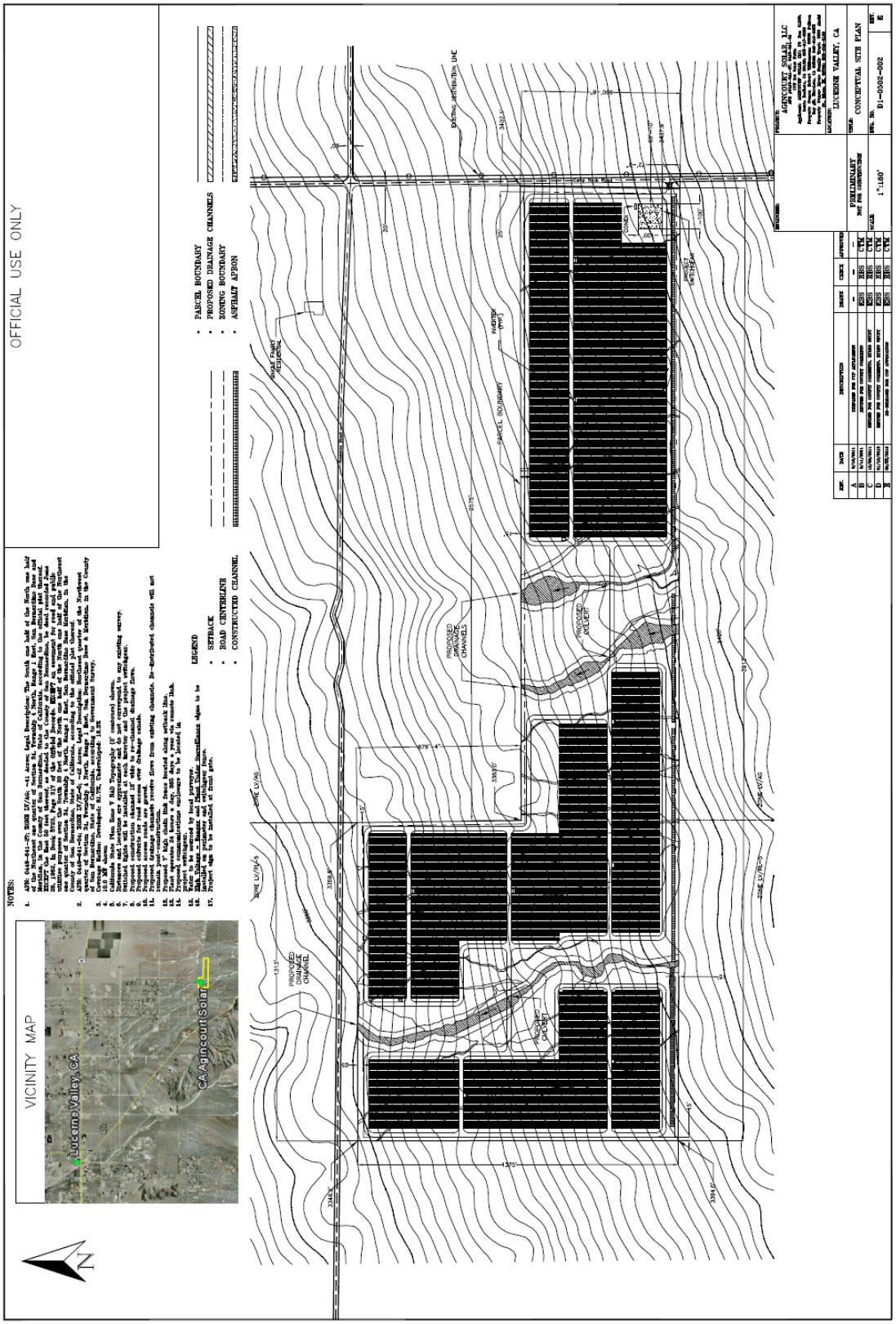

OFFICIAL USE ONLY
VICINITY MAP
Lucerne Valley, CA
CA Agincourt Solar
LEGEND
SETBACK
ROAD CENTERLINE
CONSTRUCTED CHANNEL
PARCEL BOUNDARY
PROPOSED DRAINAGE CHANNELS
ZONING BOUNDARY
ASPHALT APRON
PROPOSED DRAINAGE CHANNELS
PROPOSED CULVERT
PARCEL BOUNDARY
PROPOSED CULVERT
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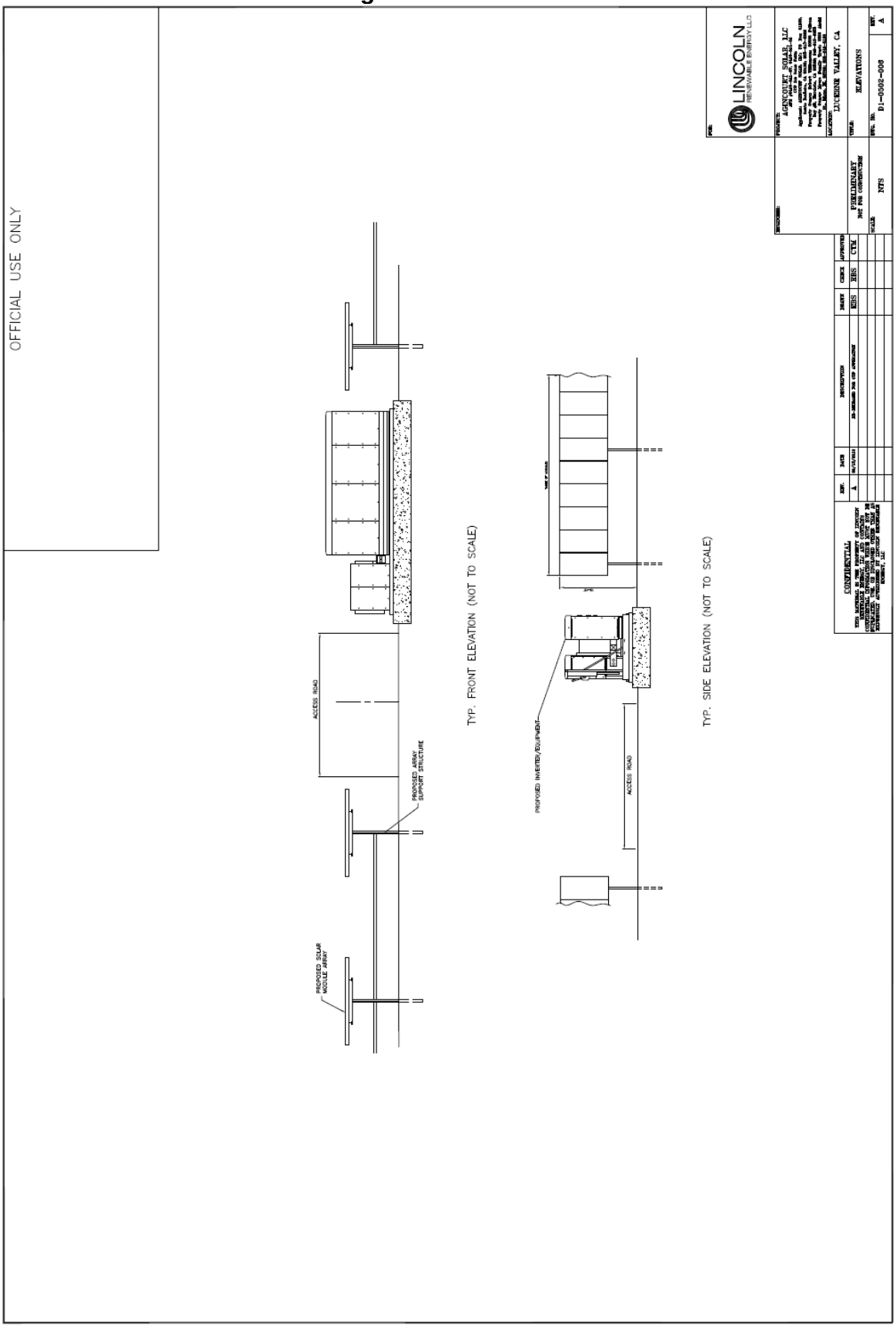
Figure 3 Elevations



required to meet safety and security requirements, and the lamp fixtures and lumens will be selected accordingly. All project lighting will be switched and without timers.

Support Pedestal Drainage and Erosion Design

The solar panels would drain freely to the ground. They would be almost parallel to the ground with a slight sloping orientation. In general, rain would run off the lower edge of the PV panel. The edge of the panel would be approximately 24 inches above the ground, and the runoff would be approximately 25 gallons in a 10-year storm (5-minute – 10-year rain event per 200 square feet of panels). This volume of water is expected to run off the panels over a 5-minute period. Based on the volume of water falling from each panel, the height of the fall, and the soil conditions, it is not expected that erosion beyond a micro level will occur. Water will fall from the PV panels and pond at a drip point before infiltrating or gradually migrating into the existing drainage patterns. If, over time, minor erosion was noted at the drip points, small gravel pads could be added to help dissipate the energy of the falling water. If minor erosion were noted near the foundations, minor grading could restore support for the individual foundations, and keep surface flows from undermining the foundations in future storm events.

Increase in Imperviousness Due to Construction

Increase in impervious area of the site due to the construction of the project embedded piers, is estimated to be minimal, approximately 11 percent assuming the AC collection system is installed in subsurface trenches. If 100 percent of the collection is installed in above-grade raceways, the impervious area would increase by approximately 2 percent, to a maximum impervious cover of approximately 13 percent.

Site Drainage

A flood map search (FEMA 2011) for Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel ID numbers 06071C6575H and 06071C6600H confirms the proposed Project site area has not been mapped by FEMA for flood zone hazards, and is therefore classified as an “Undetermined Risk Area.” The County of San Bernardino also has no flood zone hazard mapping for this area.

Typical of arid regions, the area experiences short-duration, high-intensity rainfall storm events producing potentially high rates of runoff when the initial infiltration rates are exceeded. During these periods the small, incised washes become conduits for water flow.

The soil in the watershed is predominantly Soil Group D. This soil type is characterized as having high runoff potential due to very slow infiltration rates when thoroughly wetted. Construction could affect some of the ephemeral drainages onsite but it is expected that drainage conditions present at the site, which have been formed by past storm events, would continue to convey storm flows following project construction.

Based on visual observations during a site visit and the type of facility proposed, it is expected that the proposed solar panel construction would not significantly change offsite runoff characteristics during a major storm event. Because the imperviousness of the site would not be greatly changed as a result of the construction, the impact of increased rainfall runoff due to construction would be

negligible. As noted above, the site design indicates that project construction would result in a minor (i.e., maximum of 13 percent) increase in impervious surfaces at the site.

The site topography can be characterized as uniform in surface profile, with a slight slope in a northwesterly direction. Based on field observations, the site is characterized by naturally developed riverine channels that direct rainfall runoff through the site. Some of the existing drainage flow paths would be filled during the development of the site based on the final layout of the solar panels and the project's Conceptual Drainage Plan would redirect their existing flows to other existing drainages onsite. With incorporation of the Conceptual Drainage Plan, the proposed Project is not expected to significantly affect offsite flow patterns.

Project Construction, Grading and Schedule

Construction of the proposed Project is estimated to require approximately 80-100 workers at its peak. Construction is estimated to start in 2013 and would take approximately nine months to complete. A total of approximately 40 acre-feet of water would be used during construction for dust suppression and ancillary construction activities. Dust suppression during construction may also involve application of palliatives.

The development of the Project would require site grading, with limited impact to existing offsite drainage patterns and overall topography of the site. Minor cuts may be required at the locations of inverters and other equipment to provide level foundations. The fill from these cuts will be placed around the pre-cast foundation in order to divert small, localized flows away from the foundation and prevent undermining of the same.

Where grading is required, cut-and-fills are expected be balanced onsite, resulting in little or no import or export of earthen material. A total of approximately 150,000 cubic yards of cut-and-fill may be balanced onsite. Final drainage design will be completed following a detailed topographic site survey overlaid with proposed site development grading.

Areas along major drainage channels outside of the developed footprint will be preserved. Vegetation would be cleared to allow for the construction of the solar panels and access roads. Grubbing would occur on all gravel access roads, and in any areas where the roots would impede the pier structure. The installation of the solar panels also requires trenching along and below access roads for the installation of multiple cable systems. Under and along almost every internal roadway, trenches as deep as 48 inches would house the cables in a sand bed that would be backfilled with excavated material from the site.

Best management practices (BMPs) for erosion control would be used to avoid and minimize impacts on the environment during construction, operations and maintenance. For example, gravel pads or other track-out reduction measures at project construction site access points may be used to minimize dirt and mud deposits on public roads, as required to meet stormwater quality regulations and vegetation or dust palliatives may be used if needed to control wind and water erosion during operations. A Water Quality Management Plan that includes a Stormwater Pollution Prevention Plan and an Erosion and Sediment Control Plan would be prepared and implemented to avoid and minimize impacts on water quality during construction and operations. A Joshua Tree Translocation Plan would be prepared as required by the County's Development Code.

Project Operations

The facility will be unmanned. Several part-time employees would visit the site periodically (e.g., monthly or bi-monthly) and several times a year the employees or a contractor would visit the site to wash the PV panels. Panel washing would require approximately 2 acre-feet of water per year and, based on an assumed use of medium-sized water tankers, would require approximately 130 truckloads (260 truck trips) for delivery of this water. Water would be purchased from a local purveyor. Candidate water purveyors include: Mojave Water Agency, Club View Partners, Hi-Grade Materials Company, Jubilee Mutual Water Company, Lucerne Valley Partners, M.B. Landscaping & Nursery, Inc., Mitsubishi Cement Company, or Wilshire Road Partners.

ENVIRONMENTAL/EXISTING SITE CONDITIONS:

Environmental Setting and Surrounding Uses

The Mojave Desert is a subsection of the Basin and Range Physiographic Province, which is characterized by long, north-south-trending mountain ranges separated by broad valleys. The site is located on a broad gently sloping bajada of alluvial material originating from the San Bernardino Mountains to the south. Elevation of the project site ranges from approximately 3,340 feet above sea level (asl) at its northwest corner up to 3,446 asl at its southeast corner. The topography is generally flat, with a slope of about four percent towards the north-northwest. Numerous small braided channels cross the site. The primary vegetation onsite is creosote bush-white burr sage scrub.

The Project site is bordered to the north by vacant land and Rosewood Street. Land to the north of Rosewood Street is subdivided into five acre lots, but only a few of these have been developed with residences. To the west, the land is also subdivided with lot sizes ranging from 2.5 to 10 acres. Most of these lots are vacant, and about one dozen homes are located within one-half mile of the northern and western project boundaries. Immediately south of the project site are two large vacant lots. In general terms, land to the south and east is in larger lots with a lower density of development. About one dozen homes are located within one mile of the project to the south and east.

Existing Land Uses

The project site is currently vacant, see Figure 4 Site Photos Below. The western portion of the site (parcel 04) is zoned LV/RL-5 (Rural Living – 5 acre parcel minimum). The RL land use zoning district provides sites for rural residential uses, incidental agricultural uses, and similar and compatible uses. The easterly portion of the site is zoned LV/AG (Agriculture), which has a minimum 10-acre lot size and is intended for commercial agricultural operations, agriculture support services, rural residential uses and similar and compatible uses. Under County Code Chapters 82.03 and 82.04 (Land Use Tables), electrical power generation is categorized as a transportation, communications and infrastructure use, and is allowed in the AG and RL-5 zones upon approval of a Conditional Use Permit (CUP).

Figure 4 Site Photos

Facing southwest toward the project site from Camp Rock Road.

Facing northwest toward the project site along Camp Rock Road.

Facing south from along Rosewood Street the project site's northern boundary.

Facing north from southern project boundary.

AREA	EXISTING LAND USE	OFFICIAL LAND USE DISTRICT
SITE	Vacant	Lucerne Valley Community Plan LV/RL-5 and LV/AG
North	Vacant	Lucerne Valley Community Plan LV/RL-5 and LV/AG
South	Vacant	Lucerne Valley Community Plan LV/RL-5 and LV/AG
East	Vacant	Lucerne Valley Community Plan LV/AG
West	Vacant	Lucerne Valley Community Plan LV/RL-5

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

Federal: Federal Aviation Administration (FAA)
State of California: Department of Fish and Game
State of California: Colorado River Basin Regional Water Quality Control Board (CRBRWQCB), Mojave Desert Air Quality Management District (MDAQMD), California Department of Fish and Game.
County of San Bernardino: Land Use Services – Code Enforcement; Building and Safety, Public Health-Environmental Health Services, Public Works – Land Development, Fire, Traffic

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 upon its effect on seventeen (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

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 would 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.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use/ Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

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

☐	The proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION shall be prepared.
☒	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.
☐	The proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	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.
☐	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 Nelson Miller, Contract Planner — December 18, 2012

Signature: Supervising Planner
Planning Division — December 18, 2012

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

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

a) **Less than Significant Impact.** No designated scenic vistas are located within visible distance of the Project.

The County 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 project site is zoned Rural Living (RL-5) and LV/AG and relatively flat. The proposed Project site has views of low-lying foothills in the background (see Figure 4). The solar equipment on site would consist of PV modules mounted on fixed-tilt foundations or tracker units and associated electrical equipment will maintain a low profile. The project will also include access roads and a six-foot chain link perimeter fence topped by a one-foot section of barbed wire. None of the proposed equipment would have a substantial adverse effect on any scenic vista. The project site will be visible for several minutes from motorists traveling along SR-18, a County-designated Scenic Road, and along Camp Rock Road. The proposed Project's visual impact assessment (URS June 2012) selected two Key Observation Points (KOPs) for analysis in consultation with the County. A comparison of existing conditions (Figures 5 and 6) with simulations from the KOPs (Figures 7 and 8)

indicate the proposed Project would not have a substantial adverse effect on scenic vistas. Any cumulative impacts would be less than significant. The following discussion of Item b), below, provides additional details.

b) **Less than Significant Impact.** The Project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. SR-18 is eligible for listing as a state scenic highway; however it has not been officially listed. Therefore the Project would have no impact to scenic resources along a state scenic highway.

At the local level, SR-18 is designated as a “Scenic Road” within the San Bernardino County General Plan and a visual impact assessment report including photo simulations was prepared for the proposed Project (URS 2012). In consultation with the County, two Key Observation Points (KOPs) were selected for analysis. KOP 1 is located at the intersection of Camp Rock Road and SR-18. This KOP is representative of views to the north toward the central portion of the Lucerne Valley, and is primarily experienced by motorists traveling on SR-18 (Figure 5). KOP 2 is located on the north facing slope of Blackhawk Mountain, approximately 3.1 miles south of the Project. KOP 2 faces northwest toward the open expanse of the Lucerne Valley. This KOP is located on a USFS access road and offers unobstructed and panoramic views of the Lucerne Valley and Fry Mountains (Figure 6). From this elevated perspective, residential and commercial development in the Lucerne Valley area appears small in scale relative to the panoramic landscape. This KOP includes views of the foothills of Blackhawk Mountain, located in the immediate foreground. Results of the visual impact analysis are summarized below.

As motorists travel south on SR-18 toward Big Bear Lake, the Project is likely to be visible toward the south and east for approximately 3 miles. As such, the Project has the potential to be visible for approximately three minutes when traveling south on SR-18. However, from this portion of SR-18, motorists will be at a lower elevation compared to the Project. As motorists continue to travel south toward the Project, they will also be moving west and away from the Project boundary. The combination of elevation change in relation to movement away from the Project is likely to decrease the visibility and overall duration of view for southbound travelers. Motorists traveling southbound on SR-18 from its intersection with SR-247 will also have direct views of the Mitsubishi Mining Operation. The extensive and vast nature of the visible scar on the mountains caused by this mine could attract viewer attention compared to the brevity of views they will have toward the Project.

Motorists traveling north on SR-18 from Big Bear to Lucerne Valley will be at an elevated position relative to the Project site. Based on the field reconnaissance and viewshed analysis (URS, 2012), the Project site is not visible from the mountainous portion of SR-18. While views of the Lucerne Valley are visible from this stretch of road, the Project site itself (and much of the southern portion of the greater Lucerne Valley) was largely screened by topographical obstructions in the foreground of most views. As noted on the viewshed analysis, the Project does not become visible until motorists traveling on SR-18 reach the base of the mountain and enter the Lucerne Valley. As such, motorists traveling north will

have views of the Project for approximately two miles of the entire SR-18 corridor. This equates to a possible viewing opportunity of approximately two minutes, which is a moderate to high duration of view.

The visual contrast of the Project was rated weak from KOP-1 based on a consideration of expected views along the length of SR-18 for north and south bound motorists. The Project does not dominate the motorist viewshed nor is it likely to attract particular attention. Additionally, because motorists' overall view toward the Project would be temporary and viewed at an oblique angle when traveling north or south on SR-18, the Project would not result in adverse scenic changes to the existing visual landscape viewed from SR-18. See Figures 7 and 8 for simulations of the proposed Project and another small solar project that may be constructed nearby. Cumulative impacts would be less than considerable.

c) **Less than Significant Impact.** The Project will not substantially degrade the existing character or quality of the site and its surroundings (see Figures 7 and 8). The visual analysis (URS June 2012) suggests the Project will have a moderate to weak change in terms of color and texture when viewed from an elevated position. However, the Contrast Rating analysis prepared from KOP 1, which represents views of the Project for the majority of viewers, suggests the Project will have very weak contrast with the existing visual environment. The simulations prepared for both KOP 1 and KOP 2 demonstrate the Project largely blends with the mosaic mixture of developed and undeveloped parcels that characterize the existing landscape (see Figures 7 and 8, respectively). Moreover, the size and scale of the Project is small relative to the expansive landscape that surrounds it. Consequently, the Project would not dominate the views experienced from the nearby San Bernardino Mountains (i.e., KOP 2, Figure 8). Recreationists in this area would have limited opportunities to view the Project as views of Lucerne Valley are obstructed by topography from most locations on the trail. Based on this analysis, the Project would have less than significant impacts on the existing visual character and quality of the site and its surroundings.

In addition to the proposed Project, Figures 7 and 8 also simulate potential visual impacts from another small solar project that may be located approximately 0.4-mile to the north. These figures demonstrate that the proposed Project in combination with the other solar project would not have cumulatively considerable visual impacts.

d) **Less than Significant Impact.** The Project is not expected to create a substantial new source of light or glare. The facility will be unmanned and therefore nighttime lighting will be used to the extent needed to maintain safety and security objectives. Lighting fixtures will be hooded and directed downward to avoid spillage on adjacent properties. Additionally, the Project will comply with San Bernardino County Ordinance No. 84.29.040 which regulates glare, outdoor lighting, and night sky protection. All lighting associated with the proposed Project will be subject to County approval and compliance with San Bernardino County requirements. As such, the Project will have less than significant impacts in terms of lighting.

The Project is unlikely to create a substantial source of sustained glare, though it may cause glare at various times of the day and under certain lighting conditions and from distinct viewing positions. Because the Project is low in height, and largely blends with the existing vegetation and structural components of this landscape, the majority of viewers are not expected to experience increased glare as a result of the Project. Motorists traveling down SR-18 from Big Bear to the Lucerne Valley will not have direct views of the Project from this roadway. As such, the Project will have no impact on these viewers. Some sensitive viewers utilizing local trails on Blackhawk Mountain would have elevated and clear views of the Project from certain trail locations. These viewers may experience glare from the Project at certain times of the day under particular ambient lighting conditions, however, due to the small scale of the Project within the larger landscape, combined with the fact that the Project will comply with San Bernardino County Ordinance Standards 84.29.040, which states that solar energy facilities shall be designed to preclude daytime glare on any abutting residential land use zoning district, residential parcel, or public right-of-way, the proposed Project will have less than significant impacts in terms of light and glare. No cumulatively considerable impacts are expected.

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

Figure 5 KOP 1 Existing Conditions

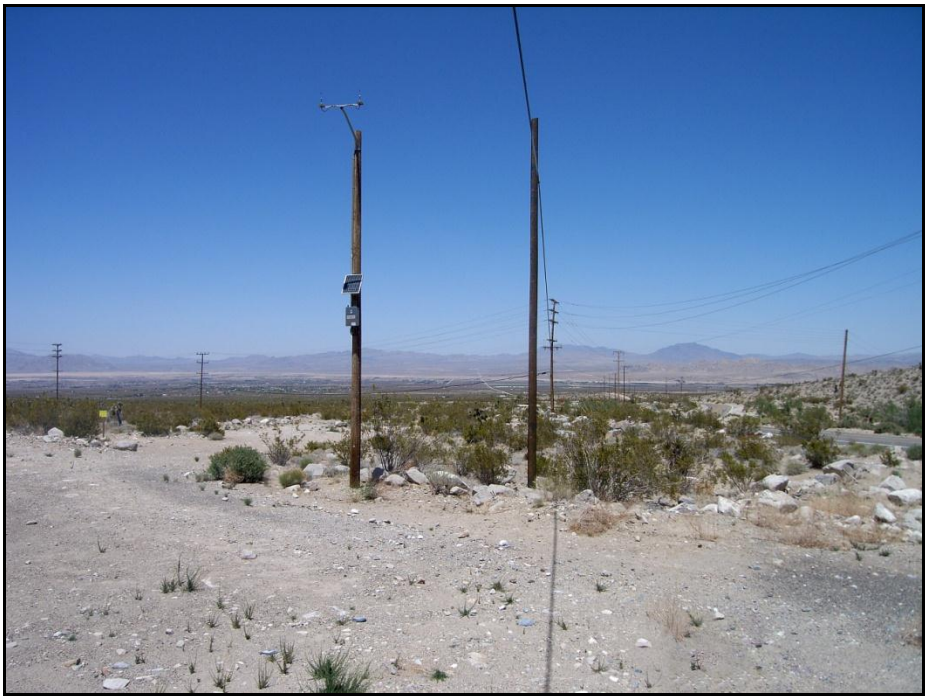


Figure 6 KOP 2 Existing Conditions

Figure 7 KOP 1 Proposed Project and Cumulative Conditions

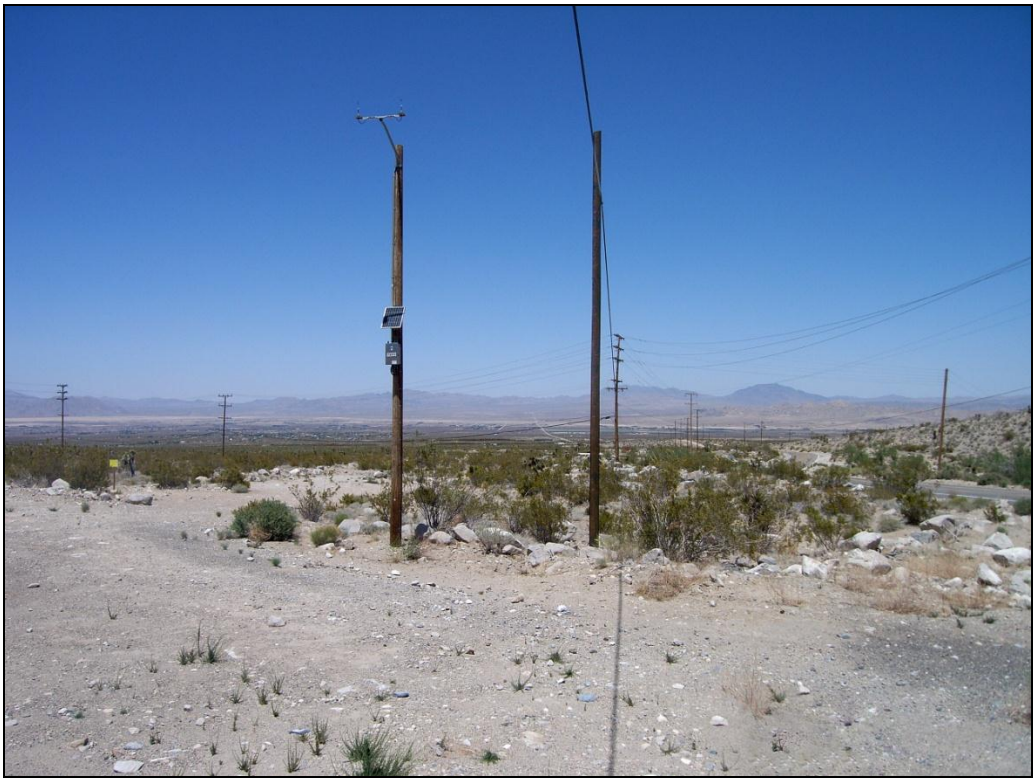


Figure 8 KOP 2 Proposed Project and Cumulative Conditions

	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. Would 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?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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

a) **No Impact.** The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use. According to the California Department of Conservation County of San Bernardino Important Farmland 2010 map, the Agincourt site is located within land mapped as Grazing Land and Other Land.

b) **No Impact.** The proposed Project does not conflict with any agricultural zoning or Williamson Act land conservation contract. The site is vacant and is not used for agricultural uses. The current General Plan land use designation for the proposed Project area is Lucerne Valley/Rural Living five acre minimum (LV/RL-5) Assessor's Parcel Number (APN) -9 and Lucerne Valley/Agriculture (LV/AG) (APN -27), which allows development of electrical power generation facilities with a Conditional Use Permit (CUP). The proposed Project area is not under a Williamson Act contract.

c) **No Impact.** The proposed Project would not 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)). 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 Project is compatible with the current zoning designation, with a Conditional Use Permit (CUP).

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 area is currently vacant land and has never been designated as forest land or timberland.

e) **No Impact.** The proposed Project will not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to a non-agricultural use because the proposed site is not classified as Farmland, is not used for agricultural purposes, and no off-site improvements are proposed.

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. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

SUBSTANTIATION: *(Discuss conformity with the South Coast Air Quality Management Plan, if applicable):*

a) **Less than Significant Impact.** The proposed Project will not conflict with or obstruct implementation of the applicable air quality plan. The project site is located within the Mojave Desert Air Basin (MDAB) and is within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The Air Quality Management Plan (AQMP) provides a program for obtaining attainment status for key monitored air pollution standards, based on existing and future air pollution emissions resulting from employment and residential growth projections. The AQMP is developed using input from various agencies' General Plans and other projections for population and employment growth. While the proposed Project is not identified specifically in the County of San Bernardino General Plan, it will not generate new homes or employment opportunities that will change the County's projections. Given that the proposed Project will 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 will be less than significant. In order to limit the production of fugitive dust during implementation of the proposed Project, construction activities will 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 where grading, blasting or vegetation removal occurs, within the staging areas, and on any unpaved roads utilized during project construction.

Over its lifetime, the proposed Project will not violate the regulations set forth by the MDAQMD Rule Book or CEQA. Currently the proposed Project will not utilize equipment that requires permits from the MDAQMD. Electricity generation via the use of photovoltaic systems does not generate chemical emissions that will negatively contribute to air quality. The proposed Project is designed to limit the amount of blasting and grading required for construction, which will limit fugitive dust generated during the life of the project.

b) **Less than Significant Impact.** The proposed Project is not expected to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Potential air quality impacts include construction exhaust emissions generated from construction equipment, vegetation clearing and earth movement activities (if necessary), construction workers' commute, blasting and construction material hauling for the entire construction period. These activities will involve the use of diesel- and gasoline-powered equipment that will generate emissions of criteria pollutants such as Carbon Monoxide (CO), Nitrogen Oxides (NOX), Reactive Organic Gases (ROG) or Volatile Organic Compounds (VOC), Sulfur Oxides (SOX), Particulate Matter less than 10 microns (PM_{10}), and Particulate Matter less than 2.5 microns ($PM_{2.5}$). The project construction activities also represent sources of vehicle re-entrained fugitive dust (which includes PM_{10}), a potential concern because the proposed Project is in a non-attainment area for ozone and PM10.

Construction-related increases in emissions of fugitive dust, exhaust from construction equipment, and employee commute vehicles will be temporary and localized during construction. Estimated quantities of unmitigated construction-related criteria pollutants from the Agincourt Solar Project in the MDAQMD are presented in Table 1. These data indicate that all construction-related emissions are below MDAQMD thresholds for California Environmental Quality Act (CEQA) review. Table 1 includes both the onsite activity of off-road equipment and the on-road mobile sources making deliveries to the site during the construction phase. A portion of these deliveries will occur in the South Coast Air Basin) and under the jurisdiction of the SCAQMD. Estimated emissions in the SCAQMD are presented in Table 2 and demonstrate that mobile sources associated with the construction activities in the South Coast Air Basin are not significant.

Some blasting of shallow bedrock may be required to bury AC/DC lines to collect power from the rows of modules and deliver it to the project substation. The horizontal area that would be affected by trenching would total approximately 1.38 acres. Even if all trenches required blasting over 6 months the increase in particulate matter would be less than 0.2 tons of PM_{10}. This amount is less than 6 percent of the total calculated PM_{10} emissions (URS November 2012, URS December 2012, MDAQMD Emissions Inventory Guidance 2000).The proposed Project will also include dust abatement measures that will limit the generation of pollutants, including particulate matter 10 microns or less in diameter (PM_{10}), consistent with

Rule 403.2 Fugitive Dust Control for the Mojave Desert Planning Area. This includes using water trucks to apply water and/or palliatives to minimize the production of visible dust emissions to 20 percent opacity in areas where grading, blasting or vegetation removal occurs, within the staging areas, and on any unpaved roads used during project construction. These measures will further reduce less than significant fugitive dust emissions. In the context of the project design and construction features, proposed Project construction-related air quality impacts will be negligible.

Electricity generation via the use of PV systems does not generate chemical emissions that will negatively affect air quality. Over its lifetime, the proposed Project will not violate the regulations set forth by the MDAQMD Rule Book, CEQA and Federal Conformity Guidelines. Emissions from this unmanned facility during operations will be from periodic security checks of the site, periodic site maintenance, and trucks associated with routine panel washing that would be conducted approximately 2-4 times per year. Periodic equipment maintenance will require truck visits, deliveries, and could require minor use of solvents, paints, coatings, etc.

Table 3 presents the estimated operational emissions for all mobile sources. It has been conservatively assumed that all operational emissions are generated in the MDAQMD, given there are no long distance deliveries required during the operational phase. These emissions are all below the annual thresholds of the MDAQMD.

TABLE 1
CONSTRUCTION PERIOD CRITERIA POLLUTANT EMISSIONS
ALL SOURCES WITHIN MDAQMD
FOR AGINCOURT SOLAR 10 MW PV PROJECT

Criteria Pollutant	Unmitigated Construction (tons/yr)	MDAQMD Annual Threshold (tons)
Carbon Monoxide (CO)	9.24	100
Oxides of Nitrogen (NO_X)	17.59	25
Volatile Organic Compounds (VOC)	2.25	25
Oxides of Sulfur (SO_X)	0.02	25
Particulate Matter (PM_{10})[1]	5.488	15
Particulate Matter ($PM_{2.5}$)[1]	2.25	15

Note: [1] Exhaust and Fugitive Dust.

TABLE 2
MOBILE SOURCE EMISSIONS FROM CONSTRUCTION ACTIVITIES
IN SCAQMD PORTION OF SAN BENARDINO COUNTY
FOR AGINCOURT SOLAR 10 MW PV PROJECT

Criteria Pollutant	Unmitigated Mobile Sources (tons/yr)	Unmitigated Mobile Sources (lb/day)	SCAQMD Mass Daily Thresholds Construction (lbs/day)
Carbon Monoxide (CO)	0.28	2.73	550
Oxides of Nitrogen (NO_X)	0.84	8.30	100
Volatile Organic Compounds (VOC)	0.06	0.54	75
Oxides of Sulfur (SO_X)	0.00	0.00	150
Particulate Matter (PM_{10}) [1]	1.03	10.05	150

Particulate Matter ($PM_{2.5}$) [1]	0.05	0.49	55

Note: [1] Exhaust and Fugitive Dust.

TABLE 3
OPERATIONAL EMISSIONS
FOR AGINCOURT SOLAR 10 MW PV PROJECT

Criteria Pollutant	Operational Emissions (tons/yr)	MDAQMD Threshold (tons/yr)
Carbon Monoxide (CO)	0.11	100
Oxides of Nitrogen (NO_X)	0.06	25
Volatile Organic Compounds (VOC)	0.01	25
Oxides of Sulfur (SO_X)	0.00	25
Particulate Matter (PM_{10}) [1]	2.24	15
Particulate Matter ($PM_{2.5}$) [1]	0.23	15

Note: [1] Exhaust and Fugitive Dust.

c) **Less than Significant Impact**. The proposed Project will not 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). The project will contribute criteria pollutants in the area during the short-term project construction period (see Table 1, above). None of the activities associated with the proposed Project will create a substantial permanent increase in the emissions of criteria pollutants that will be cumulatively considerable. Periodic panel washing, occasional patrolling and routine maintenance and repairs of the unmanned solar facility will have no cumulatively considerable impact on the emissions of criteria pollutants. There are no sources of potential long-term air impacts associated with the implementation of the proposed Project (see Table 2, above). Therefore, impacts will be less than significant. Moreover, the proposed solar electricity Project would reduce criteria pollutant emissions compared to emissions associated with generation of comparable amounts of electricity from fossil fuels.

d) **Less than Significant Impact.** The proposed Project will not expose sensitive receptors to substantial pollutant concentrations. The MDAQMD defines sensitive receptors as residences, schools, daycare centers, playgrounds and medical facilities (MDAQMD 2009). Residences in the project area may be exposed to short-term construction air quality impacts associated with construction exhaust emissions generated from construction equipment, vegetation clearing, construction workers' commute, and construction material hauling during the construction period. There will be no air quality impacts from project operation: electricity generation via the use of photovoltaic systems does not generate chemical emissions that will negatively contribute to air quality. The County's general conditions and standards as well as project-specific design and construction features incorporated into the proposed

Project such as dust suppression techniques per MDAQMD's Rule 403 will reduce any potential impacts from the project.

e) **No Impact.** The proposed Project will not create objectionable odors that will affect a substantial number of people. Electricity generation via the use of photovoltaic systems does not generate chemical emissions that will negatively affect air quality or produce objectionable odors. Potential odor generation associated with the proposed Project will be limited to construction sources such as diesel exhaust and dust but these will be temporary and not be substantial. No significant odor impacts related to project implementation are anticipated due to the nature and short-term extent of potential sources, as well as the intervening distance to sensitive receptors. Therefore, the operation of the project will have a less than significant impact associated with the creation of objectionable odors affecting a substantial number of people.

Although impacts to Air Quality are considered to be less-than-significant the following mitigation measures are required as conditions of project approval.

MM#	Mitigation Measures
AQ-1	**AQ/Construction and Operational Mitigation.** Operation of all off-road and on-road diesel vehicles/equipment shall comply with the County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)] including but not limited to: a) Equipment/vehicles shall not be left idling for period in excess of five minutes b) Engines shall be maintained in good working order to reduce emissions c) Onsite electrical power connections shall be made available where feasible d) Ultra low-sulfur diesel fuel shall be utilized (State law) e) Electric and gasoline powered equipment shall substituted for diesel powered equipment where feasible f) Signs shall be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use. g) In addition, all on-road diesel trucks shall not idle more than five minutes per truck trip or per day on the project site (State law). h) All transportation refrigeration units (TRU's) shall be provided electric connections. [Mitigation Measure **AQ-1** - General Requirements/Planning]
AQ-2	**AQ/Dust Control Plan.** The developer shall 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.

AQ-3 **AQ – Installation.** The developer shall submit for review and obtain approval from County Planning 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. [Mitigation Measure **AQ-3** – Final Inspection/Planning]

	Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
IV.	**BIOLOGICAL RESOURCES -** Would 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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☐	☐	☒

SUBSTANTIATION: *(Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database ☒): Category N/A*

a) **Less than Significant with Mitigation Incorporated**. As described more fully in Section 4.0 of the Project's General Biological Resources Assessment Report (URS 2012), the site is a fairly representative sample of the western Mojave Desert from a biological perspective. The creosote bush-white burr sage scrub vegetation community that comprises the site's vegetative cover supports an assemblage of common desert plants and wildlife, and one

special-status species, the burrowing owl (*Athene cunicularia*) was detected during field surveys. Other special-status species, such as the Mojave desert tortoise (*Gopherus agassizii*) and desert kit fox (*Vulpes macrotis arsipus*), have potential to occur on-site considering the site's habitat characteristics and distribution of the species in the region, but were not observed on-site during biological surveys. Common wildlife species that currently utilize the Project site could be impacted by construction and operation of the proposed Project. Generally speaking, impacts could potentially include injury or mortality during construction, and long-term habitat loss due to the conversion from native habitats to a developed condition. These sorts of impacts would potentially affect all wildlife species occupying the site, including common, sensitive, and special-status species.

Existing plants within proposed disturbance zones would be eliminated during grading or site preparation activities, as these species are immobile. No sensitive or special-status plants were observed during biological surveys of the Agincourt site; however, Parish's daisy (*Erigeron parishii*), a federally-listed threatened species, could potentially be present because biological surveys were conducted outside the blooming period of this plant. Additionally, several species of native cacti and yucca, including numerous Joshua trees, were detected within the Agincourt site. Although these plants maintain no formal sensitivity designations, they are protected by the California Desert Native Plants Act and the San Bernardino County Development Code. Impacts to these species are addressed under criterion e) below.

For the wildlife that inhabit the site, ground disturbance would have the potential to cause injury and/or mortality of individuals. The extent to which species would be impacted would be dependent on several factors, including the species' mobility and the extent to which the species relies on the site for life history requirements. Species of low mobility, or those that use the site during particularly vulnerable portions of the life history, such as nesting periods, would be expected to sustain greater impacts than highly mobile species or those whose use of the site is transitory. Because the project would disturb less than 80 acres on the floor of the Lucerne Valley, a relatively homogeneous desert habitat area, regionally abundant plants and wildlife species would not be substantially affected by the Project. Impacts to specific special-status species are discussed below.

Impacts to Parish's Daisy (*Erigeron parishii*). Parish's daisy is a perennial herb endemic to Southern California, and is federally-listed as threatened under the Endangered Species Act. Critical habitat for this species has been designated in portions of the northern foothills of the San Bernardino Mountains, including some areas within 3 miles of the Agincourt site. Parish's daisy is generally restricted to carbonate substrate, but has been observed in other areas as well. The blooming period for this species is normally May through July. Because full-coverage botanical surveys for the Agincourt project were completed in April, 2011 (see URS 2012), and due to the presence of suitable habitat for this species on-site and documented occurrences in the vicinity, there is a possibility that this species may occur within the Agincourt site. If present, this species would be impacted during grading or site preparation activities; therefore, impacts to Parish's daisy would be potentially significant, absent mitigation. The pre-construction surveys and contingency compensation

requirements required by Mitigation Measure BIO-4 would reduce this impact to a less than significant level.

Impacts to the Burrowing Owl (*Athene cunicularia*). Burrowing owls are a California Species of Special Concern, and were detected at two locations within the Agincourt site during biological field investigations. The individuals were detected during the nesting season; however, because the region contains both resident and migratory burrowing owls, it is currently unclear whether this species' use of the site is year-round or seasonal. Within the Project site, a total of approximately 63.88 acres of existing natural habitat would be disturbed during construction. Given the homogeneous nature of the Project region, this loss of habitat is not substantial. Moreover, the current site layout would preserve habitat along major drainages. However, since burrowing owls nest and roost underground, it is possible that adult and juvenile/nestling owls may be killed or injured, or eggs may be destroyed during construction-related ground disturbances. If construction occurs when nestlings are present, adult owls might have the ability to escape, but nestlings likely would not. In addition, disturbances from construction could potentially cause burrowing owls to abandon their nest burrows, leaving nestlings unattended and exposed to injury and mortality. Injury or mortality of burrowing owls during Project construction would be significant, absent mitigation. These impacts would be reduced to a less than significant level through Mitigation Measures requiring the permanent conservation of on-site lands (BIO-1), implementation of a Worker Environmental Awareness Program (BIO-2), presence of a biological monitor during construction (BIO-3), pre-construction surveys and passive relocation (BIO-9), and implementation of a Burrowing Owl Management Plan (BIO-10).

Impacts to the Mojave Desert Tortoise (*Gopherus agassizii*). Protocol surveys conducted in April 2012 in accordance with the USFWS (2010) survey protocol for this species (URS 2012) detected no live tortoises, burrows, scat, etc. One partial skeleton estimated at more than 4 years of age was detected during protocol surveys. The potential for project-related impacts to Mojave desert tortoises would be limited to individuals that either occupied the site but went undetected during protocol surveys or that were not present on-site during the surveys but colonized the area subsequently. Although unlikely, these impacts would be potentially significant, absent mitigation, due to the very high level of statutory protection afforded this species. These impacts would be reduced to a less than significant level through Mitigation Measures requiring the implementation of a Worker Environmental Awareness Program (BIO-2), presence of a biological monitor during construction (BIO-3), installation of tortoise exclusion fencing around disturbance zones (BIO-7), and pre-construction surveys for this species (BIO-8).

Impacts to the Desert Kit Fox (*Vulpes macrotis arsipus*). The desert kit fox is a small fox native to the Mojave and Sonoran deserts of California, Oregon, Nevada, Utah, Colorado, Texas, New Mexico, and Arizona, as well as parts of Mexico. While the desert kit fox is not designated by federal, state, or local agencies as a special-status species, CDFG regulations at 14 CCR 460 prohibit the take of this species. Thus, to be compliant with CDFG regulations, the project must be accomplished without hunting, shooting, catching, capturing, or killing desert kit foxes, or attempting these activities. Full-coverage biological

surveys within the Agincourt site did not detect any desert kit foxes or their sign on-site. However, the species is known to occur in the immediate vicinity of the site, including on the site of the nearby Marathon solar project. Considering these factors, and because of the high mobility of this species, there is a high likelihood that desert kit foxes may periodically occupy or move through the Agincourt site. Because the desert kit fox is not a sensitive or special-status species, project impacts to this species would be less than significant. However, the survey and passive relocation requirements specified in Mitigation Measure BIO-12 would further reduce the potential for the project to impact this species, and would ensure compliance with CDFG regulations.

b) **Less than Significant with Mitigation Incorporated**. Vegetation on-site is dominated by shrubs with a herbaceous understory that most closely corresponds with Sawyer et al.'s (2009) creosote bush-white burr sage scrub (*Larrea tridentata-Ambrosia dumosa* shrubland alliance). The Project site provides habitat for a variety of plant and wildlife species that are found throughout the region. To facilitate development of the Agincourt site, existing vegetation within the development envelope would need to be removed. Taller-growing species, such as Joshua trees, inhibit installation of solar panels due to their height and would be removed deliberately during site preparation. Lower-growing species, such as grasses, forbs, and shrubs, would not be removed specifically but would be uprooted or buried during the minor grading or other site preparation activities proposed. Because development of the site would involve soil movement and compaction, and because the proposed solar panels would create shade over much of the site, it is unlikely that new growth of vegetation would occur within the solar arrays following completion of the project. Thus, vegetation losses in the development footprint are presumed to be permanent. In total, implementation of the proposed Project would result in the permanent loss of approximately 64 acres of creosote bush-white burr sage scrub vegetation. The remaining vegetation would not be disturbed during project construction, and would remain in place. Because creosote bush/white burr sage scrub is abundant and widely distributed in the Project region and is not designated as a sensitive natural community, impacts would be less than significant.

As described and illustrated in Section 4.3 of the Project's General Biological Resources Assessment Report (URS 2012), jurisdictional delineations indicate the Project site contains portions of 12 unnamed ephemeral washes that total approximately 9.15 acres in size. These small drainages do not represent federally protected wetlands under the Clean Water Act but they are regulated by the California Fish and Game Code, which specifies that a Streambed Alteration Agreement must be obtained from the CDFG prior to undertaking an activity that would divert, obstruct, or substantially alter the streambed. Implementation of the proposed Project would adversely affect approximately 5.89 acres of these ephemeral drainages through filling and other means. Flows from affected drainages would be re-directed through perimeter swales to three larger drainages that would be protected onsite. These three drainages would remain in an open and earthen state, although one would be narrowed and straightened.

Because the proposed activities would result in permanent losses of jurisdictional waters,

these impacts would be significant, absent mitigation. However, the preservation of on-site lands required by Mitigation Measure BIO-1, as well as compliance will all terms and conditions of a CDFG-issued Streambed Alteration Agreement (BIO-13) would reduce these impacts to a less than significant level.

c) **No Impact.** As described and illustrated in Section 4.3 of the Project's General Biological Resources Assessment Report (URS 2012), jurisdictional delineations indicate the Project site contains portions of 12 unnamed ephemeral washes. Because they are not hydrologically connected to any navigable waters, the streams on-site are not subject to the permitting authority of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

d) **Less than Significant Impact.** As described in Section 4.5 of the proposed Project's General Biological Resources Assessment Report (URS 2012), the Agincourt Project site is not within an identified wildlife movement corridor, and the site's location on the floor of the Lucerne Valley makes the site suboptimal as a regional travel route. Use of the site for wildlife movement is mainly limited to short-distance, routine travel. Because of the site's limited size, and because the adjacent lands are equally permeable to travelling wildlife, development of the Project site would not result in obstruction or elimination of important wildlife movement routes.

e) **Less than Significant with Mitigation Incorporated.** The proposed Agincourt Solar Project has been designed with consideration for the policies and ordinances of San Bernardino County, and the proposed Project is consistent with these policies and ordinances. However, in some instances, these ordinances may impose additional requirements on the Project. Section 88.01.050 of the San Bernardino County Development Code requires that where removal of Joshua trees is proposed, all trees to be removed shall be transplanted or stockpiled for future transplanting wherever possible. Development of the proposed Project would require the removal of approximately 645 Joshua trees.

As an additional protective measure, Section 88.01.050(f)(3)(C) of the San Bernardino County Development Code requires that the removal of "specimen" size Joshua trees cannot be allowed unless there is no reasonable alternative means to develop the land. Development of the proposed Agincourt Solar Project would require the removal of approximately 288 "specimen-size" Joshua trees from the site. The spatial configuration of these trees is such that developing the site while leaving the trees in place is not feasible. Specimen trees are present on-site at a density of approximately 4.5 trees per acre, and are approximately evenly distributed across the site. Because avoidance of these trees would render the site undevelopable, the proposed development meets the test set forth by the Development Code.

Absent any sort of strategy for salvaging or preserving Joshua trees during site development, the Project would potentially conflict with Sections 88.01.050 and 88.01.060 of the San Bernardino County Development Code. This conflict would represent a potentially significant impact, absent mitigation. However, development of a Joshua Tree

Translocation Plan, per mitigation measure BIO-6, would ensure consistency with the Development Code and reduce this potential impact (resulting from conflict with local policies or ordinances protecting biological resources) to a less than significant level.

The California Desert Native Plants Act is intended to prohibit the unlawful harvest of certain native desert plant species, and provides a permit process by which the harvest of these species can be authorized. Section 88.01.060(d) of the San Bernardino County Development Code requires compliance with all provisions of the California Desert Native Plants Act prior to the County's issuance of a development permit or approval of a land use application. Protected species identified on-site include five cacti (silver cholla, pencil cholla, cottontop cactus, Englemann's hedgehog cactus, and beavertail cactus), and one member of the agave family (Mojave yucca). Harvest of these species can be authorized by the County through issuance of a permit.

Development of the proposed Project would require the removal of approximately 80 percent of the on-site individuals protected by the California Desert Native Plants Act. Thus, the project would require the removal of approximately 108 silver cholla individuals, 21 pencil cholla individuals, 57 cottontop cactus individuals, 66 Engelmann's hedgehog cactus individuals, 273 beavertail cactus individuals, and 349 Mojave yucca individuals, in addition to the Joshua trees noted above.

Because the proposed activities would result in removal of plants protected by the California Desert Native Plants Act and San Bernardino County Development Code, the applicant must obtain authorization from the County to remove these species. Obtaining a CUP for the project would comply with the County Development Code and the California Desert Native Plants Act. Preparation and implementation of a Cacti Salvage Plan, as required by Mitigation Measure BIO-5, would further reduce this impact

f) **No Impact.** The Agincourt site is not enrolled in any formal Habitat Conservation Plan or Natural Community Conservation Plan. However, several conservation plans have been adopted in the region, and the Project's consistency with these plans is described below.

In 1996, the USFWS granted an Incidental Take Permit to the Cushenbury Sand and Gravel Quarry, a facility located approximately two miles south of the Agincourt site along Camp Rock Road, and the Quarry's permit application included a Habitat Conservation Plan (HCP). The Mojave desert tortoise was the only species covered by the HCP and Incidental Take Permit. Because the provisions of the Cushenbury Sand and Gravel Quarry HCP are applicable only to the quarry site, activities on the Agincourt site are not subject to these provisions. The project would not conflict with the Cushenbury Sand and Gravel Quarry HCP.

In 2006, the Bureau of Land Management (BLM) adopted the West Mojave Plan, a habitat conservation plan and federal land use plan amendment that presents a comprehensive strategy to conserve and protect sensitive biological resources within approximately 6.2 million acres in the western Mojave Desert while also providing a streamlined program for

complying with state and federal endangered species laws. Two state agencies and 15 local jurisdictions, including the County of San Bernardino, worked closely with the BLM during preparation of the West Mojave Plan. The two species of primary importance covered in the West Mojave Plan are the Mojave desert tortoise and Mohave ground squirrel. Because these species have not been detected within the Agincourt site, the Project would not pose significant conflicts with this plan. It should be noted that the BLM's approval of the West Mojave Plan has been the subject of recent litigation, and that the legal process may necessitate some deviation from the version approved in 2006. Thus, some uncertainty exists regarding the exact terms of this plan. The project will have no significant impact relative to conservation plans.

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.

MM#	Mitigation Measures
BIO-1	**Avoidance and Long-Term Preservation of On-Site Lands.** Within eighteen months after the start of construction, the Applicant shall place a permanent Conservation Easement on a minimum of 15 acres within the Agincourt site. Vegetation mapping efforts within the Agincourt site have identified the on-site mitigation lands as creosote bush/white bursage scrub, a common Mojave Desert plant community. This vegetation provides suitable habitat for several species of desert plants and wildlife, including Joshua trees and native cacti, Mojave desert tortoise, burrowing owl, desert kit fox, and native birds, and the on-site mitigation lands also encompass the two largest and highest-quality desert washes within the site. A permanent Conservation Easement on the on-site mitigation land shall be offered to the CDFG or to a non-governmental conservation organization, and shall be recorded to the satisfaction of the County of San Bernardino and the CDFG. The Applicant shall establish an endowment satisfactory to CDFG for the management and preservation of the on-site mitigation lands. The proposed site management practices, and endowment shall be approved by the County of San Bernardino, after consultation with CDFG.
BIO-2	**Worker Environmental Awareness Program.** Prior to any construction activities on the project site, the Applicant will implement a Worker Environmental Awareness Program (WEAP) to educate on-site workers about sensitive environmental issues associated with the Project. The program will be administered to all on-site personnel, including the Applicant's personnel, contractors, and all subcontractors, on the first day of work prior to the employee's commencing work on the site. The WEAP will place special emphasis on the protected species that have potential to occur within the Agincourt site, including the Mojave desert tortoise, burrowing owl, nesting birds, and desert kit fox, among other plant and wildlife species. The program will include the following elements:

- A presentation, developed by or in consultation with a qualified biologist, discussing the sensitive biological resources with potential to occur on-site, and explaining the reasons for protecting these resources and penalties for non-compliance;
- Brochures or booklets, containing written descriptions and photographs of protected species as well as a list of site rules pertaining to biological resources, to be provided to all WEAP participants;
- Contact information for the project biological monitor, and instructions to contact the monitor with any questions regarding the WEAP presentation or booklets;
- An acknowledgement form, to be signed by each worker indicating that they received WEAP training and will abide by the site rules protecting biological resources; and,
- Conspicuous stickers, identifying the project and signifying WEAP completion, to be distributed immediately following WEAP training and required on personnel hard hats.

The project Applicant will be responsible for ensuring that all on-site personnel, throughout the duration of project construction, receive WEAP training. A training log, to be signed by all on-site personnel immediately following WEAP training, will be maintained on the project site during construction to document compliance with this measure.

BIO-3 **Biological Monitor.** Prior to issuance of a grading permit, a qualified biologist shall be retained by the Applicant as the biological monitor subject to the approval of the County of San Bernardino. The biological monitor shall be present at all times during vegetation clearing or ground disturbance, and shall ensure that impacts to biological resources are avoided or minimized to the fullest extent possible. When construction activities have progressed to the point where biological resources are no longer present, as determined by the biological monitor, biological monitoring in the area may be reduced or discontinued with approval from the County of San Bernardino. The biological monitor shall have the authority to stop specific grading or construction activities if violations of mitigation measures or any local, state, or federal laws are suspected.

BIO-4 **Parish's Daisy Surveys and Compensation.** Prior to vegetation clearing or ground disturbance within the Agincourt site, the Applicant will retain a qualified biologist to conduct a survey for Parish's daisy (*Erigeron parishii*) within the disturbance footprint. The survey shall be timed to coincide with the blooming period of this species, and shall occur between May 1 and August 31 or as determined by a qualified biologist based on observations in the region.

If Parish's daisy is observed within the disturbance footprint, the aerial extent of the occurrence will be mapped and quantified, by outlining a convex polygon around the occurrences and considering the density of Parish's daisy individuals within the polygon. An equivalent acreage will be seeded with this species within the on-site preservation areas described in Mitigation Measure BIO-1 during the fall season.

During the blooming period following seeding, the Applicant shall retain a qualified biologist to inspect the seeded area and verify that the seeds have germinated and that Parish's daisy plants are alive. If no Parish's daisy plants are observed, or if the biologist determines the plants to be in abnormally low density or poor health, a supplemental seeding application shall be performed during the next appropriate season, as determined by the biologist**.**

BIO-5 **Cactus Salvage Plan.** Prior to issuance of a grading permit, the Applicant shall submit a Cactus Salvage Plan to the County of San Bernardino and the CDFG for approval. The Cactus Salvage Plan shall contain the following elements:

- A spatial inventory of all native cacti within the project site, including species and locations;
- A quantitative assessment of the numbers of each cactus species to be removed by the project; and,
- Proposed measures to retain as many cacti as is practical on the project site, and a spatial and quantitative description indicating the species and locations of cacti to be preserved.

BIO-6 **Joshua Tree Translocation Plan.** Prior to issuance of a grading permit for the project, the Applicant shall submit a Joshua Tree Translocation Plan to the County of San Bernardino. The plan shall ensure compliance with the San Bernardino County Development Code, and shall specify methods by which Joshua trees proposed for removal shall be transplanted or stockpiled for future transplanting wherever possible. The plan shall specify the locations of all Joshua trees within the project site, and shall identify any trees that would require removal or transplantation. All trees on the on-site areas to be set aside shall be preserved. On-site preservation will be achieved via dedication of a Conservation Easement to the CDFG or a qualified third party, as required by Mitigation Measure BIO-1.

BIO-7 **Mojave Desert Tortoise Exclusion Fencing.** During the months of April, May, September, or October prior to initiation of construction activities, the Applicant will retain a qualified biologist to conduct Mojave desert tortoise surveys in accordance with the most recent USFWS survey protocol for this species. If Mojave desert tortoises or their recent sign are detected (the partial tortoise skeleton detected during protocol surveys in 2012 was many years old, and does not indicate current Mojave desert tortoise presence on the site), the Applicant shall not initiate construction, and shall instead contact the USFWS and CDFG to develop an avoidance strategy and/or seek authorization for incidental take of Mojave desert tortoise.

If survey results are negative, the Applicant shall erect a tortoise exclusion fence surrounding all portions of the Agincourt site that are proposed for solar development or other ground disturbance. The exclusion fence shall be installed in accordance with the specifications set forth in Chapter 8 of the USFWS' *Desert Tortoise Field Manual* (USFWS 2009), and installation of the fence shall be overseen by a biologist familiar with the

installation of tortoise exclusion fencing. Following installation of the tortoise exclusion fence, the Applicant shall retain a qualified biologist to conduct a second, full-coverage pedestrian survey of all areas encompassed by the exclusion fence. If Mojave desert tortoises or their recent sign are detected, the Applicant shall immediately remove portions of the exclusion fence to prevent entrapment of tortoises, and shall contact the USFWS and CDFG to develop an avoidance strategy and/or seek authorization for incidental take of Mojave desert tortoise. If no tortoises or their sign are detected during the second survey, construction activities may commence.

The tortoise exclusion fences will be inspected on a monthly basis for any signs of damage or wear that could potentially compromise the integrity of the exclusion perimeter. If damage or excessive wear is observed, the exclusion fence will be repaired immediately. Results of the monthly fence inspections will be maintained on-site to document compliance with this provision.

BIO-8 **Pre-Construction Mojave Desert Tortoise Surveys and Avoidance.** Within 14 days prior to construction-related ground clearing and/or grading, the Applicant shall retain a qualified biologist to conduct surveys for signs of occupancy by the Mojave desert tortoise. Surveys shall cover the entire area proposed for disturbance, shall be conducted by walking parallel transects spaced no more than 10 meters apart, and shall focus on detecting any live tortoises or their sign, including carcasses, burrows, palates, tracks, and scat. Should any sign indicating the presence of Mojave desert tortoise be detected, the Applicant shall not proceed with ground clearing and/or grading activities in the area of the find, and shall instead contact the USFWS and CDFG to develop an avoidance strategy and/or seek authorization for incidental take of Mojave desert tortoise.

The results of the pre-construction surveys, including graphics showing the locations of any tortoise sign detected, and documentation of any avoidance measures taken, shall be submitted to the USFWS, CDFG, and the County of San Bernardino within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable federal and state laws pertaining to the protection of Mojave desert tortoise.

BIO-9 **Pre-Construction Burrowing Owl Surveys and Passive Relocation.** Within 14 days prior to ground disturbance, the Applicant shall retain a qualified biologist to conduct burrowing owl surveys within the area to be disturbed. The survey shall be performed by walking parallel transects spaced no more than 20 meters apart, and shall 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, shall be submitted to the County of San Bernardino and CDFG within 14 days following completion of the surveys. If active burrows are detected, the following take avoidance measures shall 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 shall be left undisturbed, and no construction activity shall 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 shall 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, shall be installed in the entrance of all active burrows. The devices shall 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 shall then be excavated by hand and/or mechanically and refilled to prevent reoccupation. Exclusion shall 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), shall not be disturbed. Construction activities shall not be conducted within 300 feet of an active on-site burrow at this season.

BIO-10 **Burrowing Owl Management Plan.** Prior to issuance of a grading permit, a habitat management plan for the burrowing owl shall be developed. The plan shall include provisions for protecting foraging habitat and replacing any active burrows from which owls may be passively evicted as allowed by Mitigation Measure BIO-9, and shall also include management or enhancement practices intended to maintain burrowing owl habitat suitability within the on-site mitigation lands preserved through Mitigation Measure BIO-1. At a minimum, the plan shall include the following elements:

- If occupied burrows are to be removed, the plan shall 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-9 shall be replaced with suitable natural or artificial burrows within the on-site preservation areas, at a target ratio of 1:1.
- Provisions for vegetation management in the on-site mitigation lands (see Mitigation Measure BIO-1), specifying the maximum allowable vegetative cover adjacent to established artificial burrows and the methodology to be used in maintaining the appropriate cover.
- Measures prohibiting the use of rodenticides.
- The plan shall ensure that adequate suitable burrowing owl foraging habitat is provided in proximity to natural or artificial burrows within the on-site mitigation lands, in off-site mitigation areas, or both. Foraging habitat shall not be located in

areas shaded by the proposed solar arrays, and shall not be subject to vegetation mowing or other fuel management practices. Foraging areas shall be located adjacent to suitable natural or artificial burrow locations.

The Burrowing Owl Management Plan shall be submitted to the County of San Bernardino and CDFG for review and approval prior to issuance of a grading permit for the Project.

BIO-11 **Pre-Construction Nesting Bird Surveys and Avoidance**. 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 shall 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 shall be conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities.

If active nests are found, clearing and construction within 100 feet of the nest (or a lesser distance if approved by the USFWS) shall be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist. Avoidance buffers shall be established in the field with highly visible construction fencing or flagging, and construction personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall 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, shall be submitted to the County of San Bernardino and CDFG 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.

BIO-12 **Pre-Construction Desert Kit Fox Surveys and Passive Relocation.** To avoid unauthorized take of the desert kit fox, the project Applicant shall retain a qualified biologist to conduct preconstruction surveys for this species within 14 days prior to ground disturbance. The survey shall be conducted by walking parallel transects spaced no more than 20 meters apart, and shall be focused on detecting any desert kit fox individuals or dens within the disturbance footprint. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active based on field observations. If necessary, motion-sensitive cameras or a tracking medium shall be used to determine whether a den is active.

Inactive dens in areas that would be impacted by construction activities shall be excavated

by hand and/or mechanically and backfilled to prevent reuse by desert kit fox.

Active and potentially active dens in areas that would be impacted by construction activities shall be monitored by a qualified biologist for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand to prevent reuse. If tracks are observed, the den shall be classified as active. Outside the desert kit fox pupping season (January 15 through July 31, unless determined otherwise by a qualified biologist based on observations in the region), the den may be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the kit fox from continuing to use the den. After verification that the den is unoccupied, it shall then be excavated and backfilled by hand to prevent reuse, while ensuring that no kit fox are trapped in the den. No excavation of active desert kit fox dens shall be permitted during the pupping season.

The Applicant shall submit a report to the County of San Bernardino and CDFG within 30 days of completion of preconstruction desert kit fox surveys describing the survey methods, results, and details of any dens backfilled or foxes observed.

BIO-13 **Streambed Alteration Agreement**. Prior to undertaking any activity that would divert, fill, obstruct, or substantially alter any of the on-site streambeds described in the Biological Resources Assessment Report for the project (URS 2012), the project Applicant will enter into a Streambed Alteration Agreement with the CDFG authorizing the proposed activity as required by Section 1602 of the California Fish and Game Code. The project Applicant will ensure that all project personnel comply with all stated terms and conditions of the Agreement, including any seasonal or weather-related restrictions on work activities within the streambeds, construction site housekeeping practices, or other limitations the CDFG may impose.

Project-related impacts to CDFG-jurisdictional desert washes would be mitigated at a minimum ratio of 1:1, including through preservation within the on-site preservation areas identified in Mitigation Measure BIO-1. The preserved area encompasses the two largest and best-developed washes on the Agincourt site, ensuring that the quality of drainages preserved exceeds that of the drainages to be impacted. Because the acreage of jurisdictional washes to be permanently preserved and managed exceeds the acreage that would be affected by the project, and because the washes to be preserved are of greater biological value due to their larger size and habitat complexity, it is likely that additional compensatory mitigation will not be required by the Streambed Alteration Agreement.

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

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

a) **No Impact.** The project will not cause a substantial adverse change in the significance of a historical resource, because no resources have been identified on the site and none are expected. No structures are present.

A California Historical Resources Information System cultural resources site records and literature search for this project has been conducted by URS (URS December 2011). The site record search indicates that the Project site has not been previously surveyed for cultural resources; four previous studies have been conducted within one mile of the site. Three of the four studies were adjacent to the proposed Project site: two small aerial surveys and a linear survey of the SCE transmission line that runs along Camp Rock Road immediately adjacent to the Project site's eastern border. The fourth investigation consisted of a survey of 11 miles of replacement water mains in the Lucerne Springs residential tract northwest of the project site. The record search revealed that no cultural resources are recorded on or adjacent to the Project site and no significant cultural resources are expected to occur.

However, as a precautionary measure, a condition shall be added to the project which requires the developer to contact the County Museum for determination of appropriate measures to be taken if any cultural resources are encountered during project construction.

b) **No Impact.** See discussion of Item a), above.

c) **No Impact.** This project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature because the site contains no rock outcrops and

the site is primarily comprised of active and deep alluvial soils. No resources have been identified or are expected on the site. To further reduce the potential for impacts, a condition shall be added to the project which requires the developer to contact the County Museum for a determination of appropriate measures to be taken, if any finds are made during project construction.

d) **Less than Significant Impact.** This project will not disturb any human remains, including those interred outside of formal cemeteries, because no such burial grounds are identified on this project site and none are expected. If any human remains are discovered, during construction of this project, the developer is required to contact the County Coroner and the County Museum for a determination of appropriate measures to be taken. A Native American representative shall also be consulted, if the remains are determined to be of Native American origin.

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
VI. GEOLOGY AND SOILS - Would 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.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (2001) creating substantial risks to life or property?	☐	☐	☒	☐
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?	☐	☐	☐	☒

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

a) **i) Less than Significant Impact**. The entire San Bernardino County area is particularly susceptible to strong ground shaking and other geologic hazards from numerous earthquake fault zones, including the San Andreas Fault, among others. A review of California Geological Survey - Alquist-Priolo Earthquake Fault Zones maps indicates the proposed Project is located approximately 0.8 mile northeast of the Helendale-South

Lockhart fault zone which locally trends along Highway 18. While the potential for onsite ground rupture cannot be totally discounted (e.g., unmapped faults could conceivably underlie the project site, the likelihood of such an occurrence is considered low due to the absence of known faults within the site.

The proposed Project will not include any habitable structures. Nonetheless, the design of any structures onsite will incorporate measures to accommodate seismic loading, pursuant to existing guidelines such as the "Greenbook" Standard Specifications for Public Works Construction (2006) and the International Code Council's) ICC) 2007 California Building Code (CBC). Specific standards that may be used for the proposed Project include but are not limited to proper fill composition and compaction, anchoring (or other means of securing application structures); and use of appropriate materials, dimensions and flexible joints where appropriate. Therefore, impacts from proximity to fault zones are considered less than significant.

ii) Less than Significant Impact. The subject site is within an area that is subject to strong earthquakes but no habitable structures are proposed. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structures should, however, be designed to resist structural collapse through incorporation of California Building Standards Code design guidelines and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life. With compliance with the California Building Standards Code, impacts are considered less than significant.

iii) Less than Significant Impact. The project site is expected to experience earthquake activity that is typical of the Southern California area. However, the site is characterized by deep, well-drained alluvial soils and groundwater in the region is low. The potential for liquefaction at this site is considered to be low. Furthermore, the proposed Project design and construction will incorporate requirements of the California Building Code to address potential seismic-related effects such as liquefaction, settlement, and lateral spreading. Based on incorporation of applicable standards, potential project impacts associated with seismic-related ground failure will be less than significant.

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.

b) **Less than Significant Impact.** The proposed Project's hydrological report (URS June 2012) indicates substantial soil erosion or the loss of topsoil is not expected. Site soils are well-drained and any rain or wash water on the solar panels would drain freely to the

ground. Based on the volume of water falling from each panel during storm events, the height of the fall, and site soil conditions, it is not expected that erosion beyond a microlevel will occur. Water will fall from the PV panels and pond at a drip point before infiltrating or gradually migrating into the existing drainage patterns. If, overtime, minor erosion were noted at the drip points, small gravel pads could be added to help dissipate the energy of the falling water. If minor erosion were noted near the foundations, minor grading could restore support for the individual foundations, and keep surface flows from undermining the foundations in future storm events.

Erosion control plans will be required to be submitted, approved and implemented. Measures to reduce and control erosion of soil during construction and long term operation are required by MDAQMD through its Rule 403 for control of fugitive dust, the Colorado River Basin Regional Water Quality Control Board (RWQCB) under its administration of the State's General Construction Permit, and the County of San Bernardino Public Works Department through its Storm Water Management Program. Implementation of requirements under MDAQMD Rule 403 for control of fugitive dust would reduce or eliminate the potential for soil erosion due to wind. The proposed Project would result in a minor increase in impervious surfaces and implementation of Best Management Practices (BMPs) that would be included in the applicant's Storm Water Pollution Prevention Plan (SWPPP) would reduce soil erosion due to storm water or water associated with construction.

c) **Less than Significant Impact.** Mapped soil types—primarily well-drained alluvial soils—appear to be conducive to the development of the proposed Project. The Project design and construction methods, including use of embedded pier foundations and re-compaction of surface soils where needed, will stabilize project components; thereby, reducing potential impacts of the mapped soils to a less than significant level.

The project area is relatively flat terrain where landslides have not historically been an issue. Potential liquefaction (and related settlement and lateral spreading effects) and landslide impacts are discussed above in Sections VI.a.iii and VI.a.iv, respectively. Based on the described conditions and project design and construction methods, no significant impacts related to geologic instability are anticipated as a result of project implementation.

d) **Less than Significant Impact.** Site soils are well-drained to excessively well-drained and are not considered expansive soils.

e) **No Impact.** The proposed Project is an unmanned facility. No septic or other wastewater disposal systems will be utilized as part of this project.

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
VII	**GREENHOUSE GAS EMISSIONS -** Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

SUBSTANTIATION:

a) **Less than Significant Impact.** The County's Greenhouse Gas Emissions Reduction Plan (GHG Plan) was adopted on December 6, 2011 and became effective on January 6, 2012. The GHG Plan establishes a GHG emissions reduction target for the year 2020 that is 15 percent below 2007 emissions. The plan is consistent with AB 32 and sets the County on a path to achieve more substantial long-term reduction in the post-2020 period. Achieving this level of emissions will ensure that the contribution to greenhouse gas emissions from activities covered by the GHG Plan will not be cumulatively considerable.

In 2007, the California State Legislature adopted Senate Bill 97 (SB 97) requiring that the CEQA Guidelines be amended to include provisions addressing the effects and mitigation of GHG emissions. New CEQA Guidelines have been adopted that require: inclusion of a GHG analyses in CEQA documents; quantification of GHG emissions; a determination of significance for GHG emissions; and, adoption of feasible mitigation to address significant impacts. The CEQA Guidelines [Cal. Code of Regulations Section 15083.5 (b)] also provide that the environmental analysis of specific projects may be tiered from a programmatic GHG plan that substantially lessens the cumulative effect of GHG emissions. If a public agency adopts such a programmatic GHG Plan, the environmental review of subsequent projects may be streamlined. A project's incremental contribution of GHG emissions will not be considered cumulatively significant if the project is consistent with the adopted GHG plan.

Implementation of the County's GHG Plan is achieved through the Development Review Process by applying appropriate reduction requirements to projects, which reduce GHG emissions. All new development is required to quantify the project's GHG emissions and adopt feasible mitigation to reduce project emissions below a level of significance. A review standard of 3,000 metric tons of carbon dioxide equivalent (MTCO2e) per year is used to identify and mitigate project emissions. For projects exceeding 3,000 MTCO2e per year of GHG emissions, the developer may use the GHG Plan Screening Tables as a tool to assist with calculating GHG reduction measures and the determination of a significance finding. Projects that garner 100 or more points in the Screening Tables do not require

quantification of project-specific GHG emissions. The point system was devised to ensure project compliance with the reduction measures in the GHG Plan such that the GHG emissions from new development, when considered together with those from existing development, will allow the County to meet its 2020 target and support longer-term reductions in GHG emissions beyond 2020. Consistent with the CEQA Guidelines, such projects are consistent with the Plan and therefore are determined to have a less than significant individual and cumulative impact for GHG emissions.

Greenhouse gas emissions resulting from the construction and operation of the proposed Project were quantified and reported in a technical memorandum (URS June 2012). Results from the GHG analysis performed for the solar energy project show that construction and operation emissions over 30 years will be approximately 180 MTCO2e per year. This is far below San Bernardino County's significance threshold of 3,000 MTCO2e per year. These project GHG emissions are consistent with the County of San Bernardino's September 2011 Green House Gas Reduction Plan and would present a less than significant impact for GHG emission.

Moreover, the construction of this solar facility will generate "green" electric power generation that would otherwise be produced with fossil fuels with much higher GHG emissions. The proposed Project thus would result in a net environmental benefit regarding GHG emissions.

b) **No Impact.** The proposed Project would produce solar electricity and is consistent with the *County of San Bernardino Greenhouse Gas Emissions Reduction Plan* (GHG Plan). (See discussion above in Item a).

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
VIII	**HAZARDS AND HAZARDOUS MATERIALS -** Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐

SUBSTANTIATION:

a) **Less than Significant Impact.** The proposed Project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, because no use approved on the site is anticipated to be involved in such activities. If such uses are proposed on-site in the future, they will be subject to permit and inspection by the Hazardous Materials Division of the County Fire Department and in some instances additional land use review.

Construction will involve short-term use of hazardous substances such as fuels, lubricants, adhesives, solvents and asphalt wastes. The potential risk associated with the accidental discharge during use and storage of such construction-related hazardous materials is considered low because the handling of any such materials will be addressed through the implementation of Best Management Practices (BMPs) pursuant to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit.

The AC/DC collection system may be installed in shallow subsurface trenches and/or on an above-grade raceway suspended on stakes. Collection trenches would likely be mechanically excavated, though in some cases targeted shallow trench blasting may be required as a construction technique due to near-surface bedrock. Therefore, Construction may involve short-term use of explosives.

If explosives are to be used, the applicant will be required to obtain all necessary permits and approvals through the San Bernardino County Fire Department's Hazardous Materials Division (HMD). This may include preparing a Business Emergency Contingency Plan and securing a Certified Unified Program Agency (CUPA) Permit for hazardous materials handling and/or hazardous waste generation, as required by the HMD. The applicant and/or its construction firm and/or relevant subcontractors responsible for blasting activities will engage the HMD to perform a pre-construction site tour, to assist with worker training as necessary, and to perform a site closure inspection once any required blasting has been completed. Explosives will be transported, handled and used in accordance with all applicable laws and regulations. Therefore impacts would be less than significant.

b) **Less than Significant Impact.** The project will 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 typical construction-related hazards such as fuels, lubricants, adhesives, solvents and asphalt wastes, the proposed Project will not generate or require the use or storage of significant quantities of hazardous substances. The photovoltaic panels used in the proposed Project are environmentally sealed collections of photovoltaic cells that require no chemicals and produce no waste materials. Batteries used for the construction and operation will be stored and disposed of according to Department of Toxic Substances Control (DTSC) the Universal Waste Rule or EPA Hazardous Waste Battery Regulations. Furthermore, standard operating procedures will prevent the use of materials from causing a significant

hazard to the public or environment.

c) **No Impact.** There are no existing or proposed schools within one-quarter mile of the proposed Project site.

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 and will not create a significant hazard to the public or the environment.

e) **No Impact.** The project site is not located within an airport land use plan or within two miles of an airport. The nearest public use airport is located more than nine miles to the south in Big Bear City, California. The project is located within the County's Airport (AR-4) Overlay. AR-4 includes low-altitude/high speed corridors designated for military aircraft use. Military training routes VR-1214, -1215, -1217 and -1218 occur in this area and pilots can fly as low as 100 feet above ground level (AGL) along VR-1214, -1215, -1217 and 200 feet along VR-1218. San Bernardino Development Code 82.09.060 (b) states that "Proposed structures and the normal mature height of any vegetation shall not exceed the height limitations established in Federal Aviation Regulations (FAR) Part 77, unless Form 7460-1 (Notice of Proposed Construction or Alteration) has been filed with and approved by the FAA before the issuance of a Building Permit." As per FAR Part 77.9, construction or alteration requiring FAA notification includes:

- any construction or alteration exceeding 200 ft above ground level
- any construction or alteration:
  - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 ft
  - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft
  - within 5,000 ft of a public use heliport which exceeds a 25:1 surface
  - any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards
  - when requested by the FAA
  - any construction or alteration located on a public use airport or heliport regardless of height or location.

The proposed project would not involve construction or operational equipment that would be tall enough to affect military flights. However, as noted, the FAA may request such a filing. To provide the FAA with an opportunity to comment on the project, the applicant shall contact FAA air traffic specialists for Southern California. If requested, the applicant shall file form 7460-1 prior to receiving a Building Permit.

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 the Rabbit Ranch Airport located more than nine miles to the northwest.

g) **Less than Significant Impact.** The project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan because the project is located along Camp Rock Road with adequate access from two or more directions via State Route 18 to the south and State Route 247 to the north.

h) **Less than Significant Impact.** Any development, along with the associated human activity, in previously undeveloped areas increases the potential of the occurrence of wildfires in the region. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulations will be implemented for the proposed Project and will minimize the occurrences of fire due to project activities during construction and for the life of the project. Therefore, less than significant impacts are anticipated.

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
IX	**HYDROLOGY AND WATER QUALITY -** Would the project:				
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete 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 (e.g., the production rate of pre-existing nearby wells would drop to a level, which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
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 would result in substantial erosion or siltation on- or offsite?	☐	☐	☒	☐
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 would result in flooding on- or offsite?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structure which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

SUBSTANTIATION:

a) **Less than Significant Impact.** According to the Project's Draft Water Quality Management Plan (URS June 2012), the project will not violate any water quality standards or waste discharge requirements. Potential water quality impacts from the proposed Project could be associated with short-term (construction-related) erosion/sedimentation and hazardous material use/discharge. During operations, the expected pollutants of concern at this unmanned facility include trash and debris and potentially oil and grease from maintenance vehicles visiting the site periodically for panel washing (several times per year) and general site maintenance (as needed).

The facility will be unmanned. Solar panels will be elevated above the existing grade and supported by a metal frame and individual embedded piers. The ground shall be minimally graded. The proposed Project also includes construction of various concrete pads and gravel internal access roads but the Hydrological Analysis (URS June 2012) indicates only 13 percent of the site will be covered with impervious surfaces. The remaining 87 percent will remain as native soil or graded to improve and control surface drainage.

Furthermore, potential erosion/sedimentation and hazardous materials impacts will be avoided or reduced below a level of significance through conformance with applicable elements of the NPDES Municipal Stormwater General Construction Permit. As part of the permit requirements, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project. The SWPPP provides detailed descriptions of water quality management measures to be used (e.g., site design and construction BMPs).

Maintenance of the unmanned facility Project will primarily involve panel washing and repairs or replacement of panels or other electrical equipment. Panel washing would be conducted as needed but is expected to occur quarterly or bi-annually. Panels would be power-washed with clean water that will contain no cleaning agents or other additives.

b) **Less than Significant Impact.** The proposed Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Water sourced from a local water purveyor listed in the Project Description will be trucked in and sprayed on the panels from a water truck. Most (87 percent) of the ground surface within the proposed Project area will be permeable and operational water use will be small, estimated at approximately 2 acre-feet per year or less. Water percolation and groundwater recharge will not be significantly impacted by the proposed Project.

c) **Less than Significant Impact.** The proposed Project will have a less than significant impact on 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. The proposed Project's Hydrologic Analysis (URS December 2011) includes a conceptual drainage plan that would maintain three major washes across the site. Minor washes would be filled and their flows redirected to the large washes via a perimeter swale. The Hydrological Analysis concluded that this plan would maintain adequate runoff through

the Project site without causing backup for flows upstream or concentrated flows downstream. The proposed Project would result in only a negligible effect to the current runoff rates, offsite drainage patterns, or quantity of runoff. Furthermore, potential erosion/sedimentation and hazardous materials impacts will be avoided or reduced below a level of significance through conformance with applicable elements of the NPDES Municipal Stormwater General Construction Permit. As part of the permit requirements, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project.

The site topography is generally flat, with a slope of about four percent towards the north-northwest. Numerous small braided channels cross the site. Typical of arid regions, the area experiences short-duration, high-intensity rainfall storm events producing potentially high rates of runoff when the initial infiltration rates are exceeded. During these periods the small, incised washes onsite become conduits for water flow. Preservation of three larger washes on the site would continue drainage conditions, which have been formed by past storm events. Construction of gravel access roads, embedded pier foundations, and concrete pads for electrical equipment and storage would result in a minor (13 percent) increase in impervious surfaces at the site. Because the imperviousness of the site would not be greatly changed as a result of the construction, the impact of increased rainfall runoff due to construction would be negligible.

During operation, the panels shall drain freely to the ground any rainwater that hits them. Based on the volume of water falling from each panel, the height of the fall, and the soil conditions, it is not expected that erosion beyond an immediate micro level shall occur. Site soils are well-drained to excessively well-drained. Water from the PV panels infiltrate or gradually migrate into the existing drainage patterns. If, over time, minor erosion is noted at the drip points or foundations, small gravel pads can be added to help dissipate the energy of the falling water. If, over time, minor erosion is noted near the foundations, minor grading can restore support for the individual foundations and keep surface flows from undermining the foundations in future storm events.

d) **Less than Significant Impact.** According to the Project's Hydrologic Analysis (URS June 2012), the project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. [See the discussion above in Item (c)].

e) **Less than Significant Impact.** According to the Project's Hydrologic Analysis (URS December 2011), the proposed Project would result in a negligible increase in runoff compared to existing conditions and thus will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Three major washes onsite would be preserved and minor washes would be filled and their flows redirected to the larger washes via a perimeter swale. The Hydrologic Analysis indicates this conceptual drainage plan will not substantially increase the volume of stormwater flows originating from or altered by the project. The Hydrologic Analysis was developed in consultation with and will be reviewed by

the County Public Works Department. All necessary drainage improvements will be required by the County as conditions of project approval.

f) **Less than Significant Impact.** The proposed Project would not otherwise substantially degrade water quality because appropriate measures relating to water quality protection, including erosion control measures, are required.

g) **No Impact.** The project will not place unprotected 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, because the project does not propose housing and is not within identified flood hazard areas as reviewed by County Public Works.

h) **No Impact.** The project will not place within a 100-year flood hazard area structures which would impede or redirect flood flows, because the site is not located within a 100-year flood hazard area.

i) **No 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.

j) **No Impact.** The project will not be impacted by inundation by seiche, tsunami, or mudflow, because the project is not adjacent to any body of water that has the potential of seiche or tsunami nor is the project site in the path of any potential mudflow.

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
X.	**LAND USE AND PLANNING** - Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

SUBSTANTIATION:

a) **No Impact.** The project would not physically divide an established community because there are no established residential communities present in the project area. The proposed Project area is located in an unincorporated part of the County that has sparse residential development in the immediate area. North of the project site, land to the north of Rosewood Street is subdivided into five acre lots, but only a few of these have been developed with residences. To the west, the land is also subdivided with lot sizes ranging from 2.5 to 10 acres. Most of these lots are vacant, and about one dozen homes are located within one-half mile of the northern and western project boundaries. Immediately south of the project site are two large vacant lots. In general terms, land to the south and east is in larger lots with a lower density of development. About one dozen homes are located within one mile of the project to the south and east. Therefore, the proposed Project would not divide an established community.

b) **Less than Significant Impact.** The proposed Project will not 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. The current General Plan land use designation for the proposed Project area is Lucerne Valley/Rural Living five acre minimum (LV/RL-5) Assessor's Parcel Number (APN) -9 and Lucerne Valley/Agriculture (LV/AG) (APN -27), which allows development of electrical power generation facilities with a Conditional Use Permit (CUP). The proposed Project will be required to comply with all CUP conditions of approval.

c) **No Impact.** The proposed Project does not conflict with any applicable habitat conservation plans or natural community conservation plans, because there is no habitat conservation plan or natural community conservation plan applicable to the project site.

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
XI.	**MINERAL RESOURCES** - Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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.

b) **No Impact.** The project will 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, because there are no identified important mineral resources on the project site and the site is not within a Mineral Resource Zone Overlay.

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** - Would 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?	☐	☐	☒	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

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 the exception of a few scattered residences, the proposed Project is adjacent to undeveloped and vacant land. Construction of the proposed Project may potentially create some elevated short-term construction noise and vibration impacts to existing residents in the area; however these activities would be limited to day time hours and will comply with the noise and vibration standards of the San Bernardino Development Code. Construction noise and vibration is exempt from 7:00 A.M. to 7:00 P.M. Monday through Saturday. (County of San Bernardino, CA, County Development Code Chapter 83.01.080 and 83.01.090.) Some blasting of shallow bedrock may be needed. Noise from blasting of shallow berock will be limited in frequency and duration. The local noise ordinance does not specify a maximum dBA for construction noise sources during working times indicated above; therefore noise and vibration from any required targeted shallow trench blasting of bedrock would be considered less than significant.

Operation of the proposed unmanned solar facility would not generate audible levels of noise or perceptible levels of vibration in the surrounding area. There would be no permanent substantial change in noise or vibration levels. If the panels are mounted on trackers, on-site noises would be limited to the motors that rotate the photovoltaic panels and periodic maintenance activities (including periodic panel washing, driving motor repair, tracker repair, electrical connection repair, and panel replacement). Tracker noise typically is around 60 to 70 dBA at 50 feet, depending on the design and vendor for the equipment. Based on the preliminary project plan, the nearest existing residence would be about 800 feet from the nearest inverter stations. At this distance, the inverter noise would be reduced to about 45 dBA. According to the County's General Plan, 60 dBA is the acceptable noise level for single-family uses while 65 dBA is acceptable for commercial uses. Since this is a solar PV project, the inverters would not operate at nighttime. Vehicle trips generated by maintenance and security after construction would be nominal.

b) **Less than Significant Impact.** The project will not create exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, because the project will be conditioned to comply with the vibration standards of the County Development Code and no vibration exceeding these standards is anticipated to be generated by the proposed uses.

c) **Less than Significant Impact.** The project will not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing or allowed without the project, because the project will be conditioned to comply with the noise standards of the County Development Code and no noise exceeding these standards is anticipated to be generated by the project operations.

d) **Less than Significant Impact.** The project will not generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing or allowed without the project because construction equipment shall not operate during evening hours and construction noise and vibration is exempt from noise/vibration standards from 7:00 a.m. to 7:00 p.m. Monday-Saturday, and the project will be conditioned to comply with the noise standards of the County Development Code.

e) **No Impact.** The proposed Project area is not located an airport land use plan or within two miles of a public airport or public use airport. The nearest public use airport is located more than nine miles to the south in Big Bear City, California. The Apple Valley County Airport is approximately 21 miles northwest of the project site. The project is located within the County's Airport (AR-4) Overlay. AR-4 includes the low-altitude/high speed corridors designated for military aircraft use. Military training routes VR-1214, -1215, -1217 and -1218 occur in this area and pilots can fly as low as 100 feet above ground level (AGL) along VR-1214, -1215, -1217 and 200 feet along VR-1218. San Bernardino Development code 82.09.060 (b) states that "Proposed structures and the normal mature height of any vegetation shall not exceed the height limitations established in Federal Aviation Regulations (FAR) Part 77, unless Form 7460-1 (Notice of Proposed Construction or Alteration) has been filed with and approved by the FAA before the issuance of a Building Permit." As per FAR Part 77.9, construction or alteration requiring FAA notification includes:

- any construction or alteration exceeding 200 ft above ground level
- any construction or alteration:
  - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 ft
  - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft
  - within 5,000 ft of a public use heliport which exceeds a 25:1 surface
  - any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards
  - when requested by the FAA
  - any construction or alteration located on a public use airport or heliport regardless of height or location.

The proposed project would not involve construction or operational equipment that would be tall enough to affect military flights. However, as noted, the FAA may request such a filing. To provide the FAA with an opportunity to comment on the project, the applicant shall contact FAA air traffic specialists for Southern California. If requested, the applicant shall file form 7460-1 prior to receiving a Building Permit.

f) **No Impact.** The proposed Project area is not located within the vicinity of a private airstrip. The nearest private airstrip, Rabbit Ranch Airport, is approximately nine miles northwest of the project site.

	Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XIII.	**POPULATION AND HOUSING** - Would 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)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION:

a) **No Impact.** The project will not induce substantial population growth in an area either directly or indirectly. The proposed Project is an unmanned solar generating facility; no homes or extension of roads or other infrastructure are proposed or required. The proposed nine-month construction schedule will require only 80-100 workers at its peak. During operations the facility will be unmanned. Several part-time employees or contractors would visit the site periodically for maintenance and several times a year employees or a contractor would visit the site to wash the PV panels.

b) **No Impact.** The proposed Project site is vacant land. No existing housing would be affected.

c) **No Impact.** The proposed Project would not displace any people; the Project site is vacant.

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
XIV. PUBLIC SERVICES				
a) Would 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?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

SUBSTANTIATION:

a) **Less than Significant Impact.** The proposed Project will not 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, including fire and police protection, schools, parks or other public facilities. The project is located in Lucerne Valley County Service Area CSA-29, which provides or oversees some public services including: ambulance service, fire department, and parks and recreation.

Fire Protection - Less than Significant Impact. The proposed Project would not result in the need for additional fire protection services that would require construction of new facilities. The nearest fires station, East Lucerne Valley Fire Station (Station 7) and Lucerne Valley Fire Station (Station 8), are located approximately 3.1 miles north and 4.7 miles northwest of the project site, respectively (County of San Bernardino Fire Department 2012). Any development in previously undeveloped areas increases human presence and the potential for fire. The fire threat is considered moderate at the project site, while the southern foothills three miles south of the project site are considered very high. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulation would be implemented for the proposed Project

that would minimize the potential occurrence of fire due to project activities during construction and for the life of the project. During construction, some public services including fire protection may be required but these would be short-term and would not result in increase in the level of service offered or effect these agencies' response times. Because of the low probability and short-term nature of potential fire protection needs during construction, the proposed Project would not result in associated significant impacts to fire protection.

Police Protection – Less than Significant Impact. The proposed Project would not result in the need for additional police protection services that would require construction of new facilities. The proposed Project area is served by the San Bernardino County Sheriff's Department. The Lucerne Valley Substation is located approximately 5 miles to the northwest of the project site. The substation has one sergeant, one detective and six deputies who are responsible for 900-plus miles of farming, ranching, commercial businesses and residential areas located within a wide range of mountainous and remote desert terrain. The overall population is approximately 5,200 residents. The Lucerne Valley Substation is supported by the Victor Valley Station located 33 miles northwest of the project site. Due to the large expanse that the substation covers, deputies are regularly assisted by California Highway Patrol, Big Bear Lake, Hesperia, Victorville and the Town of Apple Valley police, and BLM Rangers. The proposed Project would not impact service ratios, response times, or other performance objectives related to police protection. During construction, some public services including police protection may be required but these would be short-term and would not result in a need for new facilities or an increase in the level of service offered or effect these agencies' response times. The project will include a six foot high chain link security fence topped with one foot of barbed wire installed at the property setback and lighting will be designed to provide the minimum illumination needed to achieve the project's security objectives.

Schools – No Impact. Long-term operations of the proposed solar facility would place no demand of school services because it does not include the construction of residences. The project would not introduce temporary or permanent population into the area; therefore no impacts to schools would occur.

Parks – No Impact. Long-term operation of the proposed unmanned solar facility would place no demand on parks because it does not include the construction of residences or the extension of roads or other infrastructure that could induce population growth

Other Public Facilities – No Impact. The proposed Project would not result in the introduction and/or an increase in new residential homes or otherwise induce population growth that could require new public facilities.

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
XV.	**RECREATION**				
a)	Would the project 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SUBSTANTIATION:

a) **No Impact.** The proposed Project will 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 because the project will be unmanned and does not include construction of any new residential units or infrastructure extensions that would induce population growth.

b) **No Impact.** The proposed solar facility will be unmanned and does not include recreational facilities or require the construction or expansion of recreational facilities.

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 -** Would 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.	☐	☐	☒	☐
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.	☐	☐	☒	☐
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?	☐	☐	☐	☒
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e)	Result in inadequate emergency access?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SUBSTANTIATION:

a,b) **Less than Significant Impact.** The proposed Project is an unmanned facility that would be visited periodically by part-time employees or contractors for maintenance, panel washing and security. The low volume of operational traffic would not create significant traffic impacts to the surrounding roadway circulation system per the thresholds of significance specified by the San Bernardino Associated Government's Congestion Management Plan (CMP). The CMP states "If a project is forecast to generate 100 to 250 peak hour trips and expects to add at least 50 peak hour trips to a State highway facility, the jurisdiction should consult with Caltrans to determine the need for a Traffic Impact Assessment [TIA] report."(Pp. 4.5, 2007).

Approximately 80 to 100 construction workers are expected to travel to the site during some months. Typically on-site work hours are 7 AM to 3:30 PM. Under this scenario, most workers (e.g., 95%) would arrive before the 7-9 AM peak hours and leave before the 4-6 PM peak hours. If 10-hour days are scheduled, workers would still arrive before 7 AM but all would leave at approximately 5:30 PM. This could temporarily generate from 160 to 200 trips in the PM peak hour during construction. Traffic conditions on roadway segments and intersections of SR-18 between SR-247 to the north and Marble Canyon Road to the south are anticipated to be a level of service B until 2030, per the County's Lucerne Valley Community Plan (Pp. 31, 2007). A LOS of C or better is required by the County General Plan. The unmanned solar facility would not result in operational traffic that would reduce LOS.

In addition, the proposed Project is not expected to exceed any applicable level of service, either individually or cumulatively, based on the short-term construction timetable. For estimated deliveries by during construction (see table below).

Construction Delivery Activity
Deliveries Per Month

Vehicle Type	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8
Material delivery Trucks[1]	40	192	288	192	144	96	96	96
Water Truck (average)[1]	814	814	814	814	814	814	814	814
Total Per Month[2]	851	1,006	1,102	1,006	958	910	910	910

[1] Heavy Duty Diesel (80,000 lbs gross vehicle weight).
[2] Assumed 4,000 gallon water trucks. Water used for dust control.

c) **No Impact.** The proposed Project will not affect air traffic patterns. Operation of the proposed Project is not dependent upon air transport related material, labor force, or service and would not result in an increase to air traffic levels. Therefore, no change in air traffic patterns, volume and safety are anticipated.

d) **No Impact.** The project will not introduce design features, such as sharp curves or dangerous intersections within the vicinity of the project site. The project site is adjacent to an established road that is accessed at points with good site distances. There are no incompatible uses proposed by the project that will impact surrounding land uses.

e) **No Impact.** The project will not result in inadequate emergency access. The unmanned facility can be accessed along Camp Rock Road via SR-18 to the south and SR-247 to the north. Both Camp Rock Road and SR 18 are designated as Major Highways based on the General Plan Transportation Element Victor Valley Region Map.

f) **No Impact.** No alternative transportation plans or programs have been designated for the proposed Project area. The Lucerne Valley Community Plan includes a goal and policies

for inclusion of alternative transportation with road widening and other improvements (San Bernardino County 2007). The proposed Project will not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) and/or decrease the performance of facilities as no offsite improvements are proposed.

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.	**UTILITIES AND SERVICE SYSTEMS -** Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded, entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f)	Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

SUBSTANTIATION:

a) **No Impact.** The proposed Project does not involve construction of facilities that would generate wastewater; therefore it would not exceed applicable wastewater treatment requirements. The project will use uncontaminated water to clean the solar panels. The proposed Project's water discharge does not require treatment or permitting per the Colorado River Regional Water Quality Control Board.

b) **No Impact.** The proposed Project will not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Approximately 40 acre-feet per year of water would be used during construction for dust suppression and ancillary construction activities. Operational panel washing would require approximately 2 acre-feet

of water per year. Water demands for the proposed Project will be purchased from a local purveyor listed in the Project Description.

c) **Less than Significant Impact.** The proposed Project would not require the construction or expansion of storm water drainage facilities. Most (87 percent) of the project site would remain pervious and existing soils are predominantly well drained. Minor washes onsite would be filled and their stormwater flows re-directed to other existing washes onsite via perimeter swales. The project's Hydrologic Analysis (URS June 2012) indicates this conceptual drainage plan would maintain adequate runoff through the Project site without causing backup for flows upstream or concentrated flows downstream. The proposed Project would result in only a negligible effect to the existing runoff rates, offsite drainage patterns, or quantity of runoff. Furthermore, potential erosion/sedimentation and hazardous materials impacts will be avoided or reduced below a level of significance through conformance with applicable elements of the NPDES Municipal Stormwater General Construction Permit. As part of the permit requirements, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project.

d) **Less than Significant Impact.** Construction and operational water demands of the proposed Project will be trucked from an offsite water purveyor listed in the Project Description. A total of approximately 40 acre-feet per year of water could be required during construction for dust suppression. The project's operation water demand is estimated at 2 acre-feet per year for panel washing. The unmanned facility requires no water or sewer hookups. Water use for construction and operation of the proposed Project is negligible relative to existing supply (18th Annual Report of the Mojave Basin Area Watermaster, May 1, 2012).

e) **No Impact.** The proposed unmanned solar facility would not require or result in the construction of new wastewater treatment facilities or the expansion of existing wastewater treatment facilities. A local portable toilet contractor would meet the wastewater needs of the approximately 80-100 workers during construction.

f) **No Impact.** Less than significant impacts related to landfill capacity are anticipated from the proposed Project. The proposed Project is an unmanned solar electricity generating facility generating no process waste and only small amounts of solid waste requiring disposal. Solid waste generated during short-term construction activities will include minor quantities of construction debris, Solid wastes associated with the proposed Project will be disposed as appropriate in local landfill or at a recycling facility.

The proposed Project area is served by the two regional Class III landfills. The Landers Sanitary Landfill (Class III) is located approximately 31 miles southeast of the project has a remaining capacity of 765,098 Cubic Yards (CYs). The Victorville Sanitary Landfill is located approximately 25 miles northwest has a remaining capacity of 81,510,000 CYs. These landfills have sufficient permitted capacity to accommodate the project's solid waste disposal needs.

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

g) **No Impact.** The proposed Project would comply with all federal, state, and local statutes and regulation related to solid waste. Accordingly, no significant impacts related to landfill capacity are anticipated from the proposed Project.

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
XVIII.	**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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c)	Does the project have environmental effects, which shall cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

SUBSTANTIATION:

a) **Less than Significant Impact with Mitigation Incorporated**. Implementation of the proposed Project, with mitigation, will not degrade the overall quality of the region's environment, or 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.

Refer to *Section III, Air Quality*, where short-term (construction) air quality impacts are discussed. Implementation of mitigation measures AQ-1, AQ-2 and AQ-3 would further reduce air quality impacts to a less than significant level.

Refer to *Section IV, Biological Resources*. The project has the potential to affect, either directly or through habitat modifications, species and/or sensitive natural communities 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. The proposed Project has the potential to have a substantial adverse effect on 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. Implementation of mitigation measures

BIO-1 through BIO-13 will reduce potential impacts to a level considered less than significant.

b) **Less than Significant Impact.** The project does not have impacts that are individually limited but cumulatively considerable. The sites of projects in the area to which this project would add cumulative impacts are capable of absorbing such uses without generating any cumulatively significant impacts.

c) **Less than Significant Impact.** The incorporation of design features, County policies, standards, and guidelines would ensure that there would be no substantial adverse effects on human beings, either directly or indirectly. Impacts of the proposed Project would be less than significant.

XIX. MITIGATION MEASURES

(The following mitigation measures, which are also included within the Conditions of Approval and coupled with the required Condition Compliance Release Forms (CCRF) shall serve as the Mitigation Monitoring and Reporting Program for this project.)

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

a) Equipment/vehicles shall not be left idling for period in excess of five minutes

b) Engines shall be maintained in good working order to reduce emissions

c) Onsite electrical power connections shall be made available where feasible

d) Ultra low-sulfur diesel fuel shall be utilized (State law)

e) Electric and gasoline powered equipment shall substituted for diesel powered equipment where feasible

f) Signs shall be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.

g) In addition, all on-road diesel trucks shall not idle more than five minutes per truck trip or per day on the project site (State law).

h) All transportation refrigeration units (TRU's) shall be provided electric connections. [Mitigation Measure AQ-1 - General Requirements/Planning]

AQ-2 **AQ/Dust Control Plan.** The developer shall 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.

AQ-3 **AQ – Installation.** The developer shall submit for review and obtain approval from County Planning 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. [Mitigation Measure **AQ-3** – Final Inspection/Planning]

BIO-1 **Avoidance and Long-Term Preservation of On-Site Lands.** Within eighteen months after the start of construction, the Applicant shall place a permanent Conservation Easement on a minimum of 15 acres within the Agincourt site. Vegetation mapping efforts within the Agincourt site have identified the on-site mitigation lands as creosote bush/white bursage scrub, a common Mojave Desert plant community. This vegetation provides suitable habitat

for several species of desert plants and wildlife, including Joshua trees and native cacti, Mojave desert tortoise, burrowing owl, desert kit fox, and native birds, and the on-site mitigation lands also encompass the two largest and highest-quality desert washes within the site. A permanent Conservation Easement on the on-site mitigation land shall be offered to the CDFG or to a non-governmental conservation organization, and shall be recorded to the satisfaction of the County of San Bernardino and the CDFG. The Applicant shall establish an endowment satisfactory to CDFG for the management and preservation of the on-site mitigation lands. The proposed site management practices, and endowment shall be approved by the County of San Bernardino, after consultation with CDFG.

BIO-2 **Worker Environmental Awareness Program.** Prior to any construction activities on the project site, the Applicant will implement a Worker Environmental Awareness Program (WEAP) to educate on-site workers about sensitive environmental issues associated with the Project. The program will be administered to all on-site personnel, including the Applicant's personnel, contractors, and all subcontractors, on the first day of work prior to the employee's commencing work on the site. The WEAP will place special emphasis on the protected species that have potential to occur within the Agincourt site, including the Mojave desert tortoise, burrowing owl, nesting birds, and desert kit fox, among other plant and wildlife species.

The program will include the following elements:

- A presentation, developed by or in consultation with a qualified biologist, discussing the sensitive biological resources with potential to occur on-site, and explaining the reasons for protecting these resources and penalties for non-compliance;
- Brochures or booklets, containing written descriptions and photographs of protected species as well as a list of site rules pertaining to biological resources, to be provided to all WEAP participants;
- Contact information for the project biological monitor, and instructions to contact the monitor with any questions regarding the WEAP presentation or booklets;
- An acknowledgement form, to be signed by each worker indicating that they received WEAP training and will abide by the site rules protecting biological resources; and,
- Conspicuous stickers, identifying the project and signifying WEAP completion, to be distributed immediately following WEAP training and required on personnel hard hats.

The project Applicant will be responsible for ensuring that all on-site personnel, throughout the duration of project construction, receive WEAP training. A training log, to be signed by all on-site personnel immediately following WEAP training, will be maintained on the project site during construction to document compliance with this measure.

BIO-3 **Biological Monitor.** Prior to issuance of a grading permit, a qualified biologist shall be retained by the Applicant as the biological monitor subject to the approval of the County of San Bernardino. The biological monitor shall be present at all times during vegetation clearing or ground disturbance, and shall ensure that impacts to biological resources are avoided or minimized to the fullest extent possible. When construction activities have progressed to the point where biological resources are no longer present, as determined by the biological monitor, biological monitoring in the area may be reduced or discontinued with approval from the County of San Bernardino. The biological monitor shall have the authority to stop specific grading or construction activities if violations of mitigation measures or any local, state, or federal laws are suspected.

BIO-4 **Parish's Daisy Surveys and Compensation.** Prior to vegetation clearing or ground disturbance within the Agincourt site, the Applicant will retain a qualified biologist to conduct a survey for Parish's daisy (*Erigeron parishii*) within the disturbance footprint. The survey shall be timed to coincide with the blooming period of this species, and shall occur between May 1 and August 31 or as determined by a qualified biologist based on observations in the region.

If Parish's daisy is observed within the disturbance footprint, the aerial extent of the occurrence will be mapped and quantified, by outlining a convex polygon around the occurrences and considering the density of Parish's daisy individuals within the polygon. An equivalent acreage will be seeded with this species within the on-site preservation areas described in Mitigation Measure BIO-1 during the fall season.

During the blooming period following seeding, the Applicant shall retain a qualified biologist to inspect the seeded area and verify that the seeds have germinated and that Parish's daisy plants are alive. If no Parish's daisy plants are observed, or if the biologist determines the plants to be in abnormally low density or poor health, a supplemental seeding application shall be performed during the next appropriate season, as determined by the biologist**.**

BIO-5 **Cactus Salvage Plan.** Prior to issuance of a grading permit, the Applicant shall submit a Cactus Salvage Plan to the County of San Bernardino and the CDFG for approval. The Cactus Salvage Plan shall contain the following elements:

- A spatial inventory of all native cacti within the project site, including species and locations;
- A quantitative assessment of the numbers of each cactus species to be removed by the project; and,
- Proposed measures to retain as many cacti as is practical on the project site, and a spatial and quantitative description indicating the species and locations of cacti to be preserved.

BIO-6 **Joshua Tree Translocation Plan.** Prior to issuance of a grading permit for the project, the Applicant shall submit a Joshua Tree Translocation Plan to the County of San Bernardino for review and approval. The plan shall ensure compliance with the San Bernardino County Development Code, and shall specify methods by which Joshua trees proposed for removal shall be transplanted or stockpiled for future transplanting wherever possible. The plan shall specify the locations of all Joshua trees within the project site, and shall identify any trees that would require removal or transplantation. All trees on the on-site areas to be set aside shall be preserved. On-site preservation will be achieved via dedication of a Conservation Easement to the CDFG or a qualified third party, as required by Mitigation Measure BIO-1.

BIO-7 **Mojave Desert Tortoise Exclusion Fencing.** During the months of April, May, September, or October prior to initiation of construction activities, the Applicant will retain a qualified biologist to conduct Mojave desert tortoise surveys in accordance with the most recent USFWS survey protocol for this species. If Mojave desert tortoises or their recent sign are detected (the partial tortoise skeleton detected during protocol surveys in 2012 was many years old, and does not indicate current Mojave desert tortoise presence on the site), the Applicant shall not initiate construction, and shall instead contact the USFWS and CDFG to develop an avoidance strategy and/or seek authorization for incidental take of Mojave desert tortoise.

If survey results are negative, the Applicant shall erect a tortoise exclusion fence surrounding all portions of the Agincourt site that are proposed for solar development or other ground disturbance. The exclusion fence shall be installed in accordance with the specifications set forth in Chapter 8 of the USFWS' *Desert Tortoise Field Manual* (USFWS 2009), and installation of the fence shall be overseen by a biologist familiar with the installation of tortoise exclusion fencing. Following installation of the tortoise exclusion fence, the Applicant shall retain a qualified biologist to conduct a second, full-coverage pedestrian survey of all areas encompassed by the exclusion fence. If Mojave desert tortoises or their recent sign are detected, the Applicant shall immediately remove portions of the exclusion fence to prevent entrapment of tortoises, and shall contact the USFWS and CDFG to develop an avoidance strategy and/or seek authorization for incidental take of Mojave desert tortoise. If no tortoises or their sign are detected during the second survey, construction activities may commence.

During site construction, the tortoise exclusion fences will be inspected on a monthly basis for any signs of damage or wear that could potentially compromise the integrity of the exclusion perimeter. If damage or excessive wear is observed, the exclusion fence will be repaired immediately. Results of the monthly fence inspections will be maintained on-site during construction to document compliance with this provision.

BIO-8 **Pre-Construction Mojave Desert Tortoise Surveys and Avoidance.** Within 14 days prior to construction-related ground clearing and/or grading, the Applicant shall retain a qualified

biologist to conduct surveys for signs of occupancy by the Mojave desert tortoise. Surveys shall cover the entire area proposed for disturbance, shall be conducted by walking parallel transects spaced no more than 10 meters apart, and shall focus on detecting any live tortoises or their sign, including carcasses, burrows, palates, tracks, and scat. Should any sign indicating the presence of Mojave desert tortoise be detected, the Applicant shall not proceed with ground clearing and/or grading activities in the area of the find, and shall instead contact the USFWS and CDFG to develop an avoidance strategy and/or seek authorization for incidental take of Mojave desert tortoise.

The results of the pre-construction surveys, including graphics showing the locations of any tortoise sign detected, and documentation of any avoidance measures taken, shall be submitted to the USFWS, CDFG, and the County of San Bernardino within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable federal and state laws pertaining to the protection of Mojave desert tortoise.

BIO-9 **Pre-Construction Burrowing Owl Surveys and Passive Relocation.** Within 14 days prior to ground disturbance, the Applicant shall retain a qualified biologist to conduct burrowing owl surveys within the area to be disturbed. The survey shall be performed by walking parallel transects spaced no more than 20 meters apart, and shall 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, shall be submitted to the County of San Bernardino and CDFG within 14 days following completion of the surveys. If active burrows are detected, the following take avoidance measures shall 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 shall be left undisturbed, and no construction activity shall take place within 300 feet of the burrow where feasible (see below).
- If disturbance of owls and owl burrows on-site is infeasible, owls shall 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, shall be installed in the entrance of all active burrows. The devices shall 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 shall then be excavated by hand and refilled to prevent reoccupation. Exclusion shall 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), shall not be disturbed. Construction activities shall not be conducted within 300 feet of an active on-site burrow at this season.

BIO-10 **Burrowing Owl Management Plan.** Prior to issuance of a grading permit, a habitat management plan for the burrowing owl shall be developed. The plan shall include provisions for protecting foraging habitat and replacing any active burrows from which owls may be passively evicted as allowed by Mitigation Measure BIO-9, and shall also include management or enhancement practices intended to maintain burrowing owl habitat suitability within the on-site mitigation lands preserved through Mitigation Measure BIO-1. At a minimum, the plan shall include the following elements:

- If occupied burrows are to be removed, the plan shall 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-9 shall be replaced with suitable natural or artificial burrows within the on-site preservation areas, at a target ratio of 1:1.
- Provisions for vegetation management in the on-site mitigation lands (see Mitigation Measure BIO-1), specifying the maximum allowable vegetative cover adjacent to established artificial burrows and the methodology to be used in maintaining the appropriate cover.
- Measures prohibiting the use of rodenticides.
- The plan shall ensure that adequate suitable burrowing owl foraging habitat is provided in proximity to natural or artificial burrows within the on-site mitigation lands. Foraging habitat shall not be located in areas shaded by the proposed solar arrays, and shall not be subject to vegetation mowing or other fuel management practices. Foraging areas shall be located adjacent to suitable natural or artificial burrow locations.

The Burrowing Owl Management Plan shall be submitted to the County of San Bernardino and CDFG for review and approval prior to issuance of a grading permit for the Project.

BIO-11 **Pre-Construction Nesting Bird Surveys and Avoidance**. 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 shall 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 shall be conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are delayed, then additional pre-

disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities.

If active nests are found, clearing and construction within 100 feet of the nest (or a lesser distance if approved by the USFWS) shall be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist. Avoidance buffers shall be established in the field with highly visible construction fencing or flagging, and construction personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall 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, shall be submitted to the County of San Bernardino and CDFG 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.

BIO-12 **Pre-Construction Desert Kit Fox Surveys and Passive Relocation.** To avoid unauthorized take of the desert kit fox, the project Applicant shall retain a qualified biologist to conduct preconstruction surveys for this species within 14 days prior to ground disturbance. The survey shall be conducted by walking parallel transects spaced no more than 20 meters apart, and shall be focused on detecting any desert kit fox individuals or dens within the disturbance footprint. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active based on field observations. If necessary, motion-sensitive cameras or a tracking medium shall be used to determine whether a den is active.

Inactive dens in areas that would be impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by desert kit fox.

Active and potentially active dens in areas that would be impacted by construction activities shall be monitored by a qualified biologist for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand to prevent reuse. If tracks are observed, the den shall be classified as active. Outside the desert kit fox pupping season (January 15 through July 31, unless determined otherwise by a qualified biologist based on observations in the region), the den may be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the kit fox from continuing to use the den. After verification that the den is unoccupied, it shall then be excavated and backfilled by hand to prevent reuse, while ensuring that no kit fox are trapped in the den. No

excavation of active desert kit fox dens shall be permitted during the pupping season.

The Applicant shall submit a report to the County of San Bernardino and CDFG within 30 days of completion of preconstruction desert kit fox surveys describing the survey methods, results, and details of any dens backfilled or foxes observed.

BIO-13 **Streambed Alteration Agreement**. Prior to undertaking any activity that would divert, fill, obstruct, or substantially alter any of the on-site streambeds described in the Biological Resources Assessment Report for the project (URS June 2012), the project Applicant will enter into a Streambed Alteration Agreement with the CDFG authorizing the proposed activity as required by Section 1602 of the California Fish and Game Code. The project Applicant will ensure that all project personnel comply with all stated terms and conditions of the Agreement, including any seasonal or weather-related restrictions on work activities within the streambeds, construction site housekeeping practices, or other limitations the CDFG may impose.

Project-related impacts to CDFG-jurisdictional desert washes would be mitigated at a minimum ratio of 1:1, including through preservation within the on-site preservation areas identified in Mitigation Measure BIO-1. The preserved area encompasses the two largest and best-developed washes on the Agincourt site, ensuring that the quality of drainages preserved exceeds that of the drainages to be impacted. Because the acreage of jurisdictional washes to be permanently preserved and managed exceeds the acreage that would be affected by the project, and because the washes to be preserved are of greater biological value due to their larger size and habitat complexity, it is likely that additional compensatory mitigation will not be required by the Streambed Alteration Agreement.

GENERAL REFERENCES

Alquist-Priolo Special Studies Zone Act Map Series (PRC 27500)

California Environmental Quality Act (CEQA) Guidelines, Appendix G.

California Fish and Game Code, Migratory Bird Treaty Act and Section 3503.

California Standard Specifications, July 1992

California Natural Diversity Database, accessed at www.dfg.ca.gov/biogeodata/cnddb/.

California Department of Resources Recycling and Recovery (CalRecycle) Accessed at http://www.calrecycle.ca.gov/SWFacilities/Landfills/ on August 17, 2012.

California Department of Conservation. County of San Bernardino Important Farmland Map. 2010.

California Geological Survey. Alquist-Priolo Earthquake Fault Zones Maps. Assessed at http://www.consrv.ca.gov/cgs/rghm/ap/Pages/index.aspx on August 16, 2012.

Water Quality Control Plan – Colorado River Basin Region 7. Colorado River Regional Water Quality Control Board (CRRWQB) approved by the State Water Resources Control Board on February 17, 1994.

Federal Emergency Management Agency (FEMA). *Flood Insurance Rate Map and Flood Boundary*

Mojave Desert Air Quality Management District California Environmental Quality Act (CEQA) and Federal Conformity Guidelines. 2009

Mojave Desert Air Quality Management District Antelope Valley Air Pollution Control District Emissions Inventory Guidance Mineral Handling and Processing Industries. 2000. www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=401

San Bernardino Associated Government's *Congestion Management Plan - 2007 Update.* Adopted December, 2007.

San Bernardino County. *Greenhouse Gas Emissions Reduction Plan*, Adopted December 6, 2011.

San Bernardino County. *Development Code*, 2007

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