SAN BERNARDINO COUNTY
INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

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

PROJECT LABEL:

APN: ***0453-041-05, -04, -20; 0453-051-07; 0453-063-01, -02; 0452-081-78, -79; 0452-081-30***

Applicant: Lendlease Energy Development, LLC
909 Lake Carolyn Parkway
Suite 260
Irving, Texas 75039

Community: Lucerne Valley

Location: Either side of State Route 247; South of Waalew Road/Desert Lane; east of White Horse Mountain; and west of Huff Road, approximately 5.5 miles north of Lucerne Valley

Project No: P201700480/CUP

Staff: Chris Warrick

Rep: David Hochart
Dudek
605 Third Street
Encinitas, CA 92024

Proposal: Four Conditional Use Permits (CUP) to construct and operate a 100 megawatt (MW) Photovoltaic Solar Energy Facility with a 100 MW Energy Storage System located on five non-contiguous sites totaling 664 acres, and a 0.2-mile 220-kilovolt overhead generation tie (gen-tie) line.

USGS Quad: White Horse Mountain
Lat/Long: 34°55'38.67"N/116°95'26.96"W

T, R, Section: T05N R1W Sec. 2T05N
R1W Sec. 11
T05N R1E Sec. 7
T05N R1W Sec. 13

Community Plan: Lucerne Valley Community Plan
LUZD: LV/AG-40, LV/AG,
LV/RL, LV/FW

Overlays: Biotic Resources
Hazard Overlay

PROJECT CONTACT INFORMATION:

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

Contact person: Chris Warrick
Phone No: 909-387-4112 ***Fax No:*** 909-387-3223

Proposed Solar Project Description

Lendlease Energy Development LLC (Applicant) proposes the Calcite Solar Project which would result in construction and operation of a 100 megawatt (MW) alternating current (AC) photovoltaic (PV) solar energy facility on approximately 664 acres. The Project would produce approximately 266,000 megawatt-hours (MWh) of renewable energy annually. The Project would include a 100 MWAC maximum capacity and energy storage (battery) system and a 220 kilovolt overhead generation tie line (gen-tie line) that would extend approximately 0.2 mile north to Southern California Edison's (SCE)

proposed Calcite Substation. An on-site substation, inverters, fencing, roads, and supervisory control and data acquisition (SCADA) system would also be constructed as part of the proposed improvements.

The Project would be constructed on 5 non-contiguous sites (or "Units"); refer to Figure 2, Vicinity Map. The PV solar energy facility is an allowed use under the existing County General Plan land use and zoning that apply to the affected sites, subject to County approval of four individual Conditional Use Permits (CUPs) (Development Code Section 85.06). Units 1 to 3 would be processed under 3 individual CUPs; Units 4 and 5 would be processed collectively under one CUP.

Summary

The initial evaluation herein addresses the potential impacts of the Project for environmental evaluation purposes under the California Environmental Quality Act (CEQA) (CEQA Guidelines Section 15378). The Calcite Solar Project site is located in close proximity to an existing transmission corridor and to SCE's proposed Calcite Substation. The Calcite Substation has not been approved at the time of preparation of this Initial Study. However, SCE will be responsible for obtaining any approvals and for completing the associated environmental review for the proposed Calcite Substation pursuant to CEQA. The Calcite Substation is not subject to any discretionary County approvals and is not a part of the CUP applications for the Calcite Solar Project (and therefore, will not be analyzed as part of the Project). Approvals by the California Public Utilities Commission (CPUC) are necessary for the Calcite Substation, which would be obtained by SCE.

Proposed Solar and Energy Storage Project Location

The Project area is situated roughly in the northern portion of Section 2, Township 5 North, Range 1 West; the northern portion of Section 11, Township 5 North, Range 1 West; the northern portion of Section 7, Township 5 North, Range 1 East; and the northern portion of Section 13, Township 5 North, Range 1 West, S.B.B. & M. of the White Horse Mountain, California U.S. Geological Survey 7.5 topographic quadrangle at approximately 34°55'38.67"N/116°95'26.96"W (see Figure 1, Regional Map). The affected County Assessor Parcel Numbers (APNs) include 0453-041-05, -04 and -20; 0453-051-07; 0453-063-01 and -02; 0452-081-78, -79 and 0452-081-30.

The Project Units are located along either side of State Route 247 (SR-247); south of Waalew Road/Desert Lane; north of Watking Road; east of White Horse Mountain; and west of Huff Road, approximately 6 miles north of Lucerne Valley, in unincorporated San Bernardino County (County).

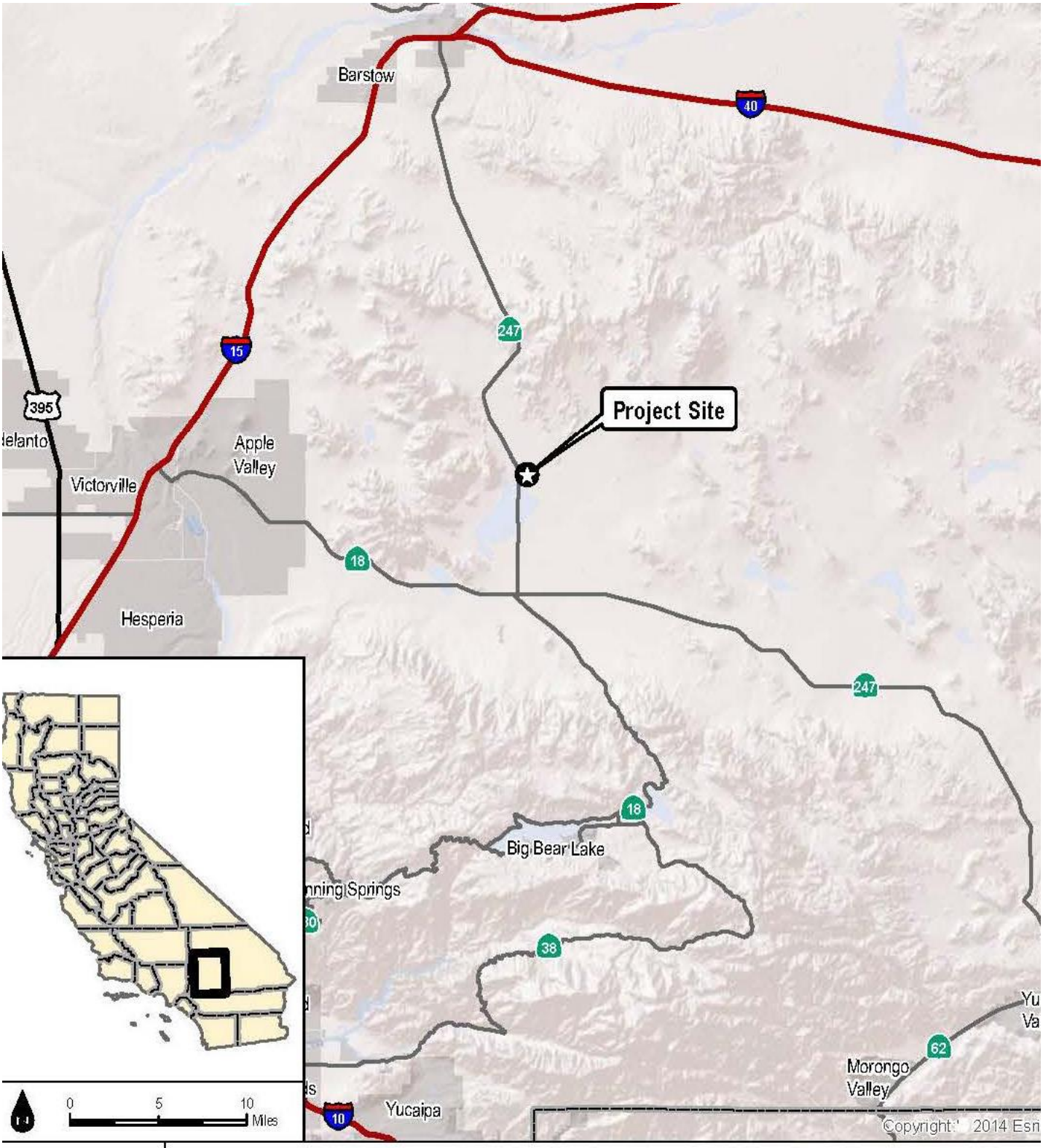

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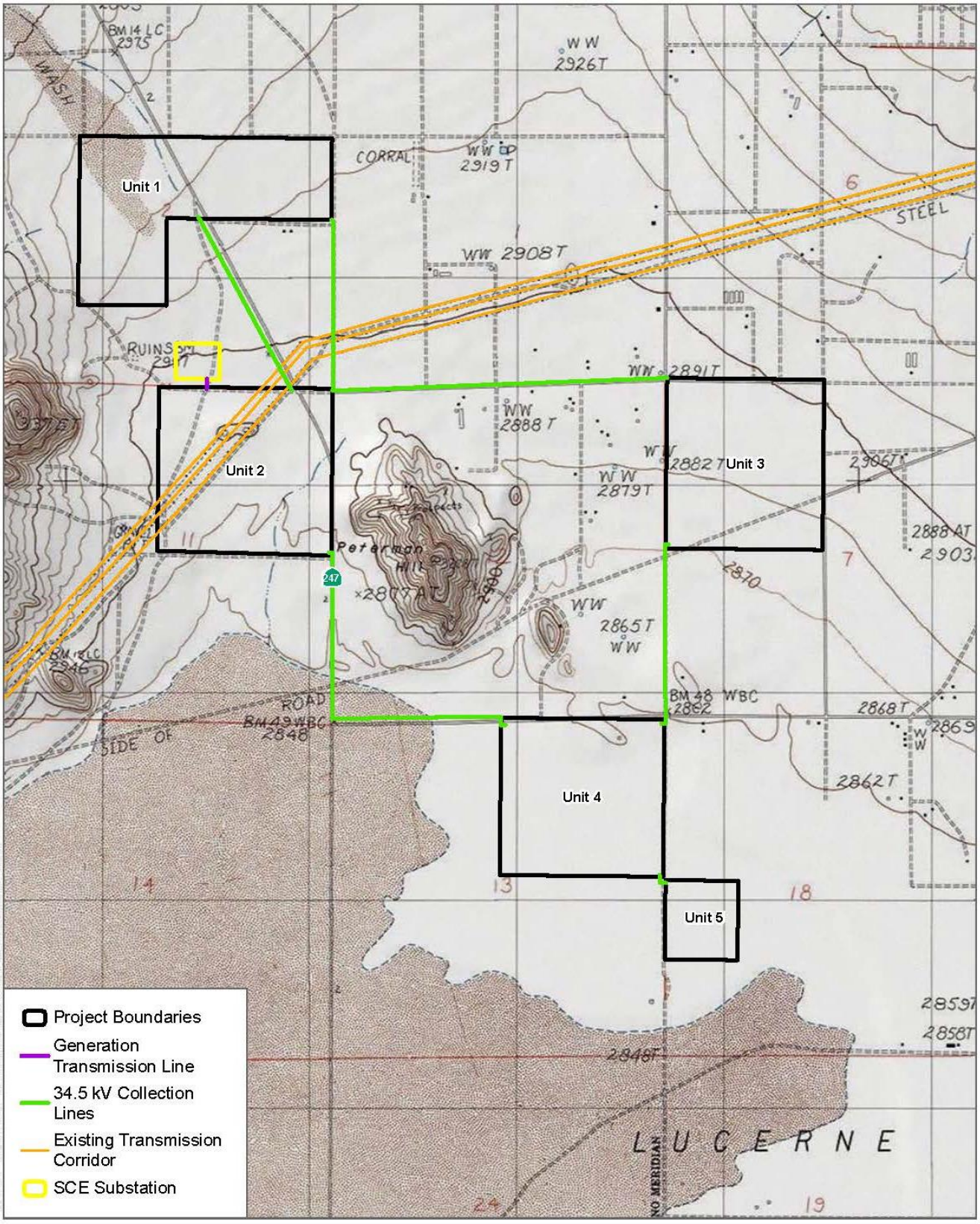
FIGURE 1
Regional Map

Calcite Solar



SOURCE: SOURCE: USGS 7.5-Minute Series White Horse Mountain Quadrangle

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FIGURE 2
Vicinity Map
Calcite Solar

Proposed Solar and Energy Storage Project Setting

The location of the Project has been selected because of its proximity to the existing transmission corridor and the proposed SCE Calcite Substation. Additionally, the Units have access to existing roadways and are located in an area with high solar irradiance (see Figure 2, Vicinity Map). Topography of the Project Units is essentially flat with an approximate 2% gradient overall. Elevations range from approximately 2,875 feet to 2,975 feet above mean sea level (amsl). Locally, the Project would be accessed via SR-247, Northside Road, Meridian Road, and an internally constructed road system. The Project area would include approximately 0.2-mile gen-tie overhead transmission line from the Project's on-site substation to the proposed SCE Calcite Substation.

The geology of the Project property and surrounding vicinity is characterized as a veneer of quaternary alluvium overlying Mesozoic-age granite and quartz monzonite intruded into Paleozoic metasedimentary rocks. The Project is located within Lucerne Valley groundwater basin, encompassed by the Este subarea of the Mojave Basin judgment area. The most prolific aquifer material of the Lucerne Valley groundwater basin is the quaternary alluvium, comprised of unconsolidated to semi-consolidated boulders, gravel, sand, silt, and clay.

Water consumption during construction is estimated to be approximately 125 acre-feet (AF) for dust suppression and earthwork over an approximately 11-month period. Panel rinsing is expected to be conducted up to four times annually as performance testing and weather and site conditions dictate. Construction and operational water for panel rinsing would be provided by on-site groundwater through an improved existing well or a newly permitted and drilled well (if necessary). An on-site diesel generator may be used to power pumps for well water use during construction. In addition, during construction water would be pumped directly into 2,000-gallon to 4,000-gallon tanked water trucks, or water may be stored in up to three overhead, temporary, approximately 12,000-gallon water storage tower/tanks (up to 16 feet tall), to assist in the availability of water for trucks and expedient filling thereof. The water storage tower/tanks would be covered.

Existing land uses surrounding the Project site consist of vacant lands, rural residential, agricultural operations and transmission facilities. Existing land uses and Land Use Zoning Districts on and adjacent to the proposed solar and energy storage Project site are listed in Table 1 (County of San Bernardino 2016b).

Table 1
Proposed Solar and Energy Storage Project - Existing Land Use and Land Use Zoning Districts

Location	Existing Land Use	Land Use Zoning District
Proposed Solar Site	Vacant	LV/AG, LV/AG-40, LV/FW
Gen-Tie Line	Vacant, Agriculture, Rural Residential	LV/AG, LV/AG-40, LV/RL
North	Vacant, Agriculture, Rural Residential	LV/AG-20/-40, LV/RL
South	Vacant, Rural Residential	LV/RL
East	Agriculture, Rural Residential	LV/AG, LV/RL
West	Vacant, Rural Residential	LV/RL

Source: County of San Bernardino, 2016b.
Notes: LV/AG = Lucerne Valley Agriculture; LV/AG-40 = Lucerne Valley Agriculture 40-acre minimum; LV/RL = Lucerne Valley Rural Living; LV/AG-20 = Lucerne Valley Agriculture 20-acre minimum.

Project Characteristics

The Project consists of the following components:

- PV Solar System
- On-site Substation
- Collector Lines (between parcels on private parcels or within County right-of-way)
- Energy Storage System
- Generation Tie Line
- Ancillary Facilities

Solar System

The Project would be an approximately 100 MWAC solar power generating installation. The five Units, totaling approximately 664 acres, would support all structures including solar panels, tracking/support structures, inverters and SCADA. All Units would be enclosed by perimeter security fencing approximately 9 feet high (see Figure 3, Site Plan).

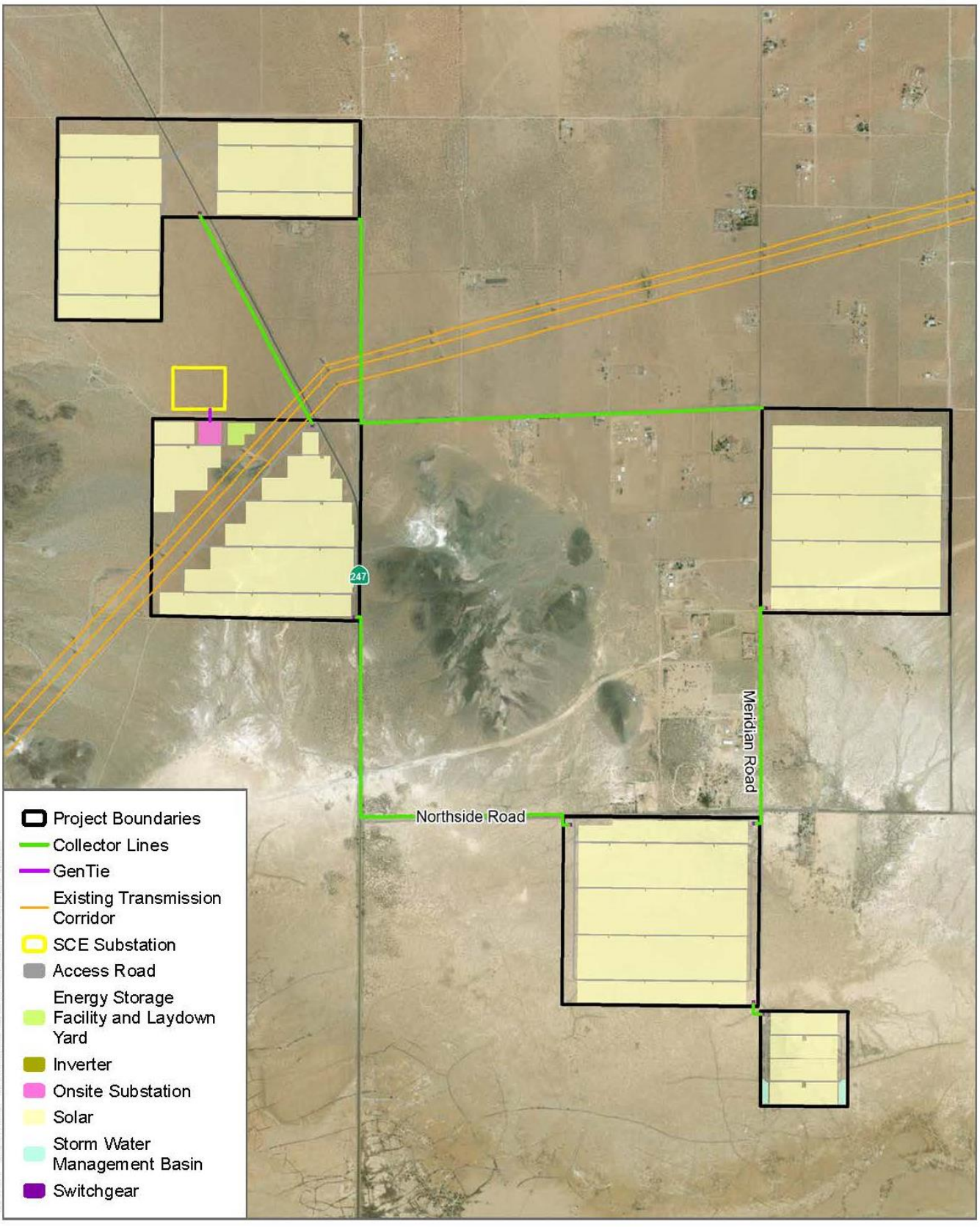
Solar energy would be captured by an array of PV panels mounted to a single-axis tracking system. The high-efficiency commercially available PV panels convert incoming sunlight to direct current (DC) electrical energy. The panels are arranged in series to effectively increase output voltage to approximately 1,500 volts. These chains of panels are called “strings” in industry terms and provide the basic building block of power conversion in the solar array. The strings are combined in the solar field via an aboveground or belowground DC collection system, and then further gathered together at the inverter stations, where the energy is converted to AC and then stepped to an intermediate voltage,

typically 34.5 kV. The chosen PV panel would either be crystalline silicon or thin film and would be well suited for the desert environment due to their durability and reliability.

The tracking system would be supported, when practical, by driven piers (piles) directly embedded into the ground. The system would rotate slowly throughout the day at a range of +/- 60 degrees facing east to west in order to stay perpendicular to the incoming solar rays so that production can be optimized. Each tracker would hold approximately 80 to 90 panels (depending on final configuration), and at its highest rotated edge would have a maximum height of approximately 12 feet above grade, depending on the dimensions of the chosen panel. The minimum clearance from the lower edge of the panel to ground level is approximately 18 inches to 24 inches, pending final design.

The inverter stations would be up to 12 feet in height and perform three critical functions for the solar plant: (1) collect DC power in a central location, (2) convert the DC power into AC power, and (3) convert low-voltage AC power to medium-voltage AC power. The inverter stations are typically open-air and well suited for desert environments. The stations consist of DC collection equipment, utility-scale inverters, and a low-to medium-voltage transformer. The output power from the inverter stations is then fed to the AC collection system via an aboveground or belowground collection system. This AC collection system would deliver the electricity to the proposed on-site substation, where the voltage would be stepped up to the interconnection voltage.

Low-elevation (<14-foot) controlled security lighting would be installed at primary access gates. The lighting is only switched on when personnel enter the area (either motion-sensor or manual activation (switch)). All safety and emergency services signs would be illuminated when the lights are on. The lighting would be shielded so that the light is directed downwards. Electrical power to supply the access gate and lighting would be obtained from SCE. Lighting would only be used in areas where it is required for safety, security, or operations. All lighting would be directed on-site and would include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.



SOURCE: SOURCE: BING Maps 2018

DUDEK

0 800 1,600 Feet

FIGURE 3
Site Plan
Calcite Solar

On-site Substation

The Project would include construction of a substation that would collect the power generated by the PV solar system blocks via a 220-kV transmission line to the proposed SCE Calcite Substation. Equipment would include a power transformer; foundations and oil containment system for the power transformer; concrete pad for the relay enclosure structure; a pre-fabricated relay enclosure to enclose the protection and control equipment; metering equipment; dead end structure; and high voltage step-up transformer, disconnect switches, circuit breakers and all associated equipment required to be compliant with utility grade interconnection services. The tallest components of the Project would be the on-site collector Project substation consisting of components up to 55 feet in height and overhead lines supported by 45- to 60-foot tall poles for the single and double circuits, respectively. The substation facilities would house the power generation control and relaying equipment, station batteries, SCADA and communication systems, and potentially housing with radio or microwave communication mounted on a transmission tower that would not exceed 100 feet in height.

Energy Storage System

The Project would install an energy storage facility and appurtenances that would provide energy storage capacity for the electric grid. The Project could include, at the Applicant's option, a battery storage system capable of storing electricity. If provided, the storage system would consist of batteries housed in electrical enclosures and buried electrical conduit. The energy storage technology has not been determined at this time, but could include any commercially available battery technology, including but not limited to lithium iron, lead acid, sodium sulfur, and sodium or nickel hydride. Power stored by the energy storage facility would be transferred to the on-site substation then to the planned SCE Calcite Substation.

Collector Lines

Overhead and underground electrical lines would facilitate the transport of electricity from each of the Project Units to the on-site substation. The overhead and underground collection lines located outside the Unit boundaries would be either within private parcels or within County-owned right-of-way. Underground electrical cables (underground collection system) would be installed from groups of PV arrays that would be arranged into power blocks. The cables would convey DC electricity to inverters which convert the DC to AC. All electrical inverters and the transformers would be installed on pre-fabricated metal skids that sit on steel pier foundations or concrete foundation, depending on the design. The inverter pad transformers would step up the voltage of the array output, which would be collected at the on-site circuit breakers or switchgear positions. From the circuit breakers or switchgear positions, the medium voltage collector lines would be routed to the on-site substation and transformed

via high-voltage transformers to 220 kV and exported to the proposed SCE Calcite Substation, part of the California Independent System Operator-controlled grid.

Generation Tie-Line

It is anticipated that the Project would be supported by the new overhead transmission corridor. The energy generated would be transmitted from the on-site solar substation to the proposed SCE Calcite Substation via an approximately 200-foot long 220 kV transmission line. Utilizing new pole structures and necessitating the installation of an underground communication line, the gen-tie would include a 100-foot wide easement corridor on private lands.

Ancillary Facilities

Access Roads

The solar and energy storage Project access roads would be 20 to 26 feet wide and composed of aggregate base. Minor earth work would occur to install aggregate base access roads and transmission line maintenance roads. The surface of the roads would be at grade in order to allow any water to sheet flow across the Project site as it currently does.

Signage

A small sign would be installed at each Unit's main entry. The signs would be no larger than 8 feet by 4 feet and would read "Calcite Solar Energy Center." In addition, required safety signs identifying high voltage would be installed within the facility on the fence near the entrances and at the gates at either ends of the access roads. The signs would include information for emergency services.

Perimeter Fence

The perimeter of the Units would be enclosed by 6-foot-high chain-link fences topped with one foot of 3-strand barbed wire. Access into the Units would be provided through drive-through gates. The main purpose of the fences is to prevent unauthorized access to the sites. The total height, above grade, of the fences would be approximately 9 feet. Desert tortoise exclusion mesh would be attached to the fence fabric that would extend from approximately 12 inches below grade to approximately 24 inches above grade.

Lighting

Low-elevation (<14-foot) controlled security lighting would be installed at primary access gates. The lighting is only switched on when personnel enter the area (either motion-sensor or manual activation (switch)). All safety and emergency services signs would be illuminated when the lights are on. The lighting would be shielded so that the light is directed downwards. Electrical power to supply the access

gate and lighting would be obtained from SCE. Lighting would be limited to use in areas where it is required for safety, security, or operations. All lighting would be directed on-site and would include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

Construction

Schedule

This Project is anticipated to be built over an approximately 11-month timeframe from the onset of perimeter fence installation through testing and commissioning of the facility. It is anticipated that the work would be completed in 8- or 10-hour shifts, with a total of five shifts per week (Monday–Friday). Overtime and weekend work would be used as necessary to meet scheduled milestones or accelerate schedule and would comply with all applicable California labor laws. Primary construction activities and durations are presented in Table 2. The activities shown in Table 2 would be overlapping in certain phases, and all are expected to occur within the estimated 11-month construction duration.

Table 2
Construction Workers, Vendor Trips, and Equipment Use per Day

	One-Way Vehicle Trips			Equipment		
Construction Phase	*Average Daily Worker Trips*	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Mobilization	4	12	0	Forklifts	1	4
				Generator sets	1	8
				Graders	1	7
				Off-highway trucks	8	2
				Off-highway trucks	6	1
				Scrapers	1	7
				Tractors/loaders/backhoes	1	7
				Trenchers	1	7
Civil	20	2	0	Generator sets	1	2
				Generator sets	1	10
				Graders	1	7
				Off-highway trucks	4	2
				Off-highway trucks	3	1
				Rollers	1	7
				Rubber-tired dozers	1	7
				Scrapers	1	7
				Tractors/loaders/backhoes	1	7

Table 2, continued

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Foundations	32	8	0	Forklifts	2	4
				Generator sets	1	2
				Generator sets	1	10
				Off-highway trucks	4	2
				Off-highway trucks	1	1
				Other construction equipment	1	7
Racking installation	34	4	0	Forklifts	1	4
				Generator sets	1	2
				Generator sets	1	10
				Off-highway trucks	3	1
				Off-highway trucks	2	1
Module installation	64	10	0	Forklifts	1	4
				Generator sets	1	2
				Generator sets	1	10
				Off-highway trucks	4	2
				Off-highway trucks	2	1
Electrical DC	64	2	0	Forklifts	1	4
				Generator sets	1	2
				Generator sets	1	10
				Off-highway trucks	6	2
				Off-highway trucks	3	1
				Skidsteer loaders	2	2
				Tractors/loaders/backhoes	1	2
				Trenchers	4	2
Substation	36	0	0	Aerial lifts	2	4
				Cranes	1	2
				Forklifts	1	4
				Generator sets	1	2
				Generator sets	1	10
				Off-highway trucks	3	2
				Off-highway trucks	2	1
				Tractors/loaders/backhoes	4	4
				Trenchers	4	2
Electrical AC	14	2	0	Cranes	1	1
				Forklifts	1	4
				Generator sets	1	2
				Generator sets	1	1
				Generator sets	1	10
				Off-highway trucks	3	2
				Off-highway trucks	1	1
				Tractors/loaders/backhoes	3	2

Table 2, continued

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Interconnection	12	0	0	Generator sets	1	10
				Off-highway trucks	2	2
				Off-highway trucks	1	1
Testing and commissioning	10	0	0	Generator sets	1	2
				Generator sets	1	10
				Off-highway trucks	4	2
				Off-highway trucks	1	1
Punchlist	8	0	0	Generator sets	1	2
				Off-highway trucks	2	2
Demobilization	8	0	0	Forklifts	2	4
				Generator sets	1	8
				Graders	1	7
				Off-highway trucks	8	2
				Off-highway trucks	6	1
				Scrapers	1	7
				Tractors/loaders/backhoes	1	7
				Trenchers	1	7

Traffic

As summarized in Table 3, the maximum number of daily construction employees would be approximately 500 with an average of 300 daily workers and a daily maximum of 58 trucks.

Table 3
Trip Generation Summary for Calcite Solar Project

Trip Generation Rates									
			AM Peak Hour			*PM Peak Hour*		
Land Use	*Daily Trip Rate*	*Factors*	*% of Daily*	*% In*	*% Out*	*% of Daily*	*% In*	*% Out*
Construction employees	2	1.25 (vehicle occupancy) [1]	50%	100%	0%	50%	0%	100%
Trucks	2	2.5 (PCE) [2]	10%	50%	50%	10%	50%	50%

Trip Generation										
					AM Peak Hour			*PM Peak Hour*		
Land Use	*Total No. of Units*	*Apply Factors*	*Unit*	*Daily Trips*	*Total*	*In*	*Out*	*Total*	*In*	*Out*
Construction employees	500	400	passenger cars	800	400	400	0	400	0	400
Trucks	58	145	trucks	290	30	15	15	30	15	15
			Total	**1,090**	**430**	**415**	**15**	**430**	**15**	**415**

[1] A vehicle occupancy factor of 1.25 is used to estimate the number of construction employees that would carpool to the site;

[2] Passenger Car Equivalency factor of 2.5 is utilized to convert truck trips to passenger car trips.

The heaviest delivery loads to the site would also consist of the tracker structures, rock truck deliveries, and the delivery of the generator step up. These loads would typically be limited to total weight of 80,000 pounds, with a cargo load of approximately 25 tons or 50,000 pounds of rock or tracker structures. The generator step up could be up to 160,000 pounds. Typically, the rock is delivered in “bottom dump trucks” or ”transfer trucks” with six axles and the tracker structures would be delivered on traditional flatbed trucks with a minimum of five axles. Low-bed transport trucks would transport the construction equipment to the site as needed. The size of the low bed truck (axles for weight distribution) would depend on the equipment transported.

Construction Activities

Because the proposed solar and energy storage site is fairly level, grading is expected to be minor in most instances; no mass grading is required or proposed. However, grading would occur throughout the site especially for the construction of roads that will include a class-III road base, on-site substation, energy storage system, storm water basins and inverter pads. This would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment. The PV modules would be off-loaded and installed using small cranes, boom trucks, forklifts, rubber-tired loaders, rubber-tired backhoes, and other small to medium sized construction equipment as needed. Construction equipment would be delivered to the site on “low bed” trucks unless the equipment can be driven to the site (e.g., boom trucks).

On-site vegetation would be modified where necessary. Vegetation would be removed where gravel roads would be constructed, where fill would be placed from grading operations, where buildings are to be constructed, and where transmission pole and tracker foundations would be installed (if necessary). At locations where transmission pole and tracker foundations would be installed, minor cuts consisting of smoothing the ground surface with use of belly scraper to remove ruts may be required where the foundations would be driven. Limited earth work to smooth out the ground surface with a belly scraper would also occur to install aggregate base access roads and transmission line maintenance roads. The surface of the roads would be at-grade to allow any water to sheet flow across the site as it currently does. Throughout the remainder of the developed area on the site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level and to assist in erosion control. During construction of the facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary, but otherwise undisturbed so that reestablishment is possible.

Water Use

Water consumption during construction is estimated to be approximately 125 acre-feet (AF) for dust suppression and earthwork over an approximately 11-month period. Panel rinsing is expected to be

conducted up to four times annually as performance testing and as weather and site conditions dictate. Construction and operational water for panel rinsing would be provided by on-site groundwater through an improved existing well or a newly permitted and drilled well (if necessary). An on-site diesel generator may be used to power pumps for well water use during construction. During construction water would be pumped directly into 2,000- to 4,000-gallon tanked water trucks, or water may be stored in up to three overhead, temporary, approximately 12,000-gallon water storage tower/tanks (up to 16 feet tall), to assist in the availability of water for trucks and expedient filling thereof. The water storage tower/tanks would be covered.

Operation and Maintenance

The Project would be unmanned, and no operation and maintenance building would be constructed. The operations would be monitored remotely via the SCADA system, and periodic inspections and maintenance activities would occur. During Project operation, solar panel washing is expected to occur one to four times per year and general labor (up to 10 individuals) may assist in the panel cleaning. Panel washing for a Project of this size would require 15 days to complete per wash cycle. Water consumption is expected to be around 0.28 gallons per square yard of panel, based on other similar operations. Given a 100 MW AC plant, with four cycles per year, the annual water usage is expected to consume up to approximately 12 AF of water. While the Applicant only expects to wash the PV panels once per year, the panels may need to be washed more frequently (up to four times per year) based on site conditions. Conditions that may necessitate increased wash requirements include unusual weather occurrences, forest fires, local air pollutants, and other similar conditions. Therefore, the Project is requesting the use of up to 12 AF per year for the explicit use of washing panels. This amount is in addition to the amount of water necessary for the operations, fire suppression, and site landscape maintenance, which is a small amount of groundwater (i.e., approximately 1 AF) to be used for this purpose. If groundwater proves unsuitable for washing, water trucks would be used to deliver water from a local purveyor.

Decommissioning

The PV system and energy storage system (including structure) would be recycled when the Project's life is over, which is anticipated to be approximately 35 years. Most parts of the proposed system are recyclable. Panels typically consist of silicon, glass, and a metal frame. Tracking systems (not including the motors and control systems) typically consist of aluminum and steel. Batteries include lithium-ion, which degrades but can be recycled and/or repurposed. Site structures would include steel or wood and concrete. All of these materials can be recycled. Concrete from deconstruction is to be recycled. Local recyclers are available. Metal and scrap equipment and parts that do not have free flowing oil may be sent for salvage.

Fuel, hydraulic fluids and oils would be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks/vessels would be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as smaller containers lubricants, paints, thinners, solvents, cleaners, batteries and sealants would be kept in a locked utility building with integral secondary containment that meets Certified Unified Program Agencies (CUPA) and Resource Conservation and Recovery Act (RCRA) requirements for hazardous waste storage until removal for proper disposal and recycling. It is anticipated that all oils and batteries would be recycled at an appropriate facility. Site personnel involved in handling these materials would be properly trained. Containers used to store hazardous materials would be inspected regularly for any signs of failure or leakage. Additional procedures would be specified in the Hazardous Materials Business Plan (HMBP) closure plan submitted to the CUPA. Transportation of the removed hazardous materials would comply with regulations for transporting hazardous materials, including those set by the Department of Transportation (DOT), EPA, California Department of Toxic Substances Control (DTSC), California Highway Patrol (CHP), and California State Fire Marshal.

Upon removal of the proposed solar and energy storage Project components the site would be left as disturbed dirt generally consistent with the existing (pre-development) conditions, subject to a Closure Plan in accordance with SBCC 84.29.60.

Potential Agency Approvals and Permits

The proposed solar and energy storage Project may require permits or approvals from additional agencies other than the County, including, but not limited to, the following:

- Mojave Desert Air Quality Management District (MDAQMD)
- Regional Water Quality Control Board (RWQCB) - Colorado River
- California Department of Transportation (Caltrans) District 8
- California Department of Fish and Wildlife (CDFW)
- State Water Resources Control Board (SWRCB)

Evaluation Format

This initial study is prepared in compliance with 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. The format of the study is presented as follows. The Project is evaluated based upon its effect on 18 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 mitigation measures are required as a condition of Project approval to reduce these impacts to a level below significant.
4. **Potentially Significant Impact**: Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts.

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 and Soils
☒	Greenhouse Gas Emissions	☒	Hazards and Hazardous Materials	☒	Hydrology/ Water Quality
☒	Land Use and Planning	☐	Mineral Resources	☒	Noise
☐	Population/ Housing	☐	Public Services	☐	Recreation
☒	Transportation and Traffic	☒	Tribal Cultural Resources	☒	Utilities and 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 Chris Warrick, Senior Planner) — Date: 1-16-2019

Signature: Heidi Duron, Planning Director
Land Use Services Department — Date: 1/16/2019

	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) **Would the Project have a substantial adverse effect on a scenic vista? Potentially Significant Impact.** The Project site and surrounding area are not considered an undisturbed natural area. In addition, the Project site is generally flat and contains no significant geologic features or vegetation that is particularly unique for the area, or vegetation that would be considered scenic. Although sparse, existing development in the area includes rural residences and accessory structures; paved SR-247 and several unpaved local roads; electrical distribution lines supported by wooden poles; and three high-voltage transmission power lines supported by tall steel lattice towers. As such, the Project site and the surrounding North Lucerne Valley area are not considered an undisturbed natural area.

Although there are no designated scenic vistas in the Project area (the County does not formally designate or identify scenic vistas, though scenic routes are designated by the County General Plan), County General Plan policies contain criteria for evaluating whether scenic vistas occur in a particular area. More specifically, 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).

While primarily characterized as a broad, flat alluvial plain, the Project area landscape is also marked by mountainous terrain to the north, west, and east and three high-voltage transmission power lines supported by tall steel lattice towers extending east-west through the region.

Although the Project would alter the existing character of the site, the introduction of Project components would not substantially obstruct or interrupt views of surrounding mountainous terrain. The majority of the proposed solar and energy storage Project equipment would maintain a relatively low vertical profile and would display a height of approximately 12 feet. Because the majority of solar facility components would display a vertical profile that would largely maintain existing available views to mountainous terrain in the surrounding area, Project impacts to scenic vistas would not be substantial. Where view blockage at a particular vantage point is anticipated, views of the local mountainous terrain would remain available to receptors elsewhere in their field of vision and would be largely unencumbered by Project components. While these elements are not anticipated to result in a substantial adverse effect on a scenic vista, further analysis is warranted within the EIR.

b) **Would the Project substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? Potentially Significant Impact.** The Project includes elements on the west and east of SR-247, an eligible state scenic highway and an officially designated County scenic route. The closest officially designated state scenic highway is SR-38, located approximately 18 miles south of the Project site in the San Bernardino Mountains. While SR-247 currently possesses a local scenic route classification, an effort is underway by a local interest group to designate SR-247 as a state scenic highway. Development of the Project would not entail the removal of trees, rock outcroppings, and/or historic buildings (these features do not occur on the Project site) within the viewshed of an officially designated state scenic highway. The Project site is generally flat and contains no significant geologic features or vegetation that is particularly unique for the area, or vegetation that would be considered scenic. Vertical elements at the Project site (e.g., solar racks, perimeter fencing etc.) and 34.5 kV overhead collection lines would be visible to passing motorists. The above-described improvements could potentially affect views from SR-247 to offsite geological features and terrain. While these elements are not anticipated to result in substantial obstruction or interruption of existing available views to mountainous terrain in the area, further analysis is warranted within the EIR.

c) **Would the Project substantially degrade the existing visual character or quality of the site and its surroundings? Potentially Significant Impact.** The existing Project site is generally flat and dotted with low, mounded shrubs, expanses of short, golden grasses, and

large areas of exposed tan colored soils. In addition, the Project site is located adjacent to three regional transmission lines that are supported by large and geometric steel lattice towers. The surrounding area displays similar features and is sparsely developed with rural residential structures, and electrical distribution and transmission infrastructure.

The visual change associated with development of the Project would be most noticeable to residents in the area and motorists passing along SR-247. While Project components would be set back from a perimeter chain-link fence, repeating rows of solar arrays would be visible through gaps in the fence and dark colors and views of regular, repeating lines atypical of the desert landscape may be experienced. From this particular vantage point along SR-247, the prevalent visual pattern of the low valley floor juxtaposed with the high vertical relief of mountainous terrain may be broken and otherwise interrupted by the introduction of solar panels to the landscape. Moderate visual contrast is also anticipated where SR-247 motorists would be afforded views to Project components. Therefore, potentially significant impacts to the existing visual quality from the Project may result, and these impacts will be analyzed further in the EIR.

d) **Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? Potentially Significant Impact.** Due to the remote desert setting, the Project site and the surrounding area are presently devoid of significant nighttime lighting sources or daytime glare. Existing light sources in the Project area consist of vehicle headlights during the night hours on SR-247 and local roadways, as well as lighting associated with the limited rural residences. There are no existing structures in the Project area that create a substantial source of daytime glare.

Construction of the Project is anticipated to occur during hours permitted by the County; therefore, nighttime lighting to accommodate construction activities would not normally be required. Proposed operational nighttime lighting would potentially affect existing views in the surrounding area, which is generally devoid of significant nighttime lighting sources. As proposed, lighting would be installed at primary access gates to the Project site. All proposed lighting would be shielded and directed downwards to minimize sky glow and occurrences of light trespass onto surrounding properties. The lighting would be installed in areas where it is required for safety, security, or operations and would remain off unless activated by Project personnel.

In addition, all nighttime lighting associated with the Project would be subject to County approval and compliance with County requirements (County Ordinance No. 3900 and County Development Code Chapter 83.07, Glare and Outdoor Lighting). County Ordinance No. 3900 regulates glare, outdoor lighting, and night sky protection, and County Development Code Chapter 83.07 regulates outdoor lighting practices geared toward minimizing light pollution, glare, and light trespass; conserving energy and resources while maintaining nighttime safety, visibility, utility, and productivity; and curtailing the degradation of the nighttime visual environment. Because all proposed lighting would be shielded and directed downwards and motion-activated lighting would normally be turned off unless needed for nighttime emergency repair/maintenance work, Project lighting would be consistent with County requirements. Compliance with County lighting regulations, submittal of an approval of exterior lighting plan as required by General Plan Conservation Element policy D/CO 3.1(b) and compliance with General Plan Conservation Element policy D/CO 3.2 would ensure that impacts associated with new sources of nighttime lighting and glare would be less than significant.

As proposed, the Project would utilize dark PV solar panels featuring a non-reflective coating. PV solar panels are designed to be highly absorptive of all light that strikes the glass surfaces, generating electricity rather than reflecting light. Further, the PV solar panels are designed to track the sun to maximize panel exposure to the sun. In addition, the solar facility would be designed to ensure consistency with Section 84.29.004 of the San Bernardino County Code that requires solar energy facility to be designed to preclude daytime glare on abutting residential land uses/parcels. Despite the high light absorption rate of dark PV solar panels and required compliance with San Bernardino County Code, some glare may be generated by the panels throughout the day. Considering the proposed scope of work, the operational condition of the Project does have the potential to create a new source of light or glare. Due to these potentially significant effects, additional analysis is warranted within the EIR.

	Issue	*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) **Would the Project 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? No Impact.** The Project would not convert prime farmland, unique farmland, or farmland of Statewide Importance (Farmland), as shown on the San Bernardino County Important Farmland Map 2016 to non-agricultural use, since the Project site is not designated as such (California Department of Conservation 2016a). Therefore, the Project would not result in impacts related to converting

important Farmland. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract? No Impact**. The Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. None of the properties associated with the Project is under a Williamson Act contract (CA Department of Conservation 2016). The current General Plan land use designation for the Project area consists of Lucerne Valley Agriculture (LV/AG), Lucerne Valley Agriculture 40-acre minimum (LV/AG-40), and Lucerne Valley Floodway (LV/FW) which allow the development of renewable energy generation facilities with conditional use permit approval by the County (Development Code Section 85.06). Therefore, the Project would not result in impacts related to conflict with agriculture zoning or a Williamson Act contract. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

c) **Would the Project 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))? No Impact**. The 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 Project area is currently fallowed agricultural land, or undeveloped land, which has never been designated as forest land or timberland. No rezoning of the Project site would be required. Therefore, the Project would not have any impact regarding forest land or timberland. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

d) **Would the Project result in the loss of forest land or conversion of forest land to non-forest use? No Impact**. The Project would not result in the loss of forest land or conversion of forest land to non-forest use. The Project site includes lands that have historically been under agricultural use, or is undeveloped lands, none of which is forest land. Therefore, the Project would not result in the loss or conversion of forest land. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

e) **Would the Project 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? No Impact.** The Project site is vacant. The Project would not convert prime farmland, unique farmland, or farmland of Statewide Importance (Farmland), as shown on the San Bernardino County Important Farmland Map 2016 to non-

agricultural use, since the Project site is not designated as such (California Department of Conservation 2016a). The current General Plan land use designation for the Project area consists of LV/AG (Lucerne Valley/Agriculture), LV/AG-40 (Lucerne Valley/ Agriculture 40-acre minimum), and LV/FW (Lucerne Valley/Floodway), all of which allow the development of renewable energy generation facilities with County approval of a CUP (Development Code Section 85.06).The Project site and vicinity do not contain any forest land or forest use. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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 Mojave Air Quality Management Plan, if applicable):*

a) **Would the Project conflict with or obstruct implementation of the applicable air quality plan? Potentially Significant Impact.** 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 Project is not identified specifically in the County General Plan, it is a conditionally allowed use under applicable zoning and general plan regulations and would not generate new homes or employment opportunities that would change the County's projections. Though the Project would not alter the population or employment projections considered during the development of the AQMP, and the emissions attributable to the Project during operation are minor (refer to discussion in item III(b) below), potential exceedances of air quality emissions thresholds during the construction phase of the Project may create an issue with AQMP consistency. Accordingly, additional discussion of this threshold is warranted in the EIR.

To limit the production of fugitive dust during implementation of the Project, construction activities will be conducted in accordance with MDAQMD Rules 401 (*Visible Emissions*) 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% opacity in areas of where grading or vegetation removal occurs, within the staging areas, and on any unpaved roads used during Project construction. Chemical stabilizers will be applied to graded areas where construction would not begin for more than 60 days after grading. In addition, the Project would not result in a long-term increase in the number of trips or increase the overall vehicle miles traveled in the area. Haul truck, vendor truck, and worker vehicle trips would be generated during the proposed construction activities but would cease after construction is completed. In regard to long-term operations, the Project would require routine inspection and maintenance which would result in a minor net increase in emissions.

Over its lifetime, the Project will comply with the regulations set forth by the MDAQMD *Rule Book* or *CEQA and Federal Conformity Guidelines*. Electricity generation via the use of photovoltaic solar systems does not generate chemical emissions that would negatively contribute to air quality. The Project is designed to limit the amount of vegetation that would be removed, and grading required for access and foundations. Throughout the remainder of the developed area on the site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level, and to assist in erosion control. During construction of the facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary, but otherwise undisturbed so that reestablishment is possible. Restraint on the disturbance of vegetation root mass would limit fugitive dust generated during the life of the Project. Potential exceedances of air quality emissions thresholds during the construction phase of the Project could create an issue associated with AQMP consistency. Accordingly, additional discussion of this threshold is warranted in the EIR.

b) **Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation? Potentially Significant Impact.**

Construction Emissions

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and volatile organic compounds (VOC) off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions.

Implementation of the Project would generate air pollutant emissions from dust, off-road equipment, vehicle emissions, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in particulate matter (PM_{10} and $PM_{2.5}$) emissions. The Project would comply with MDAQMD Rule 403.2 to control dust emissions generated during the grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites three times per day depending on weather conditions. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, nitrogen oxide (NO_x), carbon monoxide (CO), PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes would also produce VOC emissions. However, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of MDAQMD's Rule 1113 (Architectural Coatings).

Maximum daily emissions of NOx, CO, sulfur oxide (SO_x), and $PM_{2.5}$ emissions would occur during the construction phase in 2019 and 2020 as a result of off-road equipment operation and on-road vendor trucks and haul trucks. The overlap of the building construction phase and the architectural coatings phases in 2019 has the possibility of producing substantial daily VOC and PM_{10} emissions. Therefore, impacts would be potentially significant and will be analyzed further in the EIR.

The Project would comply with MDAQMD Rule 403.2 to control fugitive dust emissions generated during grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include:

- Short-term dust control by a water truck and/or available water source on or near the drilling rig;
- Minimize and cleanup trackout onto paved roads;
- Cover haul trucks;
- Stabilize (chemical or vegetation) site upon completion of grading when subsequent development is delayed;
- Cleanup of Project-related trackout or spills on paved roads; and
- Minimize grading and soil movement when winds exceed 30 miles per hour.

Operational Emissions

Operation of the Project would generate VOC, NOx, CO, SOx, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from maintenance vehicles.

The combined daily area, energy, and mobile source emissions are not likely to exceed the MDAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$, however, this will be analyzed further in the EIR to determine potential impacts associated with Project-generated operational criteria air pollutant emissions.

c) **Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? Potentially Significant Impact.** Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the MDAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, Project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a Project's individual emissions would have a cumulatively significant impact on air quality. As previously described, the Project would have potentially significant impacts for construction and operations emissions, therefore, potentially significant cumulative impacts will be further analyzed in the EIR.

d) **Would the Project expose sensitive receptors to substantial pollutant concentrations? Potentially Significant Impact.** The MDAQMD considers residences, schools, daycare centers, playgrounds and medical facilities to be sensitive receptor land uses (MDAQMD 2016). Land use surrounding the proposed work areas consists primarily of undeveloped open space areas with limited rural residential in the Mojave Desert. There is some development within the vicinity, generally consisting of active and fallow agricultural uses and limited rural residences. Construction of the Project would result in the temporary (11 months) generation of emissions associated with on-site equipment operation and off-site trucks and worker vehicles. However, emissions would be below the MDAQMD thresholds and would not result in substantial criteria air pollutant emissions. In addition, the construction activities would move throughout the Project site and would not result in extended exposure of individual residences to criteria air pollutants or toxic air contaminants (such as diesel particulate matter). Rural residential land uses are located in the vicinity of the Project, and residents could be exposed to air pollutants or toxic air contaminants. Therefore, this topic will be analyzed further in the EIR.

e) **Would the Project create objectionable odors affecting a substantial number of people? Less than Significant Impact.** Odors are a form of air pollution that is most obvious to the general public and can present problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern. Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the Project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors

are temporary and generally occur at magnitudes that would not affect substantial numbers of people. In regard to long-term operations, the Project would result in a limited number of vehicle trips and would therefore not change the routine inspection and maintenance of the existing transmission lines and would not result in any sources of substantial odors. Therefore, the Project would not result in impacts related to creation of objectionable odors affecting a substantial number of people. A less than significant impact from objectionable odors would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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 «CAT»

a) **Would the Project 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? Potentially Significant Impact**. There is potential for direct and indirect impacts to special-status plant and wildlife species if they occur within the Project site. Additionally, short-term or temporary indirect impacts to special-status wildlife species would primarily result from vegetation removal activities during grading/filling activities associated with construction. Potential short-term indirect impacts to special-status wildlife, including fugitive dust, chemical pollutants (including herbicides), increased human

activity, and non-native animal species would be potentially significant. Potential long-term indirect impacts to special-status wildlife, including the invasion of non-native, invasive plant species, would be potentially significant. Therefore, this topic will be further analyzed in the EIR.

b) **Would the Project 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? Potentially Significant Impact**. While the Project site is devoid of native riparian vegetation or other sensitive natural community identified in local or regional plans, policies, regulations, or by California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS), an assessment of the Project site and areas of disturbance for habitat value will be conducted and this topic will be analyzed further in the EIR.

c) **Would the Project 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? Potentially Significant Impact.** The National Wetlands Inventory (NWI) classifies Lucerne (dry) Lake as a wetland, and parcels within the Project area are within the wetland boundary (Westwood 2018). Portions of the Project site are located within wetland area L2USJ, which is classified as a Lacustrine system (USFWS 2018b). The U.S. Geological Survey (USGS) National Hydrography Dataset maps several ephemeral flow lines, as well as the playa associated with Lucerne (dry) Lake within and near the Project site (USGS 2018). Therefore, the Project could result in potentially significant impacts to wetlands and this topic will be analyzed further in the EIR.

d) **Would the Project 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? Potentially Significant Impact**. While some native wildlife species, especially those particularly tolerant of human disturbances, may occasionally breed on the site, no native wildlife have established nursery or breeding colonies on the site (CDFW 2018). Although unlikely, naturally occurring native fish populations that may be present within the Project site due to standing water or significant hydrological drainages where water could be present for an extended period of time would need to be analyzed further.

The Project site is located within the Pacific Flyway, an avian migratory route that stretches along the Pacific Coast from South America to the Arctic tundra. Migratory birds use this major migratory route in the spring and fall because of stopover areas where species rest, feed, and regain their strength before continuing their migration to breeding or wintering grounds. In general, bird

migration occurs during the months of March through April and August through November. The Project site is located between two stopover areas: the Salton Sea (90 miles southeast) and Mono Lake (262 miles northwest). These stopover areas are identified as California Important Bird Areas by the National Audubon Society, and guide birds over the Project area. However, the Project area does not support any bodies of water that attract large migration stopovers or attractants for avian species. Furthermore, the Project is proposed on lands that are low quality, disturbed habitats surrounded by open, undisturbed lands as well as similarly disturbed rural residential lands. However, biological observations would be conducted to determine if the Project site and adjacent off-site areas act as significant linkage areas. Therefore, this topic will be analyzed further in the EIR.

e) **Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Potentially Significant Impact.** The Project has the potential to conflict with adopted local plans such as the *San Bernardino County General Plan* (County of San Bernardino 2007) as they relate to biological resources found on the Project site. Therefore, this topic will be analyzed further in the EIR.

f) **Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan? No Impact.** The Project area is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The nearest USFWS-designated critical habitat for the Desert tortoise (*Gopherus agassizi*) is located approximately 2.8 miles northeast of the Project site (USFWS 2018a). There would be no take of critical habitat and, therefore, no land use conflict with existing management plans would occur and no impact would result. Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan. No impacts would result from the Project and this topic will not be analyzed further in the EIR.

	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) **Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? Potentially Significant Impact**. The Project has the potential to cause an adverse impact to historical resources present on or around the Project site. Therefore, potentially significant impacts to historical resources would occur and will be further analyzed in the EIR.

b) **Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? Potentially Significant Impact**. The potential for archaeological resources within the Project area exists and a survey and technical report will be prepared to evaluate potential impacts of the Project. Therefore, this topic will be further analyzed in the EIR.

c) **Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? Less than Significant Impact.** The Project site is mapped primarily as younger alluvium overlying igneous and metamorphic bedrock, with some areas of clay (Dibblee 1964; Dibblee and Minch 2008). Younger alluvium has low paleontological resource sensitivity while igneous and metamorphic bedrock has no paleontological resource sensitivity. Because the site is fairly level, grading is expected to be minor in most instances and as a result, any disturbance to paleontological resources or natural formations would be too small to be considered significant. Therefore, the Project would not result in substantial adverse impacts to paleontological resources. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

d) **Would the Project disturb any human remains, including those interred outside of formal cemeteries? Less than Significant Impact.** The Project site is not located on a known cemetery, and no human remains are anticipated to be disturbed during the construction phase. However, the procedures for consulting with Native American tribes are outlined in Assembly Bill 52 (AB 52), as described in Tribal Cultural Resources, with the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097. In accordance with Section 7050.5 of the California Health and Safety Code, which maintains if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. Compliance with the above-referenced requirements will ensure a less than significant impact is identified for this issue area. Therefore, the Project would not be anticipated to disturb human remains. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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 181-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) **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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? Less than Significant Impact**. The entire San Bernardino County area is particularly susceptible to strong ground shaking and other geologic hazards. However, the Project site is not located within an Alquist-Priolo Earthquake fault zone. While the potential for on-site ground rupture

cannot be totally discounted (e.g., unmapped faults could conceivably underlie the Project corridor), the likelihood of such an occurrence is considered low due to the absence of known faults within or adjacent to the site. The Helendale Fault and the Lenwood Fault are the nearest mapped faults; approximately 6 and 8 miles from the Project area, respectively. Accordingly, no significant impacts related to seismic ground rupture (and related effects) are anticipated from implementation of the Project. Therefore, the proposed solar and energy storage Project would result in less than significant impacts related to seismic ground rupture. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

ii) **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? Less than Significant Impact**. The Project site is within a seismically active region and is potentially subject to strong ground acceleration from earthquake events along major regional faults. According to the Geologic map of California: San Bernardino sheet: California Division of Mines and Geology, scale 1:250000 (Rogers 1967), the continental transform San Andreas Fault is located approximately 31 miles to the southwest of the Project area. The San Andreas Fault as a whole is capable of generating significant seismic activity though it is often analyzed in segments, the Northern Segment and the Mojave Segment. According to the Southern California Earthquake Data Center the Mojave segment has an average interval between major ruptures of approximately 140 years and probable magnitudes of 6.8 to 8.0. The last recorded rupture of the Mojave segment occurred in January 1857. The Helendale Fault, located approximately 6 miles from the Project area, is a right-lateral strike-slip fault 56 miles in length, with unknown rupture intervals and probable magnitudes between 6.5 and 7.3. The Lenwood Fault, located approximately 8 miles from the Project site, is also a right-lateral strike-slip fault, with rupture intervals of 4,000 to 5,000 years and probable magnitudes of 6.5 to 7.4.

The Project design would incorporate measures to accommodate projected seismic loading, pursuant to existing guidelines such as the “Greenbook” Standard Specifications for Public Works Construction (2015), the International Code Council’s (ICC) 2016 California Building Code (CBC) and the San Bernardino County Building Standards. Specific measures that may be used for the Project include proper fill composition and compaction; anchoring (or other means of for securing applicable structures); and use of appropriate pipeline materials, dimensions and flexible joints. Based on the incorporation of applicable measures into Project design and construction, potential Project impacts associated with strong seismic ground shaking would be less than significant. Therefore, the Project would result in less than significant impacts related to exposing people or structures to seismic ground shaking. Less

than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

iii) **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? Less than Significant Impact**. Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. Loose granular soils are most susceptible to these effects, with liquefaction generally restricted to saturated or near-saturated soils at depths of less than 50 feet. Other types of seismic-related ground failure include ground rupture (as discussed in Section VI.a.i), landslides (as discussed in Section VI.a.iv), dynamic ground subsidence (or settlement) and lateral spreading. According to the UC Davis Soil Resource Laboratory, the soils in the Project area are well-drained and are not susceptible to liquefaction (California Soil Resources Lab 2018). Further, Project design and construction would incorporate a number of standard measures to address potential seismic-related liquefaction and related effects such as settlement and lateral spreading, including similar types of measures from the CBC and Greenbook standards as noted above in Section VI.a.ii). Based on the incorporation of applicable measures into Project design and construction, potential Project impacts associated with seismic-related liquefaction and settlement would be less than significant. Therefore, the Project would result in less than significant impacts related to seismic-related ground failure or liquefaction. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

iv) **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? No Impact.** The 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 California Geologic Survey has not released the seismic hazards zones for the Project area. However, since the Project area is relatively flat terrain where landslides have not historically been an issue, no significant impacts are anticipated with respect to seismic-related (or other) landslide hazards. The nearest areas of slopes possible capable of producing landslides or rock-fall is approximately 0.5 mile west of the Project area.

The geologic conditions present on the Project site would not expose the Project to landslides. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **Would the Project result in substantial soil erosion or the loss of topsoil? Potentially Significant Impact.** The vegetation root base would be largely retained for the installation of the Project. It is expected that vegetation would be cleared via use of mowing equipment that will allow the root base to be maintained. This allows the retention of some of the vegetation on-site, which would reduce wind speeds near ground level and result in less erosion. Ground disturbance and foundation placement would be required for each transmission line pole, including vegetation removal in the immediate area. While minimized, grading activities will occur at various discrete locations throughout the Project site including the inverter pads, perimeter roads, substation, O&M facility, energy storage facility and storm water detention basins. Though best practices and anticipated conditions of approval associated with the Project will ensure minimization of windblown dust and soil erosion, further evaluation is warranted. Additional analysis will occur for this issue in the EIR.

c) **Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? Less than Significant Impact.** According to the UC Davis Soil Resource Laboratory, soils on the Project site consist of Wasco sandy loam, Helendale sandy loam, Kimerlina loamy fine sand, Cajon gravelly sand, Cajon sand, Lavic, loamy fine sand, rock outcrop, cave loam, Bousic clay Peterman clay and playas (California Soil Resources Lab 2018).

A majority of the mapped soil types appear to be conducive to the development of the proposed solar and energy storage Project. The surface soils are disturbed, have low strength characteristics and are highly compressible when saturated. The Project design and construction methods, including recompacting surface soils in the area of structure would stabilize the surface soils thereby reducing potential impacts to less than significant.

The Project area is relatively flat terrain where landslides have not historically been an issue. Furthermore, excavation associated with the Project would be minimal and would be limited to existing fill materials and alluvial deposits. 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, less than significant impacts related to geologic instability are anticipated as a result of Project implementation. Because the Project site is not likely to have soil instability, the Project would have less than significant impacts. Therefore, this topic will not be analyzed further in the EIR.

d) **Would the Project be located on expansive soil, as defined in Table 181-B of the California Building Code (2001) creating substantial risks to life or property? Potentially Significant Impact**. Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals and can adversely affect the structural integrity of facilities including underground pipelines. The surface and near surface soils observed on the site consist of sandy silts, silty sands, relatively clean sands and clayey sands. The clayey soils are considered to be slightly expansive, which could present a significant geologic hazard to the Project. Surficial materials within the Project site would be limited predominantly to fill deposits and alluvium. Therefore, potentially significant impacts related to expansive soil may occur and additional analysis in the EIR is warranted.

e) **Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? No Impact.** The Project would be unmanned and does not propose to use septic tanks or alternative wastewater disposal systems. Therefore, the Project would not result in impacts relative to wastewater. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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) **Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? Potentially Significant Impact.**

Construction Emissions

Construction of the Project would result in greenhouse gas (GHG) emissions, which are primarily associated with use of off-road construction equipment, on-road vendor trucks, and worker vehicles. The County's GHG Reduction Plan (County of San Bernardino 2014) recommends that construction emissions be amortized over a 30-year Project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. The Project has the potential to cause an adverse impact from GHG construction emissions. Therefore, this topic will be further analyzed in the EIR.

Operational Emissions

Operation of the Project would generate GHG emissions through motor vehicle trips to and from the Project site; energy use (natural gas and generation of electricity consumed by the Project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. The Project has the potential to cause an adverse impact from operational GHG emissions. Therefore, this topic will be further analyzed in the EIR.

b) **Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? Potentially Significant Impact.**

As discussed in Section VII.a) and as stated in the San Bernardino County Final Regional GHG Reduction Plan (County of San Bernardino 2014), with the application of the GHG performance

standards, small projects that do not exceed 3,000 MT CO_2E[1] per year are still required to meet certain specified performance measures that also result in GHG emission reductions. As previously discussed in Section VII.a), the Project has the potential to cause an adverse impact from operational and construction GHG emissions. Therefore, this topic will be further analyzed in the EIR.

[1] MT CO_2E (metric tons of carbon dioxide equivalent) is a metric measure used to compare the emissions from different greenhouse gases. Total emissions are expressed as $MTCO_2$ which is calculated by adding the metric tons of carbon dioxide emissions with the metric ton carbon dioxide equivalents for methane and nitrous oxide.

	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) **Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Potentially Significant Impact.** Implementation of the Project would not entail the routine transport, use or disposal of hazardous materials, with the potential exception of short-term construction-related 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 during Project construction is considered low because the handling of any such materials would be addressed through the implementation of Best Management Practices (BMPs) pursuant to the

intent of the National Pollution Discharge Elimination System (NPDES) General Construction Permit. Operation of the Project would include limited chemical use such as mineral oil in the substations and lithium ion in the battery structures. The Project is designed to comply with the requirement of Chapter 6.95 of the Health and Safety Code (H&SC), including containment provisions for potential spills by containing the materials within boxed components and mounting these on concrete foundations. All materials would be used in stable applications and contained in accordance with applicable regulatory requirements, which include the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Hazardous Materials Transportation Act, International Fire Code, and Title 22 and Title 27 of the California Code of Regulations. Potentially significant impacts from hazardous materials may occur. Therefore, further analysis in the EIR is warranted.

b) **Would the Project 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? Potentially Significant Impact.** Construction-related hazards such as fuels, lubricants, adhesives, solvents, and asphalt wastes would be employed during construction of the Project. The Project is designed to comply with the requirement of Chapter 6.95 of the H&SC, including containment provisions for potential spills by containing the materials within boxed components and mounting these on concrete foundations. The storage system would consist of battery banks housed in electrical enclosures and buried electrical conduit. The energy storage technology has not been determined at this time, but could include any commercially available battery technology, including but not limited to lithium iron, lead acid, sodium sulfur, and sodium or nickel hydride. The energy storage facilities would have a fire rating in conformance with County standards and have specialized fire suppression systems installed for the battery areas.

   The security and fire prevention measures proposed by the Project Applicant would minimize the potential for power disruptions or hazardous materials release caused by outside parties. However, potentially significant impacts may occur, and therefore, further analysis in the EIR is warranted.

c) **Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? No Impact.** There are no existing or proposed schools within one-quarter mile of the Project site. The nearest school is located approximately 5 miles south of the Project site in Lucerne Valley. Additionally, operation and maintenance of the Project would not produce hazardous emissions. Therefore, the Project would not result in impacts related to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an

existing or proposed school. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

d) **Would the Project 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? 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 (California Department of Toxics and Substance Control [DTSC] 2018). The Project would not create a significant hazard to the public or the environment. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

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 private use airport, would the Project result in a safety hazard for people residing or working in the Project area? No Impact.** The Project area is not located within an airport land use plan and it is not within 2 miles of a public airport or public use airport. The nearest airport is the privately-owned Holiday Ranch Airport, which is located approximately 7 miles to the west of the Project area and the nearest public airport is the Ontario Airport located approximately 50 miles south of the Project area. Therefore, the Project would not be located within an airport land use plan or within two miles of a working airport and would not result in a safety hazard for people residing or working in the Project area. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

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? No Impact.** The 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 airport is the privately-owned Holiday Ranch Airport, which is located approximately 7 miles to the west of the Project area. Therefore, the Project would not be located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the Project area. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

g) **Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? No Impact.** Activities associated with the Project would not impede existing emergency response plans for the Project site and/or other land uses in the Project vicinity. The Project would not result in any closures of SR-247 that might have an effect on emergency response or evacuation plans in the vicinity of the Project site.

In addition, all construction/maintenance vehicles and stationary equipment would be located off public roads and would not block emergency access routes. Therefore, the Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

h) **Would the Project 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? Potentially 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. The vegetation in the area is low-lying and non-contiguous scrub typical of the high desert. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulations would be implemented for the Project and would minimize the occurrences of wildfire due to Project activities during construction and for the life of the Project. Refer also to Threshold a), above, pertaining to battery hazards. Additional analysis on this topic in the EIR is warranted.

	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) **Would the Project violate any water quality standards or waste discharge requirements? Less than Significant Impact.** Potential water quality impacts from the Project are associated with short-term (construction-related) erosion/sedimentation and hazardous material use/discharge. As described above in Section VIII.b), potential erosion/sedimentation and hazardous materials impacts would be avoided or reduced below a level of significance through conformance with applicable elements of the National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater General Construction Permit. As part of the permit requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared for the proposed solar and energy storage Project. The SWPPP would provide detailed descriptions of the various structural and nonstructural water quality management measures to be used and may include: construction BMPs; downstream water quality monitoring; use of permanent source control best management practices (BMPs); and treatment control BMPs, which may include installation of filters, straw bale barriers, silt fences, stock pile coverings, and sediment basins. Maintenance of the Project would include cleaning, inspections, drive motor repair, tracker repair, electrical connection repair, and panel replacement. Cleaning is expected to be conducted one to four times per year and water used would not contain any cleaning agents or other additives. Maintenance of the proposed on-site substation would involve substation and line inspections, electrical connection repair, and communications repair. No on-site operations and maintenance buildings are proposed, and all facilities would be unmanned. Therefore, the proposed solar and energy storage Project would not violate any water quality standards or waste discharge requirements. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **Would the Project 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)? Potentially Significant Impact**. The Project is located within Lucerne Valley groundwater basin, encompassed by the Este subarea of the Mojave Basin judgement area. The primary source of water supply is anticipated to be groundwater from the Este Subarea of the Mojave Groundwater Basin. Additionally, water supply may be secured via a newly permitted and drilled on-site groundwater well. Water for Project use during construction and operation would be procured through a transfer of a portion of the Base Annual Production (BAP) rights as per the Mojave Basin Area Judgment (City of Barstow v. City of Adelanto, Riverside County Superior Court Case No. 208568, January 10, 1996 (Judgement 1996)). The Judgment established a decreasing Free Production Allowance (FPA) in each Subarea of the Lucerne Valley Groundwater Basin. The FPA is allocated among the Producers

in the Subarea based on each Producer's percentage share of the FPA. All water produced in excess of any Producer's share of the FPA must be replaced by the Producer, either by payment to the Watermaster of funds sufficient to purchase Replacement Water, or by transfer of unused FPA from another Producer (Judgement 1996; Judgment 2008). Each Producer's percentage share of FPA in a Subarea was determined by first verifying the maximum annual water production (termed Base Annual Production (BAP)) for each Producer during the 5-year, 1986–1990, Base Period and then calculating each Producer's percentage share of the total of all such BAP in the Subarea. All such percentage allocations are of equal priority (Judgement 1996). Water for the construction phase of the Project would be acquired pursuant to a temporary transfer of sufficient BAP/FPA to produce up to approximately 125 acre-feet (AF) for the 11-month construction period. Permanent transfer of sufficient BAP or the payment of equal replenishment water would allow the production of up to 12 AF per year during operation. The availability and reliability of the adjudicated groundwater supplies in the Basin are secured through the diverse water supply portfolio held by the Mojave Water Agency (MWA) and through the myriad water supply management and demand reduction policies, programs, projects and laws being implemented throughout MWA. Tests of well pumping will be conducted in the event onsite wells are determined to be utilized for construction or operational water demands in order to determine whether groundwater availability is sufficient for Project construction and operation. Therefore, this topic will be further analyzed in the EIR.

c) **Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite? Potentially Significant Impact.** The existing drainage patterns may be altered to install the selected technology for the Project. Minor grading consisting of smoothing out ground surfaces would occur to allow the installation of inverter pads, aggregate base access roads, on-site substation and energy storage facilities. Access roads would be installed generally around the perimeter of each Unit. Additionally, several interior roads would be constructed to enhance access within the PV field(s).

At locations where foundations are installed, it is expected that minor cuts consisting of smoothing out the ground surface via use of a belly scrapper would be required to place the foundations on a level pad. It is expected that the cut material would be placed around the pre-cast foundation to divert small localized flows away from the foundation and prevent undermining.

There would be a slight increase in imperviousness of the soil on site due placement of class III access roads, substation pad, and energy storage facilities and construction activities. The root mass of the existing vegetation on site is proposed to be left as-is to assist in erosion control and to maintain the existing soil characteristics (i.e. infiltration rates). Vegetation removal would take

place at the areas where the concrete pads for the trackers would be placed and for gravel road installation. The addition of the foundations and inverter pads would increase impervious area on-site. Additionally, the gravel roads are expected to increase the imperviousness of the area where roads are constructed, but again, the total area of the gravel roads would be limited in comparison with the overall site and the gravel roads would allow some level of infiltration. Though grading would be kept to a minimum, additional formal analysis within the EIR is warranted to determine the extent of impacts upon drainage patterns and the potential for erosion.

Alterations to existing on-site drainage patterns would not be substantial and implementation of BMPs pursuant to the NPDES General Construction Permit would be required. The Project would require minimal alterations to existing drainage and would comply with NPDES requirements. Therefore, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite. Though grading would be limited, additional formal analysis within the EIR is warranted to determine the extent of Project impacts relative to drainage patterns and the potential for erosion.

d) **Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? Potentially Significant Impact.** As previously discussed in Section IX.c), the existing drainage patterns would not be significantly altered to install the Project components. Although there would be a slight increase in imperviousness of the soil on site due to grading and construction activities, the root mass of the existing vegetation on site would be left as-is to assist in erosion control and to maintain the existing soil characteristics (i.e. infiltration rates). Vegetation removal would take place at the areas where the concrete pads for the trackers would be placed, foundations for the on-site substation, energy storage structure, and for gravel road installation. The addition of the foundations and inverter pads would create a slight increase in area that can be considered impervious. However, the area disturbed by the Project foundations and/or on-site access roads would be relatively small in proportion to the approximately 664-acre site. The surface of the roads would be at grade in order to allow any water to sheet flow across the site as it currently does. Throughout the remainder of the developed area on the site, the vegetation root mas would be generally left in place to assist in erosion control. During construction of the facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary, but otherwise undisturbed so that reestablishment is possible. While alteration would be minimal, additional analysis in the EIR to determine the extent of the drainage related impacts to flooding is warranted.

e) **Would the Project 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? Less than Significant Impact.** As discussed previously in Section IX.a), potential water quality impacts from the Project would be associated with short-term (construction-related) erosion/sedimentation and hazardous material use/discharge. Also described above in Sections VIII.b) and IX.a), potential erosion/sedimentation and hazardous materials impacts would 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 SWPPP would be prepared for the proposed solar and energy storage Project. The SWPPP would provide detailed descriptions of the various structural and nonstructural water quality management measures to be used and may include: construction BMPs; downstream water quality monitoring; use of permanent source control BMPs; and treatment control BMPs, which may include installation of filters, straw bale barriers, silt fences, stock pile coverings, and sediment basins. Maintenance of the proposed solar and energy storage Project would include cleaning, drive motor repair, tracker repair, electrical connection repair, and panel replacement. Cleaning is expected to be conducted one to four times per year and water used would not contain any cleaning agents or other additives.

Therefore, the Project would not 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. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

f) **Would the Project otherwise substantially degrade water quality? Potentially Significant Impact.** As discussed previously in Section IX.a), potential water quality impacts from the Project are associated with short-term (construction-related) erosion/sedimentation and hazardous material use/discharge. Also described above in Sections VIII.b), IX.a), and IX.e), potential erosion/sedimentation and hazardous materials impacts would 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 SWPPP would be prepared for the Project. The SWPPP would provide detailed descriptions of the various structural and nonstructural water quality management measures to be used and may include: construction BMPs; downstream water quality monitoring; use of permanent source control BMPs; and treatment control BMPs, which may include installation of filters, straw bale barriers, silt fences, stock pile coverings, and sediment basins. Maintenance of the proposed solar and energy storage Project would include cleaning of PV panels that would potentially result in water draining on the site and percolating or evaporating. Cleaning is expected to be conducted one to four times annually and water used would not contain any cleaning agents or other additives. During the

operational phase of the Project, as discussed in Section VIII, hazardous materials would be handled on the site. Further analysis regarding the potential impacts associated with the degradation of water quality and the handling of hazardous materials is warranted in the EIR.

g) **Would the Project 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? No Impact.** The Project does not involve the development of any housing and would not construct housing within a 100-year flood hazard area. Further, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (0607IC5900H, dated August 28, 2008) indicates that the Project area is within Zone D - an Undetermined Risk Area (FEMA 2018). In addition, a review of the San Bernardino County Dam Inundation mapping for the Desert Region (Panel EIFIB) indicates that Units 4 and 5 are located adjacent to the southern edge of the Lucerne Dry Lake and is subject to potential flooding. However, the Project would not involve the development or placement of housing within a 100-year flood hazard area. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

h) **Would the Project place within a 100-year flood hazard area structure which would impede or redirect flood flows? Potentially Significant Impact.** As discussed in Section IX.g), the Project is not within a 100-year flood hazard area and would not place within a 100-year flood hazard area any structures that would impede or redirect flood flows. Further, FEMA Flood Insurance Rate Map (0607IC5900H, dated August 28, 2008) indicates that the Project area is within Zone D - an Undetermined Risk Area (FEMA 2018). In addition, a review of the San Bernardino County Dam Inundation mapping (Panel EIFIB) for the Desert Region indicates that Units 4 and 5 are located adjacent to the Lucerne Dry Lake, which is subject to potential flooding. Based upon the modeling performed by Westwood (2018), 100-year flooding depths of 0-3 feet can be expected across portions of the Project site. Therefore, additional analysis is warranted, and this topic will be further analyzed in the EIR.

i) **Would the Project 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? Potentially Significant Impact.** As described in IX.h), the Project has the potential to expose people or structures to a significant risk of loss, injury or death involving flooding because portions of the site are located within and adjacent to a dry lake bed. Therefore, additional analysis is warranted, and this topic will be further analyzed in the EIR.

j) **Would the Project be exposed to inundation by seiche, tsunami, or mudflow? No Impact.** A tsunami is a series of ocean waves generated in the ocean by an impulsive disturbance. Due to the inland location of the Project, tsunamis are not considered a threat (California Department

of Conservation 2016b). A seiche is an oscillating surface wave in a restricted or enclosed body of water generated by ground motion, usually during an earthquake. Inundation from a seiche can occur if the wave overflows a containment wall or the banks of a water body. However, because the Project is not adjacent to any marine or inland water bodies, impacts from seiche are not expected to occur. In addition, the soils in the Project area are moderately well-drained, the terrain is relatively flat, and mudflows have not historically been an issue in the Project area. Therefore, the Project would not be exposed to inundation by seiche, tsunami, or mudflow. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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) **Would the Project physically divide an established community? Less than Significant Impact.** The area surrounding the Project site is characterized by rural desert terrain modified by power lines, roads, active and fallow agricultural fields, along with limited single-family residential uses. The SR-247 transportation corridor runs north-south between the Project sites. The Project would maintain all existing access routes and no new public roadways or other structural elements that would limit existing circulation patterns or that would have the potential to isolate or create a division between existing land uses are proposed. Therefore, the Project would not physically divide an established community. Less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **Would the Project 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? Potentially Significant Impact**. The current General Plan Land Use Element designation for the proposed solar and energy storage Project area is Lucerne Valley/Agriculture (LV/AG), Lucerne Valley Agriculture 40-acre minimum (LV/AG-40), and Lucerne Valley Floodway (LV/FW) which allow development of electrical power generation with a CUP (Development Code Section 85.06). The County of San Bernardino passed an ordinance amending the development code relating to the regulation of commercial solar energy generation facilities in 2013 (County of San Bernardino 2013). This ordinance requires that the County make findings for solar renewable energy projects to approve such projects. The findings require that before approval of a commercial solar facility, it must be determined that the location of the proposed commercial facility is appropriate in relation to the desirability and future development of communities, neighborhoods, and rural residential uses

(County of San Bernardino 2013). Additionally, the ordinance would require that the Planning Commission shall consider (1) the characteristics of the commercial solar energy facility development site and its physical and environmental setting, as well as the physical layout and design of the proposed development in relation to nearby communities, neighborhoods, and rural residential uses; and (2) the location of other commercial solar energy generation facilities that have been constructed, approved, or applied for in the vicinity, whether within a city or unincorporated territory, or on state or federal land (County of San Bernardino 2013). The southwestern corner of Unit 5 is designated as LV/FW land use zoning and is subject to the following additional standards: (a) No structure or use shall be constructed, located or substantially improved and no land shall be graded or developed in the area designated as floodway, except upon approval of a plan which provides that the proposed development will not result in any increase in flood levels during the occurrence of the base flood discharge; and (b) Proposed land use permits within the FW district shall comply with all of the requirements necessary for the approval of a permit in the Floodplain Overlay (County of San Bernardino 2009). The proposed solar and energy storage Project would be subject to these and additional findings requirements as a part of the 2013 Ordinance during the review and CUP application process.

Additionally, the Board of Supervisors adopted the Renewable Energy and Conservation Element of the County General Plan on August 8, 2017 (County of San Bernardino 2016a). The Renewable Energy and Conservation Element is intended to establish goals and policies to manage renewable energy development and conservation. Policy 4.10 was added to the Renewable Energy and Conservation Element after the Planning Commission had considered the document. As such, the Board of Supervisors adopted the Renewable Energy and Conservation Element excluding Policy 4.10. A revised version of Policy 4.10, which requires utility-oriented renewable energy Project applications to include a community compatibility report to outline Project benefits and measures intended to protect the quality of life and economic opportunities in existing unincorporated communities, has been recommended. This policy is currently under review.

With approval of discretionary land use entitlements, the Project would 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. However, additional formal analysis within the EIR is warranted in light of currently pending revisions to existing policies. Therefore, this topic will be further analyzed in the EIR.

c) **Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan? No Impact.** The Project site is not within 2 miles of Joshua Tree National Park, Mojave National Preserve, Death Valley National Park, or any county, state or federal agency designated wilderness area. Similarly, the Project does not conflict with any applicable habitat conservation plans or natural community conservation plans. Specifically, the Santa Ana Watershed Project Authority (2002) has identified several "Essential Resource Conservation Areas" within San Bernardino County (County of San Bernardino 2007). The Project is not located within these watershed conservation areas. Additional areas under varying levels of conservation management include the 11 Desert Region areas designated by the BLM as "Areas of Critical Environmental Concern" (ACEC) and Special Areas, as well as the Big Morongo Canyon Preserve recognized by The Nature Conservancy. Although these conservation and preservation planning areas are co-located in the Desert Region of San Bernardino County with the Project site, the Project would not impact these areas. Of these conservation planning areas, Johnson Valley and Soggy Dry Lake are located closest to the Project sites, at 16 miles and 14 miles respectively. The Project would not impact these or any of the other conservation and preservation planning areas throughout the Valley Region of San Bernardino County. Currently, there is not a regional Multiple Species Habitat Conservation Program in place within San Bernardino County. The Project site is not located on or near any conservation areas. Therefore, the Project would not conflict with any applicable habitat conservation plan or natural community conservation plan. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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) **Would the Project 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? No Impact.** The United States Geological Survey (USGS) Mineral Resources Spatial Data Mapper was used to determine that no metallic or nonmetallic mineral resources have been mapped on the Project area. In addition, although mining claims have been registered for much of the region surrounding the Project area, no active mines or mining claims are located on or in the immediate vicinity of the Project site and the site is not within a Mineral Resource Zone Overlay (USGS 2018). Resources that have been extracted in the region include tungsten, silver, dolomite, and limestone. According to the California Soil Resource Lab, soils on the site are a good source for road fill, fair source for topsoil and sand, but a poor source for gravel for construction purposes. Implementation of the Project would not result in the loss of any known mineral resources on the subject site. Therefore, the Project would not 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. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **Would the Project 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? No Impact.** The Project would not have any impacts regarding the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan (see Section XI.a). Therefore, no impacts would result from the Project and no mitigation would be required. This topic will not be analyzed further in the EIR.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XII.	**NOISE** - Would the Project:				
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) **Would the Project result in 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? Potentially Significant Impact.** The Project is adjacent to rural residences, undeveloped and/or vacant land; therefore, noise generated from the Project could potentially expose persons to or generate noise levels in excess of standards established in the County General Plan or Noise Ordinance, or applicable standards of other agencies. The Project has the potential to expose persons to elevated levels of noise during construction and operation. Therefore, this topic will be further analyzed in the EIR.

b) **Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? Potentially Significant Impact.** Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground that diminishes (attenuates) fairly rapidly over distance. The Project has the potential to cause an increase in groundborne vibration or noise during construction. Therefore, this topic will be further analyzed in the EIR.

Operation of the Project would not generate audible levels of noise or perceptible levels of vibration in the surrounding community. On-site noises would be limited to power drive motors that rotate the photovoltaic panels on the single-axis tracking system, noise generated by the transmission equipment, and maintenance activities (including cleaning, drive motor repair, tracker repair, electrical connection repair, transmission line repair, and panel replacement). Further, the Project would not include additional dwellings or other development that would subject persons to groundborne vibrations, nor would it have the potential to generate any additional vibration after construction is completed. Therefore, the Project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels during operation. Less than significant impacts would result from the Project's groundborne operational vibration or groundborne noise generation and this topic will not be further analyzed in the EIR.

c) **Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project? Potentially Significant Impact.** The Project has the potential to increase ambient noise levels. Therefore, this will be further analyzed in the EIR.

d) **Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project? Potentially Significant Impact.** The Project has the potential to cause a temporary or periodic increase in ambient noise levels. Therefore, this topic will be further analyzed in the EIR.

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? No Impact.** The Project area is not located within an airport land use plan and it is not within 2 miles of a public airport or public use airport as the nearest public airport is the Ontario Airport located approximately 50 miles south of the Project area Therefore, the Project would not result in exposure of people residing or working in the Project area to excessive noise levels. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

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? No Impact.** The Project area is not located within the vicinity of a private airstrip. The nearest airport is the privately-owned Holiday Ranch Airport, which is located approximately 7 miles to the west of the Project area. Aircraft using this airport are limited to a single engine, which limits the noise produced during takeoffs and approaches to the airport that may include the airspace over the Project area.

Therefore, the Project would not be within the vicinity of a private airstrip, such that the Project would expose people residing or working in the Project area to excessive noise levels. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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) **Would the Project 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)? Less than Significant Impact.** The Project does not include development of residences or infrastructure that would facilitate the construction of new homes or business. Infrastructure improvements to the electrical system proposed would enable generated electricity to be delivered to the grid to serve existing electrical demand. Local infrastructure improvements would be limited to access roads for the Project. Therefore, the Project is not anticipated to result in an increase in new residential homes nor directly or indirectly induce population growth. Impacts would be less than significant, and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? No Impact.** No occupied houses or other residences would be removed or otherwise displaced by the Project. Accordingly, the Project would not result in any impacts to housing or related infrastructure, nor require construction of additional housing. Therefore, the Project would not displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

c) **Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? No Impact.** As previously discussed in Section XIII.b), no inhabited housing or other residential uses would be removed or otherwise displaced by the Project. Accordingly, the Project would not result in any impacts to housing or related infrastructure, nor require construction of additional housing. Therefore, the Project would not

displace a substantial number of people necessitating the construction of replacement housing elsewhere. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

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:				
i) Fire Protection?	☐	☐	☒	☐
ii) Police Protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other Public Facilities?	☐	☐	☐	☒

SUBSTANTIATION:

a) i) **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 Fire Protection services? Less than Significant Impact.** The Project area is serviced by the North Desert Division of the San Bernardino County Fire Department. Lucerne Valley Station 8 is located approximately 5.5 miles to the south of the Project site. During construction some public services may be required, such as fire protection, but these would be short-term requirements and would not require increases in the level of public service offered or affect these agencies' response times.

Any development, along with the associated human activity, in previously undeveloped areas increases the potential of the occurrence of wildfires. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulations would be implemented for the Project that would minimize the occurrences of fire due to Project activities during construction and for the life of the Project. Because of the low probability and short-term nature of potential fire protection needs during construction, the

Project would not result in associated significant impacts. During operations and maintenance, the Project would introduce potential ignition sources that do not currently exist on the site. The equipment on the site that may be ignition sources during operation and maintenance includes transformers, capacitors, electric transmission lines (including the gen-tie line), substations, vehicles, and gas- or electric-powered small hand tools. Depending on the type of battery selected for the energy storage component, the potential hazards are primarily associated with the possibility of thermal runaway (similar to overheating) occurring from a malfunctioning or damaged battery. Newer battery technologies have minimized the occurrence of thermal runaway through a system of protections including internal cell monitoring and partitioning; use of non-flammable chemicals; container design and features; ventilation, and air-conditioning (HVAC) systems; and inert gas fire suppression systems. The inverters and solar panels also represent potential ignition sources that have a low likelihood of causing fires. This equipment represents a risk of sparking or igniting nearby off-site flammable vegetation. However, all battery components would be on concrete pads, within an enclosed structure, avoiding contact with ignition sources and would not include liquids that could spill. The enclosed structure would be equipped with a fire suppression system. Additionally, the Project would be constructed in compliance with requirements from San Bernardino County Fire (conditions of approval) and would be subject to payment of Public Safety Public Safety Services Impact Fees in conformance with San Bernardino County Development Code Section 84.29.040(d) for solar facilities to ensure that the Project would not adversely affect the provision of fire protection services in the area. Due to the nature of battery storage, a fire management plan would also be developed as part of the Project design.

Therefore, the Project would 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, to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. Impacts would be less than significant. Additional analysis is not warranted in the EIR.

ii) **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 Police Protection services? Potentially Significant Impact.** The Project area and other unincorporated portions of the County are served by the San Bernardino County Sheriff's Department. The nearest San Bernardino County Sheriff's Station is located approximately 5.5 miles to the south of the

Project site. Due to the large expanse that the deputies cover, they regularly assist and are assisted by the California Highway Patrol, Barstow Police Department, and the BLM Rangers. The Project would be unmanned, remotely monitored, and fenced for security. Therefore, the Project would not impact service ratios, response times, or other performance objectives related to police protection. However, due to the number of on-site workers during construction, some public services may be required, such as police protection, but these would be short-term requirements and would not require increases in the level of public service offered or affect these agencies' response times. The Project would be subject to the payment of Public Safety Public Safety Services Impact Fees in conformance with San Bernardino County Development Code Section 84.29.040(c) for solar facilities to ensure that the Project would not adversely affect the provision of police protection services in the area.

Therefore, the Project would 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 police protection services. Impacts would be less than significant. Additional analysis is not warranted in the EIR.

iii) **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 School services? No Impact.** The Project would be unmanned and would not increase demand on school facilities. Construction of the Project would introduce a temporary increase in workers, but they would not be anticipated to relocate to the area or bring their families for the construction as the workers would be sourced from San Bernardino, surrounding counties and/or be active for only a few months. As such, the Project would not result in an increase in population in the area that would necessitate additional schooling services. Therefore, the Project would 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 school services. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

iv) **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 Park services? No Impact**. The Project would be unmanned and would not increase demand on park facilities. Construction of the Project would introduce a temporary increase in workers, but they would not be anticipated to relocate to the area or bring their families for the construction as the workers would be sourced from San Bernardino, surrounding counties and/or be active for only a few months. As such the Project would not result an increase in population into the area that would necessitate additional park services. Therefore, the Project would 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 park services. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

v) **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 other public facilities? No Impact.** The Project would be unmanned and would not increase demand on other public facilities (such as libraries). Construction of the Project would introduce a temporary increase in workers, but they would not be anticipated to relocate to the area or bring their families for the construction as the workers would be sourced from San Bernardino, surrounding counties and/or be active for only a few months. As such the Project would not result an increase in population into the area that would necessitate additional other public facilities (such as libraries). Therefore, the Project would 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 other facilities (such as libraries). No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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) **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? No Impact.** The Project would be unmanned and would not increase demand on recreational facilities. Construction of the Project would introduce a temporary increase in workers, but they would not be anticipated to relocate to the area or bring their families for the construction as the workers would be sourced from San Bernardino, surrounding counties and/or be active for only a few months. As such the Project would not result an increase in population into the area that would increase the use of recreational facilities. Therefore, the Project would not result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

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? No Impact.** The Project would not include any recreational facilities and would be unmanned thereby not increasing demand on recreational facilities such that their construction or expansion would be necessitated. Construction of the Project would introduce a temporary increase in workers, but they would not be anticipated to relocate to the area or bring their families for the construction as the workers would be sourced from San Bernardino, surrounding counties and/or be active for only a few months. As such the Project would not result an increase in population into the area that would increase the use of recreational facilities. Therefore, the Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	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) **Would the Project 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? Potentially Significant Impact.** Project construction activities would not require closure of SR 247, but would likely require short-term traffic control to minimize traffic disruption during the crossing of SR 247. To ease potential traffic area congestion as a result Project construction, designated ingress and egress routes would be used. No other transportation modes exist in the area other than SR 247 and rural surface roadways. Because construction activities would be temporary, no permanent alterations to the circulation system would result. However, construction activities would result in additional worker trips and trips associated with deliveries (components,

materials, etc.). This could result in a potentially significant impact on local roadways including SR 247. Because the potential exists for construction activities to conflict with the performance of the existing circulation system, review and approval of a construction management plan would be required. Impacts to the local circulation system will be analyzed further in the EIR.

b) **Would the Project 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? Potentially Significant Impact.** At the initiation of Project construction, equipment that may include water trucks, backhoes, trenchers, plows, and trackhoes would be mobilized to the Project site using SR 247. This equipment would then be stored on-site for the duration of construction and used as construction progresses. Additional vehicles delivering Project components (e.g. solar panels) would be used during the lifetime of Project would also be necessary. However, impacts to local traffic on SR 247 due to mobilizing construction equipment and delivery of machinery would be short-term.

The San Bernardino County Department of Public Works maintains paved and unpaved roadways in the county's unincorporated areas. These roads typically experience minimal use since there are limited residences or other traffic-generating uses in the area. Daily increases to traffic volumes during construction would primarily result from Project personnel commuting to and from the work site. The numbers of construction workers and associated construction trips for the Project would potentially affect the levels of service along SR 247. Project construction activities would not require closure of SR 247, but would likely require short-term traffic control to minimize traffic disruption. To further ease potential traffic congestion as a result of the Project, designated ingress and egress routes would be used. Due to these potential impacts, additional analysis in the EIR is warranted.

c) **Would the Project 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? Less than Significant Impact.** The nearest airport is the Holiday Ranch Airport which is located approximately 7 miles to the west of the Project site. The tallest components of the Project would be the on-site collector Project substation consisting of components up to 55 feet in height and overhead lines supported by 45- to 60-foot tall poles for the single and double circuits, respectively. With the exception of existing tall steel lattice towers supporting 500 kilovolt (kV) transmission lines in the Project area, vertical elements at the proposed substation facility would be greater in height than existing residential structures in the vicinity.

The support structures for the gen-tie would be either lattice steel towers or tubular monopoles made of steel or concrete and would be spaced approximately 500 feet apart for approximately

0.2 mile. The Project would consist of solar arrays approximately 12 feet above ground surface and would be surrounded by a fence that would consist of 6-foot-high chain-link topped with 1 foot of three-strand barb wire. The on-site substation would consist of a power transformer; foundations and oil containment system for the power transformer; concrete pad for the relay enclosure structure; a pre-fabricated relay enclosure to enclose the protection and control equipment; metering equipment; dead end structured high and voltage step-up transformer, disconnect switches, circuit breakers and all associated equipment required to be compliant with utility grade interconnection services. The substation facilities would house the power generation control and relaying equipment, station batteries, SCADA and communications systems, and potentially housing with radio or microwave communication mounted on a transmission tower.

Because the proposed transmission line would be constructed in close proximity to existing larger transmission support structures associated with the existing SCE transmission corridor, over 7 miles from the nearest airport, and constructed consistent with FAA requirements to ensure avoidance of potential air traffic collisions or hazards, the height of vertical components of Project would not affect air traffic patterns.

While the solar arrays height would be less than many of the other components of the Project, at approximately 12 feet tall, common preconceptions of solar panels associate solar panels with glare. The Project would generally avoid the use of materials such as fiberglass, aluminum or vinyl/plastic siding, and brightly painted steel roofs, which have the potential to create on- and off-site glare impacts. Unlike solar thermal facilities, which rely on large fields of mirrors to reflect light, the potential reflection from solar PV modules used on a tracker mounting system is inherently low due to the materials of its construction and its mode of operation. PV cells are designed to capture (rather than reflect) nearly all sunlight. Reflected light from the surface of standard PV modules is between 10 to 20 percent of the incident radiation (lower than free water and glass surfaces), while steel (used in industrial roofs) is between 40 to 90 percent (Aztec 2014). In addition, because tracker systems follow the sun, the underside of the PV panels and most of the structure supporting them are shadowed throughout the day. The solar reflectivity of the PV panels used would be low and include an anti-glare coating, because the material used to manufacture solar panels is designed to absorb rather than reflect sunlight. As such, potential effects on air traffic patterns would be less than significant (refer also to Section I.d).

Therefore, the Project would not 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. Impacts would be less than significant, and no mitigation is required. This topic will not be analyzed further in the EIR.

d) **Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Potentially Significant Impact.** The Project would include use of existing roads off SR 247 during construction activities and does not propose the construction of new roadways containing potentially hazardous features. Therefore, the Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections). However, the Project could temporarily increase hazards due to oversized delivery vehicles using SR 247 during construction. Therefore, this topic will be analyzed in the EIR.

e) **Would the Project result in inadequate emergency access? Less than Significant Impact**. The Project proposes class-III base roads off of SR 247 suitable for emergency vehicle access and emergency access roads within the facility would be suitable for emergency vehicular use. In addition, overrides of access gates for emergency access to the facility would be installed. Impacts would be less than significant and this topic will not be analyzed further in the EIR. The Project would not result in closures of SR 247 that might have an effect on emergency access in the vicinity of the Project site. During Project construction, all vehicles would be parked off of public roads and would not block emergency access routes. Therefore, the Project would not result in inadequate emergency access to the Project area. Impacts would be less than significant, and no mitigation is required. This topic will not be analyzed further in the EIR.

f) **Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? No Impact.** No alternative transportation policies, plans, or programs have been designated for the Project area. The nearest public transit provider is the Victor Valley Transit Authority which provides bus service to the cities of Adelanto, Apple Valley, Barstow, Hesperia, Helendale, Lucerne Valley, Phelan, San Bernardino, Victorville, and Wrightwood. Therefore, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities. No impacts would result, and no mitigation is required. This topic will not be analyzed further in the EIR.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVII.	**TRIBAL CULTURAL RESOURCES -**Would the Project cause a substantial adverse change in the significance of a tribal cultural resources, as defined in the Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is:				
a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☒	☐	☐	☐
b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☒	☐	☐	☐

SUBSTANTIATION:

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

a) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? Potentially Significant Impact.** Assembly Bill (AB) 52 took effect on July 1, 2015. AB 52 requires a lead agency to make best efforts to avoid, preserve, and protect tribal cultural resources. The bill states that tribal cultural resources are:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either (i) included or determined to be eligible for inclusion in the California Register of Historical Resources; or included in a local register of historical resources;
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c);
3. A cultural landscape that meets one of the criteria of 1), above, and is geographically defined in terms of the size and scope of the landscape; and/or

4. A historical resource described in PRC 21084.1, a unique archaeological resource described in PRC 21083.2(g), or a non-unique archaeological resource as defined in PRC 21083(h) if it conforms with the criteria of 1), above.

Prior to the release of the CEQA document for a Project, AB 52 requires the lead agency to initiate consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Project if: (1) the California Native American tribe requested the lead agency, in writing, to be informed by the lead agency through formal notification of projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

As the lead agency under CEQA, the County is responsible for and has initiated formal government-to-government consultation with Native American Tribes under California Assembly Bill 52. The County will conduct formal consultation, and any information obtained through those processes may be included in the EIR. Therefore, this topic will be further analyzed in the EIR.

b) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? Potentially Significant Impact.** As discussed above in Section XVII.a), the Project would be compliant with AB 52. However, the Project has the potential to affect tribal cultural resources as determined by the lead agency and California Native American tribes. Therefore, this topic will be further analyzed in the EIR.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVIII.	**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) **Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? Less than Significant Impact**. The Project would not exceed wastewater treatment requirements of the Colorado River RWQCB. The Project would be unmanned, and no permanent infrastructure improvements for sanitation purposes (e.g., bathrooms) would be constructed. Construction of the Project would result in the generation of various waste materials including soil, vegetation, and sanitation waste (portable toilets). Soil excavated for the Project site would either be used as fill or disposed of off-site at an appropriately licensed waste facility. Sanitation waste (i.e., human generated waste) would be disposed of according to sanitation waste management practices. During construction, water used for dust suppression and earthwork activities would be directly applied to on-site soil, and no runoff from the site is anticipated. The Project would discharge uncontaminated water that is used to clean

the solar panels, with no toxicants or cleaning agents used. Impacts would be less than significant and no mitigation measures are required. This topic will not be further analyzed in the EIR.

b) **Would the Project 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? No Impact.** The Project would be unmanned, and no operation and maintenance building would be constructed. Public wastewater treatment services would therefore not be required, and no increase in demand for such services would occur. Construction and operational water for panel rinsing would be provided primarily by groundwater from the Este Subarea of the Mojave Groundwater Basin. Additionally, water supply may be secured via a newly permitted and drilled on-site groundwater well (if necessary). The Project would not result in a determination by the water or wastewater treatment provider that serves the Project area that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, no impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

c) **Would the Project 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? Potentially Significant Impact.**

A Preliminary Flood Risk Analysis was prepared for the Project (Westwood 2018). The Project would be anticipated to use approximately 125 acre-feet of water during construction and approximately 12 acre-feet of water for operations. The Project would discharge uncontaminated water that is used to clean the solar panels, with no toxicants or cleaning agents used. It is assumed that the insubstantial quantity of discharged water generated by cleaning would be absorbed into the soils on-site.

Most of the ground surface within the Project area would not be covered with impermeable material. However, the Project sites are located in and adjacent to a dry lakebed (Lucerne (dry) Lake), which is flat with no outlet. Soils within the dry lakebed are classified as a playa which is impermeable clay and most closely relates to a "D" soil which has high runoff potential and very little infiltration. As such, storm water management basins are proposed throughout the Project area.

Although minor, grading would occur throughout the sites. Construction of the Project would therefore increase impermeable surfaces on-site and impacts to storm water drainage could result. Further, although minor, grading would occur throughout the sites for the construction of roads, on-site substation, energy storage system, storm water management basins and inverter pads and would alter existing on-site drainage patterns. The Project would require or result in the

construction of new storm water drainage facilities on-site, the construction of which could cause significant environmental effects. This topic will be further analyzed in the EIR.

d) **Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded, entitlements needed? Potentially Significant Impact**.

Total water consumption during construction is estimated to be approximately 125 AF for the purpose of dust suppression and earthwork. This water use would occur over an estimated 11-month construction period and would be provided by groundwater. In addition, during construction water would be pumped directly into 2,000-gallon to 4,000-gallon tank water trucks, or water may be stored in overhead, temporary, approximately 12,000-gallon water storage tower/tanks (up to 16 feet tall), to assist in the availability of water for trucks and expedient filling thereof. The water storage tower/tanks would be covered. Water for Project operations and panel rinsing would be provided by groundwater. The solar and energy storage Project proposes the use of up to 12 AF of groundwater per year during operation. The majority of this water demand is for routine panel washing (approximately 12 AF per year). Approximately 0.6 AF per year would be used for maintenance and repair dust suppression. It is assumed that this water demand is the consumptive use for the Project as there would likely be negligible return flow to the groundwater supply underlying the Project site.

Panel washing for a solar and energy storage Project of this size would require approximately 15 days to complete per wash cycle. Water consumption is expected to be around 0.28 gallons per square yard of panel, based on other similar PV solar operations. Given a 100 MW AC plant, with four cycles per year, the annual water usage is expected to consume up to approximately 12 AF of water. In the event the flow rate of the on-site well(s) is insufficient to support rinsing panels, a small temporary tank would be set up to store pumped groundwater to support the rinsing activity. The tank would be stored upon completion of the rinse event. During construction, if the flow rate of the on-site well or wells is insufficient to support peak water demands groundwater may be pumped to a large or several large temporary above ground storage tanks for storage and use during peak water demand associated with construction activities. Potable water would be supplied via filtered well water or bottled water for drinking purposes.

The Project has sufficient water supplies available from existing entitlements, and no new, or expanded, entitlements are needed. However, a new well may be required. This issue will be further analyzed in the EIR.

e) **Would the Project 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? No Impact**. The Project would be unmanned and would not require wastewater service. Therefore, the Project would not 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. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

f) **Would the Project be served by a landfill(s) with sufficient permitted capacity to accommodate the Project's solid waste disposal needs? Less than Significant Impact**. The Project would be unmanned, and solid waste would largely result from short-term construction activities (with short-term waste generation limited to construction debris) and would not result in long-term solid waste generation. San Bernardino County adopted the California Green Building Standards Code (CalGREEN) which includes mandatory construction and demolition waste recycling (San Bernardino County 2018). Projects that have the potential to generate construction and demolition waste are required to submit a Construction and Demolition Waste Management Plan (CDWMP) to identify the estimated quantity and location of recycling for construction and demolition waste resulting from the Project. Per the 2016 CalGREEN code, 65% of construction and demolition materials must be diverted away from the landfill by either recycling or reusing materials. The CDWMP must be approved by the County's Solid Waste Management Division prior to issuance of building permits.

Solid waste associated with the Project would be disposed as appropriate in a local landfill or at a recycling facility. The nearest active landfill is the Barstow Landfill, located approximately 19 miles north of the Project site at 32553 Barstow Road. This Class III landfill accepts agricultural, construction/demolition, industrial, mixed municipal, and biosolid wastes. According to the California Department of Resources Recycling and Recovery (CalRecycle), this landfill has a remaining capacity of 71,481,660 cubic yards[2] and is not scheduled to cease operations until the year 2071 (CalRecycle 2018). The Project over its lifecycle would have negligible solid waste disposal requirements and the Barstow Landfill has sufficient permitted capacity to accommodate the Project's solid waste disposal requirements.

The proposed solar and energy storage Project components, including panels and tracking system, shall eventually need to be decommissioned and disposed. Panels typically consist of silicon, glass, and a metal frame. Tracking systems (not including the motors and control systems) typically consist of aluminum and concrete. All of these materials can be recycled. Concrete from

[2] One ton equals 1.35 cubic yards.

deconstruction would be recycled through local recyclers. Metal and scrap equipment and parts that do not have free flowing oil would be sent for salvage. Equipment containing any free-flowing oil would be managed as hazardous waste and evaluated before disposal at a properly permitted and licensed disposal facility. Oil and lubricants removed from equipment would be managed as used oil and disposed in accordance with applicable state hazardous waste disposal requirements. Therefore, less than significant impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

g) **Would the Project comply with federal, state, and local statutes and regulations related to solid waste? No Impact**. The Project would comply with all federal, state, and local statutes and regulation related to solid waste. The Project would be unmanned and thus waste generation would consist of short-term construction activities (with short-term waste generation limited to construction debris) and thus would not result in long-term solid waste generation. Solid waste produced during the construction phase of the Project, or during future decommission activity of the proposed solar and energy storage, would be disposed of in accordance with all applicable statutes and regulations.

Therefore, the Project would not result in impacts related to solid waste. No impacts would result from the Project and no mitigation is required. This topic will not be analyzed further in the EIR.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIX.	**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) **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? Potentially Significant Impact.** The Project has the potential to substantially degrade the quality of the environment, 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, and/or eliminate important examples of the major periods of California history or prehistory. The Project, as described throughout the various sections of this checklist, has the potential to impact these resources and such topics will be analyzed further in the EIR.

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). Potentially Significant Impact.** Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The

cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period.

The *CEQA Guidelines*, Section 15130 (a) and (b), states:

a. Cumulative impacts shall be discussed when the Project's incremental effect is cumulatively considerable.

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

Impacts considered cumulatively considerable from the Project and other projects in the surrounding area will be analyzed further in the EIR for the resources most likely to be cumulatively affected by the Project. These include aesthetics, air quality, biological resources, and noise.

c) **Does the Project have environmental effects, which shall cause substantial adverse effects on human beings, either directly or indirectly? Potentially Significant Impact**. The Project has the potential to directly or indirectly cause substantial adverse effects on human beings or resource categories involving effects to human beings, including aesthetics, air quality and noise. Therefore, these topics will be further analyzed in the EIR.

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