SAN BERNARDINO COUNTY
INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

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

Project Label:

APN:	0453-091-11, 12, 24, 29, 31, 48, 51, 72, & 0453-041-07
Applicant:	Ord Mountain Solar, LLC 700 Universe Boulevard Juno Beach, FL 33408
Community:	Kramer Junction
Location:	East of State Route 247; North of Haynes Road; West of Meridian Road; approximately 8 miles north of Lucerne Valley
Project No:	P201600510/CUP
Staff:	John Oquendo, AICP
Rep:	Matt Valerio Dudek 605 Third Street Encinitas, CA 92024
Proposal:	A Conditional Use Permit to establish a 60-Megawatt Solar Photovoltaic Energy Facility and 60-Megawatt Energy Storage Facility on 484-acres, and a 0.6-mile 220-kiloVolt overhead transmission line, with a Major Variance to modify the maximum structure height to permit the construction of onsite transmission poles and related structures up to 94 ft. in height.

USGS Quad:	White Horse Mountain
Lat/Long:	34°33'36.74"N/116°56'0.97"W
T, R, Section:	T05N R1W Sec. 1 T05N R1W Sec. 2 T06N R1W Sec. 36
Thomas Bros	P4120/ GRID: A & B-7 P 4120 / GRID: A & B-1
Community Plan:	Lucerne Valley Community Plan
LUZD:	LV/AG-40, LV/AG
Overlays:	Biotic Resources, AR-4, Lucerne Valley Local Fee Area

Project Contact Information:

Lead agency:	County of San Bernardino Land Use Services Department 15900 Smoke Tree Street, Suite 131 Hesperia, CA 92345
Contact person:	John Oquendo, AICP, Planner
Phone No:	(760) 995-8153 ***Fax No:*** (760) 995-8167

Summary

The initial evaluation herein addresses the potential impacts of the proposed Ord Mountain Solar and Energy Storage Project and the Calcite Substation Project; together they represent the "proposed project" for environmental evaluation purposes under the California Environmental Quality Act (CEQA) (CEQA Guidelines Section 15378). The Ord Mountain Solar and Energy Storage Project is proposed by Ord Mountain Solar LLC (Applicant) and the Calcite Substation Project is proposed by Southern California Edison (SCE). The Ord Mountain Solar and Energy Storage Project is both practically located to be close to SCE's proposed Calcite Substation and the first trigger need for that substation. The location of both projects is in close proximity to the existing SCE transmission corridor. Because it is a necessary infrastructure improvement to allow the proposed solar and energy storage project to connect to the grid, the Calcite Substation is a connected project. The Calcite Substation has not been approved

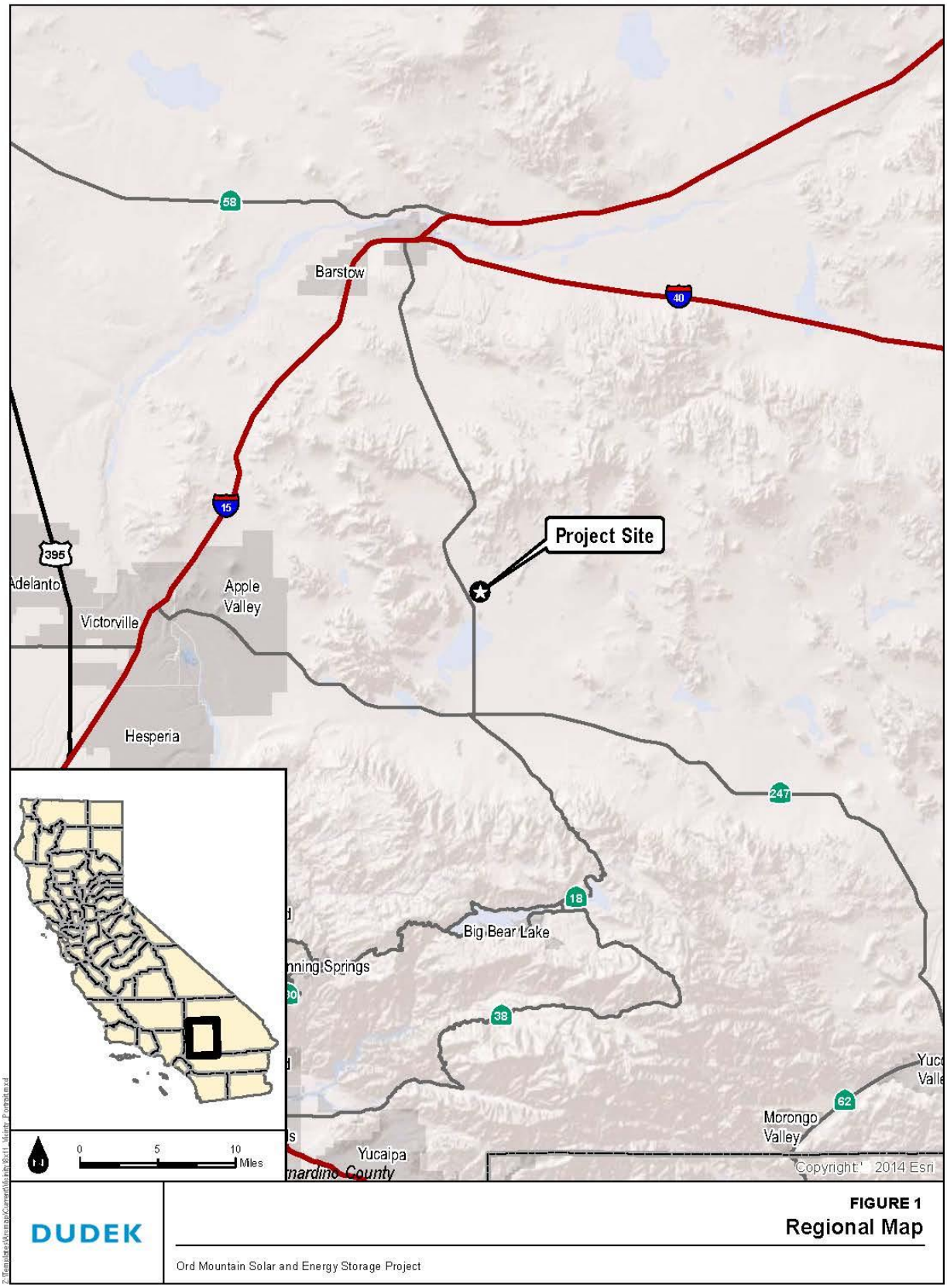
or reviewed by an agency and will necessarily need to be included in the analysis in the Environmental Impact Report (EIR) as part of the whole of the action (proposed project). The Calcite Substation project is not subject to any discretionary County approvals and is not a part of the conditional use permit application for the proposed Ord Mountain Solar and Energy Storage project. To conduct adequate review under CEQA, the EIR will include detailed description and analysis of the Ord Mountain Solar and Energy Storage Project and the Calcite Substation Project, including alternatives. Approvals by the California Public Utilities Commission (CPUC) are necessary for the Calcite Substation and the CPUC is a responsible agency for the purposes of environmental evaluation. In the analysis herein the proposed project means both the Ord Mountain Solar and Energy Storage Project and the Calcite Substation Project, which may be individually identified as a connected project, each being a connected project to the other, or simply by their distinct names.

Proposed Solar and Energy Storage Project Description

Ord Mountain Solar LLC (Applicant) proposes to construct and operate the Ord Mountain Solar and Energy Storage Project (proposed solar and energy storage project) on approximately 484 acres to produce approximately 160,000 megawatt-hours (MWhs) of renewable energy annually. The proposed solar and energy storage project would be a 60-Megawatt (MW) alternating current (AC) photovoltaic (PV) solar energy facility with associated on-site substation, inverters, fencing, roads, and supervisory control and data acquisition (SCADA) system. The proposed solar and energy storage project would include a 60 MW AC maximum capacity, 4-hour energy storage (battery) system. The proposed solar and energy storage project also would include a 220-kilovolt (kV) overhead generation tie line (gen-tie line), which would extend approximately 0.6 mile southwest to Southern California Edison's (SCE) proposed Calcite Substation, in close proximity to the existing high-voltage transmission corridor.

Proposed Solar and Energy Storage Project Location

The proposed solar and energy storage project site is situated roughly in the southern portion of Section 36, Township 6 North, Range 1 West, the northern portion of Section 1, Township 5 North, Range 1 West, and the southern portion of Section 2, Township 5 North, Ranch 1 West, S.B.B. & M. of the White Horse Mountain, CA U.S. Geological Survey (USGS) 7.5-topographic quadrangle at approximately Latitude/Longitude 34°33'36.74"N/116°56'0.97"W (Figure 2, Vicinity Map). The proposed solar and energy storage project site is located east of State Route (SR) 247; north of Haynes Road; and west of Meridian Road, approximately 8 miles north of Lucerne Valley, in unincorporated San Bernardino County (County). The gen-tie line would extend southwest from the proposed solar and energy storage project site to the proposed SCE Calcite Substation, west of SR-247.


58
Barstow
40
15
395
Adelanto
Apple Valley
Victorville
Project Site
Hesperia
247
18
Big Bear Lake
38
62
Morongo Valley
Yucaipa
0 5 10 Miles
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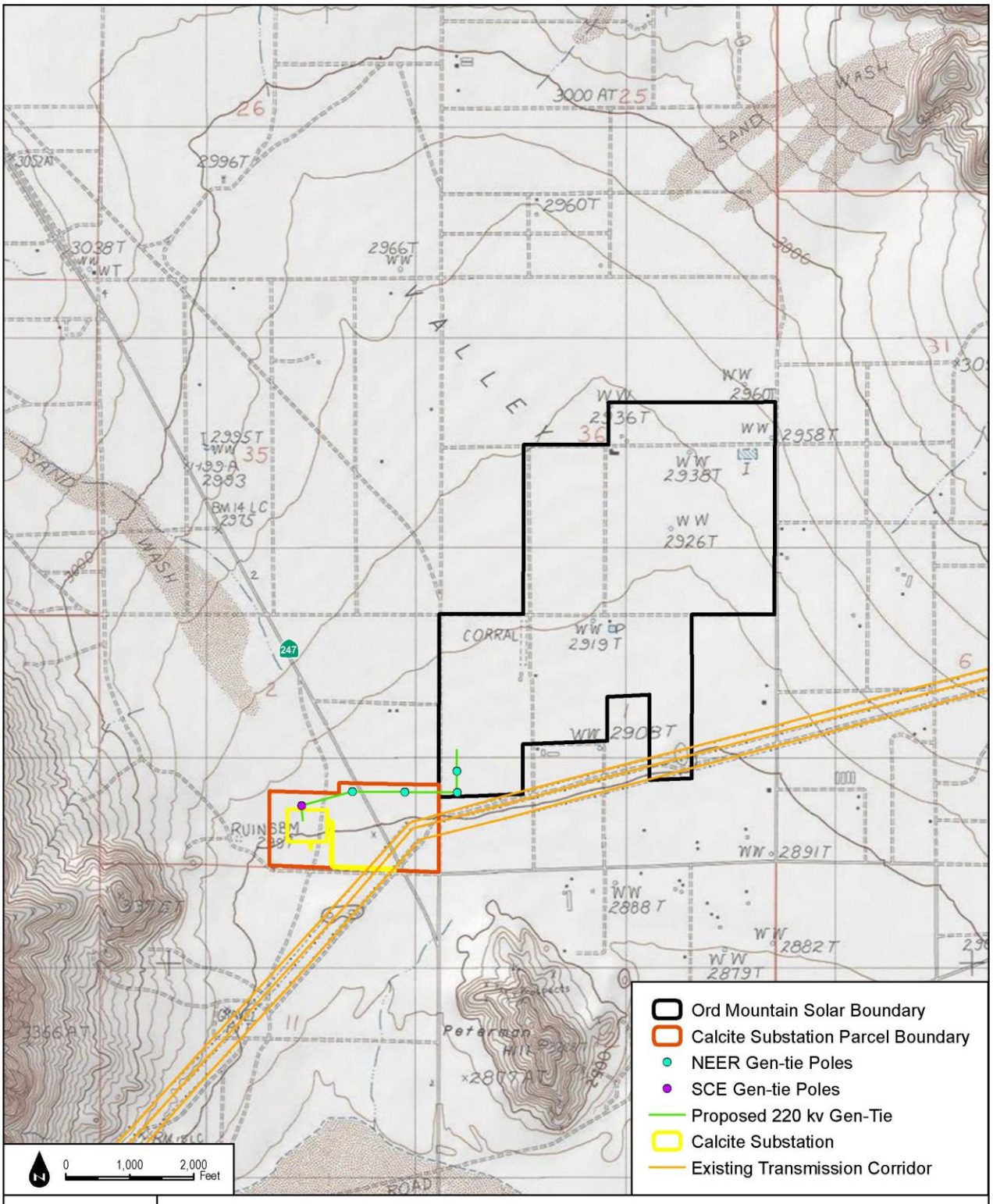
DUDEK
FIGURE 1
Regional Map
Ord Mountain Solar and Energy Storage Project


Ord Mountain Solar Boundary
Calcite Substation Parcel Boundary
NEER Gen-tie Poles
SCE Gen-tie Poles
Proposed 220 kv Gen-Tie
Calcite Substation
Existing Transmission Corridor
0
1,000
2,000
Feet
SOURCE: USGS 7.5-Minute Series White Horse Mountain Quadrangle
DUDEK
FIGURE 2
Vicinity Map
Ord Mountain Solar Energy Storage Project and Calcite Substation Project

Proposed Solar and Energy Storage Project Setting

The location of the proposed solar and energy storage project has been selected because of its proximity to the existing high-voltage transmission corridor and a SCE proposed Calcite Substation; the fact that the land was previously used for agriculture and is now fallow; the site has nearby access to existing roads reducing the need for new roads; and the site is in an area with excellent solar irradiance. The proposed solar and energy storage project site is essentially flat with only an approximate 1.5% gradient overall. The site generally slopes from northwest to southeast, with elevations of approximately 2,980 to 2,900 feet above mean sea level. Locally, the proposed solar and energy storage project would be accessed via SR-247 and an internally constructed road system. The project area would include the approximately 0.6 mile gen-tie overhead transmission line from the proposed solar and energy storage project's on-site substation to the SCE proposed Calcite Substation.

The proposed solar and energy storage project site is composed of fallow agricultural fields with some early succession saltbush scrub vegetation in isolated patches, which for the most part, has been degraded due to the agricultural use and livestock grazing on site. The transmission line would traverse undeveloped Mojave creosote bush scrub and desert saltbush scrub.

According to the UC Davis Soil Resource Laboratory and the Natural Resources Conservation Service (NRCS), five types of soil have been mapped on the proposed solar and energy storage project area: Helendale loamy sand, 0 to 2% slopes; Helendale loamy sand, 2 to 5% slopes; Cajon sand, 0 to 2% slopes; Cajon-Arizo complex, 2 to 15% slopes; and Wasco sandy loam, cool, 0 to 2% slopes. All of the mapped soil types are moderately well-drained with high infiltration (RCC 2016) and are suitable for a PV solar development project.

The geology of the proposed solar and energy storage project property and surrounding vicinity is characterized as a veneer of quaternary alluvium overlying mesozioc-age granite and quartz monzonite intruded into Paleozoic metasedimentary rocks. Historically, agricultural irrigation wells have been completed in the alluvium overlying basement granitic and metasedimentary rock. The 1996 Mojave Basin area adjudication created the Este subarea, which includes the Lucerne Valley groundwater basin and the Fifteen mile Valley groundwater basin. The proposed solar and energy storage project is located within Lucerne Valley groundwater basin, encompassed by the Este subarea of the Mojave Basin judgement 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. Based on well completion reports provided by the Department of Water Resources (DWR), the alluvium of the proposed solar and energy storage project boundary ranges from 165 feet to 330 feet in thickness.

The proposed solar and energy storage project site has 19 identified groundwater wells on-site in various conditions from prior agricultural activities. Of the existing 19 groundwater wells, six have production potential and two have been identified as potentially ideal for use as a water source(s) for proposed solar and energy storage project construction and operation. Improvements to the wells, such as new pumps, or drilling of replacement wells, may be necessary. Several of the pumps are provided electrical power via existing distribution lines, but distribution power may need to be extended in the event that the preferred well is not currently being serviced.

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.

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	Agriculture (fallow)	LV/AG (Lucerne Valley/Agriculture) LV/AG-40
Gen-Tie	Agriculture (fallow)/SCE Transmission	LV/AG; LV/AG-40
On-Site Substation	Vacant	LV/AG-40
North	Agriculture (fallow)	LV/AG-20/-40
South	Agriculture (fallow)	LV/AG-
East	Agriculture (fallow)	LV/RL/RC (Rural Living/Resource Conservation)
West	Agriculture (fallow)	LV/AG-20/-40; LV/RC

Source: San Bernardino County Land Use Services Department, 2016.

Project Characteristics

The proposed solar and energy storage project consists of the following components:

- Solar Energy Generation System
- On-site Substation
- Energy Storage System
- Generation Tie Line
- Ancillary Facilities

Solar Energy Generation System

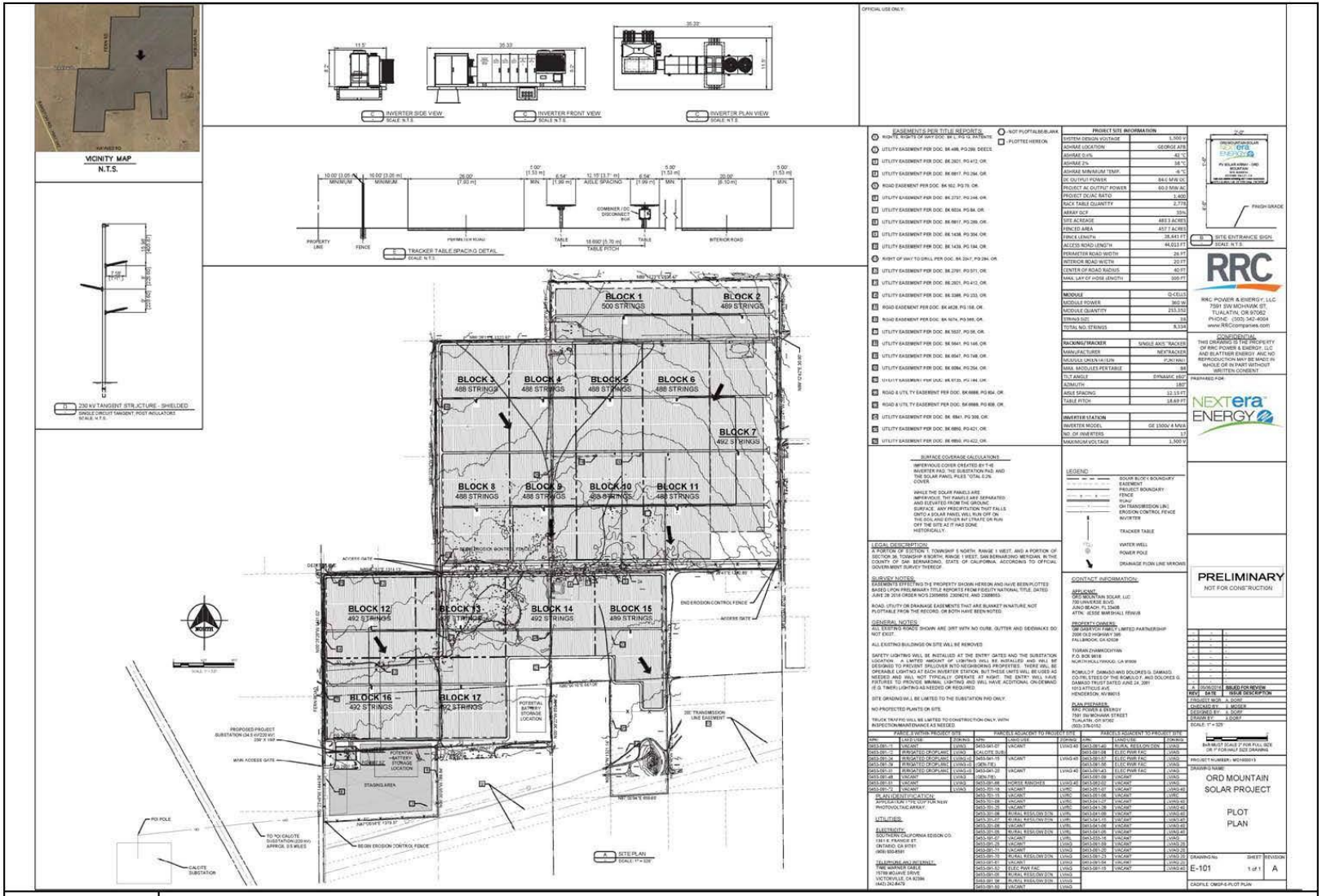
The proposed solar and energy storage project includes a 60 MW solar power generating installation built over a 10-month period. The 484-acre site would house all structures including solar panels, tracking/support structures, inverters, SCADA, and interconnection facilities (on-site substation) all of which would be enclosed by a perimeter security fence. The proposed site plan is shown in Figure 2

Site Plan. Solar energy would be captured by an array of approximately 250,000 photovoltaic (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 series 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 above- or below-ground DC collection system, and then further ganged 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 and would be parallel to the ground. The system would rotate slowly throughout the day at a range of +/- 60 degrees facing east to west 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 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 the 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 above- or below-ground collection system. This AC collection system would deliver the electricity to the on-site substation, where the voltage would be stepped up to the interconnection voltage.



SOURCE: RRC Power & Energy 2016

FIGURE 3
Site Plan

DUDEK

Ord Mountain Solar and Energy Storage Project

On-site Substation

The proposed solar and energy storage project on-site substation is the termination point of the collection system of 34.5 kV electricity. The output of the entire field is passed through a final interconnection step-up transformer to convert it to the grid tie voltage at 220 kV. Additionally the proposed solar and energy storage project on-site substation would host the grid intertie safety equipment and switches required to interconnect to the high-voltage transmission system. The open air on-site substation would be constructed on the southern border of the solar array nearest the proposed SCE Calcite Substation. The footprint of the on-site substation would be approximately 150 feet by 230 feet. The proposed solar and energy storage project on-site substation would consist of components of approximately 25 feet tall with lightning protection masts up to 70 feet tall and a deadend "H" frame structure up to 65 feet in height with masts to 70 feet. Feeders would be overhead lines constructed with 45-foot- and 60-foot-tall poles for the single and double circuits, respectively.

Energy Storage System

Adjacent to the on-site substation an energy storage system is proposed to provide a maximum capacity of 60 MW over a 4-hour period (240MWhs). The energy storage batteries would be housed in a structure of approximately 35,000 square feet. The structures height would be approximately 20 feet. The batteries would be housed in an open air style racking (similar to computer racking) 7 to 9 feet high. The associated inverters, transformers, and switchgear would be located immediately adjacent to the structure on concrete pads.

The energy storage equipment would be enclosed in a structure that would also have a fire rating in conformance with County standards and have specialized fire suppression systems installed for the battery compartments. All non-battery compartments would have County approved standard sprinkler systems. The structure would also have HVAC cooling in areas with batteries to maintain energy efficiency. Power to the HVAC, lighting, etc. would be provided via a connection to the on-site station service transformer with connection lines installed above and/or below ground. The energy storage system would be un-staffed and would have remote operational control and periodic inspections/maintenance performed as necessary.

Generation Tie-Line

The energy is transported from the on-site substation to SCE's proposed Calcite Substation via a generation tie transmission line (gen-tie line). The transmission line would extend approximately 0.6 mile to the southwest, from the facility's on-site substation to SCE's proposed Calcite Substation (see Figure 4). The 220kV gen-tie transmission line would consist of approximately seven single circuits, up to 150-foot-tall concrete or steel poles, spaced on an average of every 500 feet. The poles would carry 336 ACSR conductors, one conductor per phase, and would allow the line to maintain a minimum 30

foot vertical clearance to ground. The number of and height of the poles as well as the type of conductor would be finalized during detailed design. At the Ord Mountain Project site, the height of onsite poles will be 94 feet maximum. Except for the pole or lattice steel tower (LST) closest to the connected Calcite Substation, all poles would be constructed as part of the proposed Ord Mountain Solar and Energy Storage Project by the applicant. The right-of-way is expected to consist of a width of up to 50 feet for the maintenance road and gen-tie line. Less width may be required for portions of the right-of-way where access to the transmission line is facilitated by existing roads, such as those associated with the existing SCE high-voltage transmission lines.

Ancillary Facilities

Access Road

The solar and energy storage project access road would be 24 feet wide and composed of asphalt concrete. This road would connect to Highway 247 (Barstow Road) and would require the construction of approximately 1,200 feet of new road. Permanent land disturbance would be approximately 1 acre for the solar and energy storage project access road and gen-tie components on the Calcite Substation property.

Signage

A small sign at the site main entry to the proposed solar and energy storage project would be installed. The sign would be no larger than 8 feet by 4 feet, and read “Ord Mountain Solar Energy Center XXXX Fern Road”. In addition, required safety signs would be installed identifying high voltage within the facility on the fence near the entrance and at the gates either end of Desert Lane, as well as information for emergency services.

Perimeter Fence

The perimeter of the proposed solar and energy storage project site would be enclosed by a 6-foot-tall chain-link fence topped with a foot of three-strand barbed wire. Natural colored privacy/wind slats will be added to the fence where the fence encroaches within 0.25 mile of a primary residence (San Bernardino County Development Code §84.29.035 (c) (22)). Access into the proposed solar and energy storage project site would be provided through drive-through gates. The main purpose of the fence is to prevent unauthorized access to the site. The total height, above grade, of the fence would be approximately 7 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 and the on-site substation, and entrance to energy storage structure. 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 lighted 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 only 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 proposed solar and energy storage project is anticipated to be built over an approximately 10-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- to 10-hour shifts, with a total of five shifts per week (Monday–Friday). Overtime and weekend work would be used only 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 10-month construction duration.

Table 2
Proposed Solar and Energy Storage Project Construction Duration, Equipment and Workers by Activity

Activity	Duration	Equipment	Pieces	Daily Workers
Perimeter Fence Installation	2 Months			Maximum = 250 Average = 150
		Skid Loader with Auger Attachment	1	
		Pick-up Truck	1	
		Flatbed Truck	1	
Site Preparation and Clearing/Grading	1.5 Months	Water Truck-3 Axles	3	
		Grader	2	
		Bulldozer	1	
		Scraper	1	
		10-Ton Roller	1	
		Sheepsfoot Roller	1	
		Tractor (with Mower Attachment)	1	
Demolition of existing structures	2 Weeks	Backhoe	1	
		Bulldozer	1	
		5 Cubic Yard Dump Truck	4	
		Front End Loader	1	
Underground Work (Trenching)	3 Months	Excavator	2	
		Sheepsfoot Roller	1	
		Water Truck-3 Axles	1	

Table 2
Proposed Solar and Energy Storage Project Construction Duration, Equipment and Workers by Activity

Activity	Duration	Equipment	Pieces	Daily Workers
		5kW Generator	1	
		Aussie Padder (Screening Machine)	1	
		4x4 Forklift	1	
System Installation	4 Months	4x4 Forklift	8	
		Small Crane (80 Ton)	1	
		ATV Vehicle	20	
		Pile Driver	4	
		Pick-up Truck	4	
		5kW Generator	2	
Gen-Tie Installation	1 Month	Line Truck (with Spool Trailer)	1	
		Boom Truck (with Bucket)	1	
Energy Storage System	7 Months	Foundation	1	
		Building Construction	1	
		Batteries Installation	1	
		4x4 Forklift	1	
Testing & Commissioning	3 Months	Pick-up Truck	4	
Site Clean-Up & Restoration	1 Month	Grader	1	
		Skid Loader	1	

Traffic

Peak daily construction employees would be approximately 250 with an average of 150 workers daily. As shown in Table 3, below, in addition to the 250 maximum daily workers traveling to the site there would be up to 19 truck trips per day at peak construction activity (trenching and system installation phases overlap). A total of up to 279 trips per day are anticipated during peak construction activities, assuming a worst-case whereby no car-pooling occurs though it is likely that car-pooling would occur.

Table 3
Proposed Solar and Energy Storage Project Construction Estimated Truck Activity

Truck Type	Average On-Site	Gross Weight (pounds)	Trips/Day	Duration
8,000 Gallon Water Truck—will stay on site	2	80,000 pounds loaded	0	7 Months
20 Cubic Yard Dump/Bottom Dump Truck	3	80,000 pounds loaded	4+	2 Months
Pick-up Trucks	20	8,000	2	10 Months
Pile Driver	4	15,000	1	4 Months
Grader	2	54,000	1	3 Months
Boom Truck with Bucket	1	42,000	1	2 Months
Component Delivery Trucks	1	42,000	19	2 Months
Utility Line Service Truck	3	30,000	1	3 Months

Delivery of material and supplies would reach the site via on-road truck delivery via SR-247. The majority of the truck deliveries would be for the PV system installation, as well as any aggregate material that may be required for road base. It is estimated that a total of up to 2,500 truck trips are required to complete the proposed solar and energy storage project, with the aggregate trucks accounting for approximately 30% of this number. It is estimated that there would be an average of 268 truck deliveries per month (about 13 per work day) with a peak number of truck deliveries of 383 deliveries per month (about 18 per work day) plus one other miscellaneous delivery equates to a peak truck trip of 19 per work day. These truck trips would be intentionally spread out throughout the construction day to optimize construction efficiency as is practical by scheduling deliveries at predetermined times.

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 (GSU). 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 GSU 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. However, grading would occur throughout the site especially for the construction of roads 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 (for example the boom trucks). It is estimated that there would be approximately 35 pieces of construction equipment on site each month (see Table 3).

Vegetation on the site would be modified only 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 may be required where the foundations would be driven. Minor earth work 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 solar and energy storage 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 solar and energy storage 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 75 acre-feet (AF) for dust suppression and earthwork over an approximately 10-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 as well as operational water for panel rinsing would be provided by on-site groundwater through an improved existing well or a new well permitted and drilled (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. 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 existing wells on-site that would not be used would be capped in place in accordance with County requirements.

On-Site Electrical Distribution

Existing electrical power distribution lines on site that serve existing facilities including well pumps would be removed to allow for the solar and energy storage project development. New distribution lines would be needed to provide backup power to the solar and energy storage facilities for lighting and communications purposes, as well as to the groundwater well pump(s).

Operation

The proposed solar and energy project component would be unmanned and no operation and maintenance building would be constructed. The operations would be monitored remotely via the Supervisory Control and Data Acquisition (SCADA) system and periodic inspections and maintenance activities would occur. During operations, 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 60 MW AC plant, with four cycles per year, the annual water usage is expected to consume up to approximately 6 AF of water. While the Applicant only expects to actually 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 proposed solar and energy storage project is requesting the use of up to 6 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 0.6 AF) to be used for this purpose. In the event that electrical power distribution cannot be delivered to the groundwater pump, a generator would be located adjacent to the well pump to provide power. 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 solar and energy storage project's life is over. Most parts of the proposed system are recyclable. Panels typically consist of silicon, glass, and a metal frame. Tracking systems (not counting the motors and control systems) typically consist of aluminum and 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 trained to properly handle them. 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.

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

The proposed solar and energy storage project may require permits or approvals from additional agencies,

including the following:

- Mohave Desert Air Quality Management District (MDAQMD)
- Regional Water Quality Control Board (RWQCB)—Lahontan
- California Department of Transportation (Caltrans) District 8
- California Department of Fish and Wildlife (CDFW)
- State Water Resources Control Board (SWRCB)
- In addition, the connected proposed Calcite Substation project is subject to California Public Utilities Commission (CPUC) jurisdiction as described below

Connected Project: Calcite Substation

As previously described, the proposed solar and energy storage project is both practically located to be close to SCE's proposed Calcite Substation and the first trigger necessitating that substation. Because it is a necessary infrastructure improvement to allow the proposed solar and energy storage project to connect to the grid, the Calcite Substation is a connected project and together they represent the "proposed project" for environmental evaluation purposes under CEQA. Approvals by the California Public Utilities Commission (CPUC) are necessary for the Calcite Substation and the CPUC is a responsible agency for the purposes of environmental evaluation.

Calcite Substation Summary

SCE proposes to construct and operate the Calcite Substation project on approximately 13 acres to facilitate the connections of renewable energy generation to the SCE electrical grid. The Calcite Substation project would also include loop-in transmission lines from the existing Lugo-Pisgah No.1 220 kV transmission lines approximately 2,500 feet in length. The Calcite Substation project also includes two new fiber-optic cables to provide telecommunications and 12 kV distribution lines to provide power for lighting at the substation along the same approximately 1 mile route. The Calcite Substation project would also develop access roads to facilitate construction and maintenance for the substation and transmission connections.

Calcite Substation Location

The proposed Calcite Substation project would be located on an approximately 75-acre parcel of land that extends on the west and east sides of SR-247, directly north of Haynes Road, in the County of San Bernardino (Vicinity Map (See Figure 2)).

Two new 220 kV transmission lines to loop the Calcite Substation into the existing Lugo-Pisgah No.1 220 kV transmission line would extend approximately 2,500 feet south of Calcite Substation,

cross under SCE's Eldorado-Lugo and Lugo-Mohave 500 kV lines, and enter Calcite Substation from the south. The existing 12 kV distribution circuit would be extended to provide temporary power and permanent Calcite Substation light and power westward overhead on Haynes Road, for approximately 2,000 feet. The circuit would then continue underground for approximately 2,100 feet heading westward under the existing transmission right-of-way (ROW) along Haynes Road and then north along the new Calcite Substation access road into the light and power rack within Calcite Substation.

The telecommunication fiber-optic cables would connect the proposed Calcite Substation to SCE's Barstow Repeater Communication Site (CS) and to a splice box on tower M29-T3 on SCE's Lugo Mohave 500 kV transmission line.

Calcite Substation Setting

The location of the proposed Calcite Substation is selected based on numerous engineering factors including proximity to the existing Lugo-Pisgah 220 kV transmission line and the transmission corridor. The site also has access to existing roads. The proposed Calcite Substation project site is relatively flat with elevations of approximately 2,980 feet to 2,900 feet above mean sea level. Locally, the proposed Calcite Substation project would be accessed via SR-247 and constructed road system. The proposed Calcite Substation project area would include approximately 1-mile loop-in transmission line from the existing Lugo-Pisgah 220 kV transmission line to the proposed Calcite Substation.

The geology of the proposed Calcite Substation project property and surrounding vicinity is consistent with that described for the proposed solar and energy storage project site.

Existing Land Uses and Land Use Zoning Districts on and adjacent to the proposed Calcite Substation project site is Vacant with portions of the existing transmission corridor recognized as electrical power facilities.

Calcite Substation Project Characteristics

The proposed Calcite Substation project consists of the following components (See Figure 4):

- Calcite Substation
- Loop-In Transmission Line
- Telecommunication Facilities
- Ancillary Facilities

Calcite Substation

The proposed Calcite Substation project would be a new regional 220kV collector station initially needed to support the proposed Ord Mountain Solar and Energy Storage project, measuring approximately 620 feet by 480 feet. The Calcite Substation would be an unattended collector station (no power transformation) surrounded by a prefabricated concrete wall with a visible loop of razor wire along the top and with two gates. The proposed Calcite Substation project would be designed to accommodate a total of eight 220 kV positions, with four positions initially constructed. Two positions would be used in the initial design: one position shared between the Ord Mountain Solar and Energy Storage project gen-tie and the Pisgah 220 kV transmission line, and one position for the Lugo 220 kV transmission line. The remaining two positions would be available for future network or generation tie-lines.

Calcite Substation would be initially equipped with the following:

- Two overhead 220 kV buses
- Five circuit breakers
- Ten group-operated disconnect switches
- One Mechanical Electrical Equipment Room (MEER)
- Light and power transformers and associated equipment
- Station lighting
- Permanent wall
- Microwave tower

The proposed Calcite Substation design includes terminating the Ord Mountain Solar 220 kV gen-tie line into the switchrack. There would be two double-circuit lattice or Tubular Steel Poles (TSPs) dead-end structures with heights ranging from approximately 130 feet to approximately 180 feet on the Calcite Substation property for the connection of Ord Mountain's gen-tie line to a 220 kV position inside Calcite Substation.

Loop-In Transmission Line

The proposed Calcite Substation would connect to the Lugo-Pisgah No. 1 220 kV Transmission Line transmission source line via a loop-in that would modify the Lugo-Pisgah No. 1 220 kV Transmission Line. That modification would create two new line segments: the Calcite-Lugo 220 kV transmission line and the Calcite-Pisgah 220 kV transmission line. Each new transmission line segment entering into the Calcite Substation would be approximately 2,500 feet long.

The proposed routes for these new transmission lines would require crossing under SCE's Eldorado-Lugo and Lugo-Mohave 500 kV lines. Crossing under the 500 kV lines would require the addition of one 500 kV interset tower for each of the Eldorado-Lugo and Lugo-Mohave 500 kV lines to comply with the safe clearance requirements of G0 95.

The new 220 kV transmission lines would require approximately seven transmission structures, consisting of six single-circuit structures and one double-circuit structure. Four single-circuit structures with heights ranging from approximately 50 feet to approximately 100 feet would be used to cross underneath the Eldorado-Lugo 500 kV and Lugo-Mohave 500 kV transmission lines. The path would then continue north to two single-circuit structures with approximate heights between 110 feet and 160 feet. From there, the alignment turns northeast to one 220 kV double-circuit structure with a height ranging from approximately 130 feet to approximately 180 feet. The 220 kV double-circuit TSP or Lattice Steel Tower (LST) would be located just outside of the substation wall (but still within the proposed Calcite Substation Property boundaries). The conductor used would be 2B-1590 kcmil "Lapwing" Aluminum Conductor Steel Reinforced (ACSR) conductor or similar.

Additionally, one existing 220 kV lattice steel tower in the existing ROW would be removed. The final combination of poles and towers will be determined during detailed engineering.

The seven new structures would require a new ROW ranging between approximately 250 and 400 feet wide (depending on structure types and line crossings) from SCE's existing ROW to the Calcite Substation Property.

DUDEK

SOURCE: BING 2016

FIGURE 4
Calcite Substation Project Components

Ord Mountain Solar

At the point of the proposed 220 kV line undercrossing, the existing Lugo-Mohave and Eldorado-Lugo 500 kV transmission lines would require the addition of one 500 kV interset tower per line to comply with applicable engineering standards and specifications (including GO 95). The preferred approach at this time would be to determine the appropriate crossing structures and position the interset towers within the 500 kV ROW. The current structures are slightly less than 150 feet tall. It should be assumed that the interset tower would be approximately 15-30 feet taller to facilitate the proposed undercrossing.

Loop-In Transmission Line Access and Spur Roads

Existing public roads and existing transmission line roads would be used as much as possible during construction. However, the Calcite Substation project would require new transmission line roads to access the new 220 kV transmission line segments and structure locations between the Calcite Substation and existing SCE ROW.

The graded road would have a minimum drivable width of between 14 feet and 22 feet with 2 feet of shoulder on each side as required by the existing land terrain, but may be wider depending on final engineering requirements and field conditions. The minimum center line turning radius required along a curve is 50 feet (the minimum turning radius required to meet construction and maintenance vehicle requirements) and berm and swale drainage improvements may be required for erosion control along the road.

Distribution System for Station Light and Power

An extension of an existing 12 kV distribution circuit would be required to provide the temporary power for construction and permanent station light and power for Calcite Substation. The Calcite Substation project calls for extending the existing 12 kV distribution circuit overhead westward on Haynes Road for approximately 2,000 feet by installing approximately 12 wood poles.

The 12 kV distribution circuit would then extend underground heading west along Haynes Road under the existing California Highway 247 and transmission ROW and then turn north along the Calcite Substation driveway and into Calcite Substation. The total underground circuit extension length would be approximately 1,700 feet, of which 1,400 feet is forecasted to have surface disturbance. These new facilities would also be used for installation of the required telecommunication fiber-optic cables into Calcite Substation (described below Telecommunication Facilities).

Telecommunication Facilities

A telecommunication system would be required to provide monitoring and remote operation capabilities of the electrical equipment at Calcite Substation, transmission line protection, and Remedial Action Scheme (RAS).

The SCE telecommunication facilities expected to be constructed as part of the Calcite Substation project would include two approximately 1-mile-long fiber-optic cables to the nearest splice points on an optical ground wire (OPGW) that is expected to already be in place on the 500 kV Lugo-Mohave T/L by the time any work associated with the Calcite Substation project commences.[1]

The first proposed fiber-optic cable would start from Calcite Substation and would be installed along the new 12 kV distribution path previously described. The proposed line would turn north along an un-named dirt road for approximately 1,100 feet attaching to existing wood poles and arriving at the Barstow Repeater Communication Site (CS). The line would drop down in a new riser and continue underground for approximately 150 feet into an existing communication room within the CS.

The second proposed fiber-optic cable would start from Calcite Substation and exit the substation to the south for approximately 400 feet in new underground conduit and then turn east onto Haynes Road for approximately 1,200 feet. The conduit would turn southwest on an existing access road for approximately 4,000 feet and then turn northwest to get to tower M29-T3 on the Lugo-Mohave transmission line where the existing splice box is located. This underground conduit route would be built exclusively for telecommunications use.

Ancillary Facilities

Access Road

The Calcite Substation access road would be 24 feet wide and composed of asphalt concrete. This road would connect to Highway 247 (Barstow Road) and would require the improvement of approximately 1,100 feet of the existing Haynes Road and the establishment of approximately 800 feet of new road. Permanent land disturbance would be approximately 2 acres on the Calcite Substation property.

Perimeter Fence

The Calcite Substation would be an unattended collector station (no power transformation) surrounded by a prefabricated concrete wall with a visible loop of razor wire along the top and with

[1] That OPGW is expected to be in place as a result of the anticipated completion of SCE's anticipated Eldorado Lugo Mohave (ELM) Series Capacitors project. The ELM Series Capacitors project is a distinct and independent project being separately undertaken by SCE that has independent utility from the Calcite Substation Project. Completion and operation of the ELM Series Capacitors project would include OPGW, which would be tapped to connect to the proposed Calcite Substation. Similarly, SCE also has another distinct and independent project with telecommunications equipment that, if constructed, would obviate the need to construct any other telecommunication facilities to support the Calcite Substation, namely, the Lugo-Victorville 500 kV Transmission Line Special Protection Scheme (SPS) Project. In fact, SCE has already submitted a Standard Form 299 application to the U.S. Bureau of Land Management for authorization to complete the Lugo-Victorville 500 kV Transmission Line SPS Project, which also has independent utility from the Calcite Substation Project. In light of the fact that both the ELM Series Capacitors Project and the Lugo-Victorville 500 kV Transmission Line SPS Project, currently planned by SCE, would be constructed and placed into operation prior to the operation of Calcite Substation, SCE would not need to construct any further telecommunication facilities to support the Calcite Substation (other than the two 1-mile taps described above).

two gates.

Lighting

Low-elevation (<14 foot) controlled security lighting would be installed within the substation. 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 lighted when the lights are on. The lighting would be shielded so that the light is directed downwards. Lighting would be only 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

The Calcite Substation and associated transmission and telecommunications connections are anticipated to be constructed over a period of approximately 10 months.

Substation

The approximate area of land disturbance (cleared and graded) at the Calcite Substation property, is approximately 18 acres, approximately 13 acres of which would be permanent and the other approximately 5 acres would be temporarily disturbed for construction. The Calcite Substation access road would be 24 feet wide and composed of asphalt concrete. This road would connect to Highway 247 (Barstow Road) and would require the improvement of approximately 1,100 feet of the existing Haynes Road and the establishment of approximately 800 feet of new road. Permanent land disturbance would be approximately 2 acres on the Calcite Substation property.

The volume and type of earth materials proposed to be used is approximately 26,000 cubic yards (cy) of soil and approximately 3,000 cy of surface material (rock), which would be imported as part of construction. Existing material not suitable for use would be exported and disposed of off-site, is estimated at approximately 3,000 cy.

Loop-In Transmission Structures

The new structure pad locations and laydown/work areas would first be graded and/or cleared of vegetation as required to provide a reasonably level and vegetation-free surface for structure installation. Erection of the structures may also require establishment of a permanent equipment pad of approximately 50 feet by 50 feet located adjacent to each applicable structure within the laydown/work area used for structure assembly. The pad may be cleared of vegetation and/or graded as necessary to provide a level surface for equipment operation. Typical structure foundations for each LST would consist of four poured-in-place concrete footings; TSPs would require a single drilled poured-in-place concrete

footing; and TSP H-Frames would require a two drilled poured-in-place concrete footings. Actual footing diameters and depths for each of the structure foundations would depend on the soil conditions and topography at each property and would be determined during final engineering.

Wire stringing activities would be in accordance with SCE common practices and are similar to process methods detailed in the IEEE Standard 524-2003 (Guide to the Installation of Overhead Transmission Line Conductors). Typical wire stringing activities may or may not include the use of a helicopter.

The total land disturbance associated with the loop-in and the dead ends for the gen-tie that SCE would install is estimated approximately 42.2 acres. The majority of the disturbance would be temporary, approximately 39.3 acres, and approximately 2.9 acres permanently disturbed.

Telecommunication Facilities

For the locations that require overhead construction, the permanent ground disturbance for each pole installation would be approximately 4.9 square feet per pole and 0.1 square feet per pole anchor. At some structure locations, vegetation may be removed and/or trimmed to accommodate the installation of overhead and/or underground distribution facilities. For the locations that require the construction of a trench or underground structure, excavation activities would generally be done using a backhoe. The anticipated dimensions for the trench would be approximately 24 inches wide by approximately 51 inches deep resulting in approximately 0.38 acre of disturbance.

Laydown Areas and Access Roads

Laydown areas may include the following existing SCE facilities:

- Victorville Service Center - Hesperia Road, Victorville
- Apple Valley Sub – Deep Creek Road, Apple Valley
- Calcite Substation Property – Barstow Road (SR-247), Lucerne Valley
- Barstow Service Center – Rimrok Road, Barstow

Traffic

Construction would be performed by SCE Crews or its contract personnel, which would range from 4 to 28 personnel for any given activity. Multiple crews and activities may be ongoing on any given day. SCE estimates approximately 257 workers would be required to construct the proposed Calcite Substation project with up to 90 on-site(s) during peak days where activities overlap. In addition to the 90 maximum daily workers traveling to the site there would be up to 19 truck trips per day at peak construction activity (trenching and system installation phases overlap). A total of up to 109 trips per day are anticipated during peak construction activities. The estimated number of persons and types of equipment required for each phase of transmission line construction is provided in Table 4.

Construction Activities

SCE anticipates a total of approximately 257 workers, with approximately 90 construction personnel working on any given day. SCE anticipates that crews would work concurrently whenever possible; however, the estimated deployment and number of crew members would be dependent upon county permitting, material availability and construction scheduling. For example, installation of electrical equipment (such as the MEER, wiring, and circuit breaker) installation may occur while the transmission line construction proceeds.

Table 4
Proposed Calcite Substation Project Construction Duration, Equipment and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
Survey and Grading	2 months	Pick-up Truck	8	Maximum = 257 Average = 90
		Dozer	1	
		Loader	2	
		Scraper	2	
		Grader	1	
		Dump Truck	2	
		Backhoe	3	
		Tamper	1	
		Tool Truck	1	
		Utility Cart	2	
		Water Truck	7	
		Forklift	1	
		Ranger	1	
		Generator	1	
		Tracked Dozer	1	
		Motor Grader	1	
		Drum Compactor	1	
		Excavator	1	

Table 4
Proposed Calcite Substation Project Construction Duration, Equipment and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
		Lowboy Truck/Trailer	1	
Fencing	1 month	Pick-up Truck	1	
		Bobcat	1	
		Flatbed ruck	1	
		Utility Cart	1	
		Water Truck	1	
Civil	3 months	Pick-up Truck	1	
		Excavator	1	
		Lo-Drill/Auger	1	
		Backhoe	2	
		Bobcat	1	
		Dump Truck	2	
		Skip Loader	1	
		Forklift	1	
		Concrete Truck	2	
		Generator	1	
		Tool Truck	1	
		Utility Cart	2	
		Water Truck	2	
Installation	1 month	Pick-up Truck	4	
		Bucket Truck	6	
		Stake Truck	1	
		Crane	2	
		Forklift	1	
		Tool Truck	1	
		Compressor Trailer	1	
		Boom/Crane Truck	1	
		Auger Truck	1	
		Flatbed Truck	3	
Electrical	3 months	Pick-up truck	2	
		Scissor Lift	1	
		Bucket Truck	2	
		Reach Manlift	1	
		Crane	1	
		Forklift	1	
		Generator	1	
		Utility Cart	2	
		Tool Truck	1	
Wiring and Towers	3 months	Pick-up Truck	47	

Table 4
Proposed Calcite Substation Project Construction Duration, Equipment and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
		Bucket Truck	14	
		Utility Cart	1	
		Double Bucket Truck	3	
		Boom/Crane Truck	10	
		Puller	1	
		Static Truck/ Tensioner	2	
		Dump/Stake Bed Truck	6	
		Compressor Trailer	7	
		R/T Crane (L)	5	
		R/T Crane (M)	3	
		Flatbed Truck	6	
		Backhoe/Front Loader	7	
		Excavator	1	
		Drill Rig	2	
		Concrete Truck	7	
		R/T Forklift	3	
		Crane	2	
		Sag Cat w/ Winches	4	
		Lowboy Truck/trailer	4	
		Wire Truck/Trailer	2	
		Sock Line puller	1	
		Bullwheel Puller	1	
		Spacing Cart	3	
		Hydraulic Rewind Puller	1	
		Excavation and Boring Equipment	1	
		Water Truck	4	
Maintenance and Testing	4 months	Pick-up Truck	1	
		Test Truck	2	
Paving	1.5 months	Pick-up Truck	2	
		Stake Truck	1	
		Dump Truck	1	
		Asphalt Paver	1	
		Tractor	1	
		Paving Roller	2	
		Asphalt Curb Machine	1	
		Utility Cart	1	
Telecommunications	2 months	Pick-up Truck	10	
		Flatbed Truck	4	
		Bucket Truck	7	

Table 4
Proposed Calcite Substation Project Construction Duration, Equipment and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
		Splicing Lab	4	
		Backhoe/Front Loader	2	
		Water Truck	4	
		Concrete Truck	2	
Site Clean-Up & Restoration	.5 month	Pick-up Truck	2	
		Backhoe/Front Loader	1	
		Motor Grader	1	
		Water Truck	1	
		Drum Compactor	1	
		Lowboy Truck/Trailer	1	

Construction of the transmission lines would require the establishment of an approximately 5-acre staging yard within the Calcite Substation property. This staging yard would be used as a reporting location for workers, vehicle and equipment parking, and material storage. The yard would also have construction trailers for supervisory and clerical personnel. The staging yard may be lit for staging and security.

Water Use

The total anticipated water demand for construction of the proposed Calcite Substation project is approximately 37 acre-feet. No water is expected to be necessary for operations with nominal amounts potentially necessary for maintenance in the event of repairs. Water would be provided either from the groundwater wells on the proposed solar and energy storage project site, or from the local water provider.

Operations

The proposed Calcite Substation would be unstaffed, and electrical equipment within the substation would be remotely monitored and controlled by an automated system from SCE's Lugo Substation Switching Center. Operations and Maintenance (O&M) activities are necessary to ensure reliable service, as well as the safety of the utility worker and the general public, as mandated by the CPUC. SCE facilities are subject to Federal Energy Regulatory Commission jurisdiction. SCE transmission facilities are under operational control of the California Independent System Operator (CAISO). SCE personnel would typically visit for electrical switching and routine maintenance purposes. Routine maintenance would include equipment testing, monitoring and repair.

Following the completion of project construction, operation of the new telecommunication facilities would commence. Inspection and maintenance activities would occur at least once per year. The frequency of

inspection and maintenance activities would be on an as-needed basis.

California Native Tribes

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun? The required notification of affected tribes has occurred.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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. This format of the study is presented as follows. The project is evaluated based upon its effect on 17 major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study Checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact

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 John Oquendo, AICP, Planner) — Date: 5/24/2017

Signature: Heidi Doron, Supervising Planner — Date: 5/25/2017

	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 solar and energy storage project site and surrounding area are not considered an undisturbed natural area. The solar and energy storage project site has been previously farmed and has been fallow for over a decade. 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. The gen-tie line, Calcite Substation, loop-in transmission line, and telecommunications traverse areas that are disturbed with existing infrastructure (roads and/or transmission facilities) and undisturbed (vegetated). Although the sparse, existing development in the area includes scattered rural residences; abandoned residential structures, trailers, and vehicles; 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 proposed 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 proposed 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. Due to the presence of rugged terrain, the landscape is enclosed on three sides, yet the lack of prominent local terrain to the south and southeast affords receptors views to the distant San Bernardino Mountains. 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. However, panels may obstruct distant mountainous terrain in views available at residences located immediately adjacent to the project boundary and impacts would be potentially significant. Visual simulations would be created and further analyzed in the EIR.

Equipment within the on-site substation would range from 16 to 60 feet in height; however, these components would be close to existing tall vertical features (i.e., steel lattice towers) and there are no receptors (either residents or motorists) in the immediate vicinity of the on-site substation. The applicant is seeking a Major Variance to modify the maximum structure height to permit the construction of onsite transmission poles and related structures up to 94 feet in height. Pole heights for offsite transmission are described in the project description as approximately 150 feet. SR-247 is located approximately 0.3 mile east of the on-site substation; however, due to distance and because tall equipment within the substation facility would not form a continuous wall, the introduction of substation equipment would not substantially obstruct or interrupt views of mountainous terrain available in easterly views from SR-247.

As proposed, the project's gen-tie transmission line would span SR-247 and interconnect to SCE's proposed Calcite Substation. The gen-tie transmission line would generally parallel existing high-voltage transmission lines present in the project area. Under existing conditions, the three high-voltage transmission lines span SR-247 approximately 900 feet northwest of the Fern Road/Haynes Road intersection and then proceed in a southwesterly alignment towards existing large and geometric steel lattice towers. To minimize the potential for visual impacts and adverse effects to existing views, support monopoles for the proposed gen-tie transmission line would be installed near existing steel lattice structures and as such, new structures would be viewed alongside existing structures. However, unlike existing transmission lines that are supported by steel lattice towers, the proposed gen-tie transmission line would be supported by five steel or concrete monopoles that would display a solid form and regular, straight line. As such, monopoles would not replicate the existing form and line of utility infrastructure in the

immediate area. Further, monopoles would be more visible than steel lattice towers and would not display the same capability as steel lattice to blend in with the surrounding landscape. Still, the close proximity of existing steel lattice and steel or concrete monopoles would reduce the potential for the gen-tie line to significantly detract from the existing visual setting and significantly obstruct existing views. Lastly, the visual effects of grading activities associated with the installation of gen-tie transmission line support structures would be similar to the line and texture contrasts produced by existing electrical infrastructure dirt access roads. Due to the presence of low, mounded shrubs in the landscape, the removal of existing vegetation and resulting patch of cleared, smooth textured soils at the base of new support structures would largely be screened from view of passing motorists.

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. The placement of the proposed gen-tie transmission line and five support monopoles along an existing transmission corridor and in close proximity to existing high voltage transmission lines and tall steel lattice towers would minimize potential visual effects on existing views available to SR-247 motorists as they pass through the project area.

The majority of equipment and structures within the Calcite Substation fenceline would be between 10 and 80 feet in height, and loop-in transmission line structures (tubular steel pole or lattice steel towers; tubular steel poles are reflected in visual simulations) would display a height of between 50 and 180 feet. Equipment and structures within the substation fenceline would generally display thin vertical and horizontal lines that when viewed in the context of the surrounding landscape, would not substantially detract from existing views of mountainous terrain and the flat valley landscape, in proximity to the existing three regional transmission lines. Although they would display a thin line and tall form, proposed loop-in transmission line structures would be backscreened by mountainous terrain and would replicate the height displayed by existing steel lattice towers in the landscape. However, potential impacts from nearby residences would be analyzed further in the EIR. Both the proposed solar and energy storage project and proposed Calcite Substation project would have potentially significant impacts on a scenic vista and will be analyzed further in 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 proposed 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 23 miles south of the project site in the San Bernardino Mountains. While SR-247 currently only 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 proposed 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 solar and energy storage project site has been previously farmed and has been fallow for over a decade. 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 Calcite Substation (e.g., switchracks, A-frames, and the prefabricated concrete perimeter wall) would be visible to passing motorists. The substation is setback approximately 650 feet from SR-247. The above-described improvements could potentially affect views from SR-247 to offsite geological features and terrain, such as the Ord Mountains to the north east of the project site. The proposed gen-tie transmission line northwest of the Fern Road/Hayne Road intersection would span SR-247. As previously discussed under question I. a) above, the placement of the proposed gen-tie transmission line and support poles along an existing transmission corridor and in close proximity to existing high voltage transmission lines and tall steel lattice towers would minimize potential visual effects on existing views available to SR-247 motorists as they pass through the project area. The majority of project components would display a relatively low vertical profile and when viewed from SR-247. 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, as potentially significant impacts upon locally classified scenic resources may occur.

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 consists of fallow agricultural lands dotted with low, mounded shrubs, expanses of short, golden grasses, and large areas of exposed tan colored soils, In addition, the southern edge of the project site is punctuated by 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, abandoned residences, and electrical distribution and transmission infrastructure. While SR-247 traverses the project area landscape and provides motorists generally indistinct views to the project site, approximately 20 active residences are located within 0.5 mile of the project site.

The visual change associated with development of the proposed project would be most noticeable to residents located on properties situated immediately adjacent to the proposed project site and those situated at an elevation greater than the proposed project. While

project components would be set back from a perimeter slat and chain-link fence, repeating rows of solar arrays would be visible through gaps in the slatted fence and dark colors and regular, repeating lines atypical of the desert landscape may be experienced. Also, from this particular vantage point, 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 thousands of solar panels to the landscape. Moderate visual contrast is also anticipated where SR-247 motorists would be afforded views to Calcite Substation components. Therefore, potentially significant impacts to the existing visual quality from the proposed 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 scattered rural residences. There are no existing structures in the project area that create a substantial source of daytime glare.

Construction of the proposed project is anticipated to occur during hours permitted by the County; therefore, nighttime lighting to accommodate construction activities would not normally be required. Five residences are located within 100 feet of the project boundaries, and 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 solar and energy storage project site and around the on-site substation and energy storage structure. All proposed lighting would be shielded and directed downwards to minimize skyglow and occurrences of light trespass onto surrounding properties. Furthermore, installed lighting would be mounted on support poles less than 14 feet in height and would be motion activated. The lighting would be installed only in areas where it is required for safety, security, or operations and would normally be off unless activated by project personnel.

In addition, all nighttime lighting associated with the proposed 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 work, project lighting would be consistent with County requirements. SCE's Calcite Substation is not subject to County approval and requirements however, installed lighting would also be shielded, directed downwards, and normally turned off unless needed for nighttime emergency work or motion activated. Compliance with County lighting regulations, submittal of an approval of exterior lighting plans 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 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 absorption intent of dark PV solar panels and required compliance with San Bernardino County Code, some glare may be generated by the panels throughout the day and may be received on non-abutting residential properties to the east of the facility as the tracking systems follows the sun. This is more likely to occur at the break of day as panels would be angled towards the eastern horizon. The presence of the slatted perimeter fence would help cutoff glare at the facility boundary but due to variations in elevation, receptors at higher vantage points than the proposed facility in the surrounding area may be exposed. However, as previously stated, glare generated by PV solar panels may be received by a limited number of residences located east of solar facility for a relatively brief duration near the break of 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 proposed project would not convert prime farmland, unique farmland, or farmland of Statewide Importance (Farmland), as shown on the San Bernardino County Important Farmland Map 2014, to non- agricultural use, since the proposed project is not designated as such. No

significant adverse impacts are identified or anticipated and no mitigation measures are required. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in impacts related to converting important Farmland. No impacts would result from the proposed 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? Less Than Significant Impact**. The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. None of the properties associated with the proposed project is under a Williamson Act contract. The current General Plan land use designation for the proposed solar and energy storage project area is LV/AG (Lucerne Valley/Agriculture), which allows the development of renewable energy generation facility with a Conditional Use Permit (CUP) (Development Code Section 85.06). While the proposed solar and energy project site is designated for agriculture, the site has been fallowed for more than a decade and the landowner has not been able to secure viable agricultural operations. The connected proposed Calcite Substation Project is located on vacant land parcels designated as 'vacant undifferentiated' and LV/AG. Infrastructure components for utilities are not subject to the County land use designations. The land is not subject to a Williamson Act contract. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in impact related to conflicting with agriculture zoning or a Williamson Act contract. Less than significant impacts would result from the proposed 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 proposed project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). The proposed project area is currently fallowed agricultural land, or undeveloped land, which has never been designated as forest land or timberland. No rezoning of the proposed project site would be required. Therefore, Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would have any impact regarding forest land or timberland. No impacts would result from the proposed 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 proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The proposed project site includes lands that have historically been under agricultural use, is currently fallowed agricultural land, or is undeveloped lands, none of

which is forest land. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in the loss or conversion of forest land. No impacts would result from the proposed 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? Less Than Significant Impact.** The proposed solar and energy storage project site was previously used for agriculture but has been fallow for several years. The site landowner has not been able to secure viable agricultural operations on the site during this time. While the proposed solar and energy storage project would convert designated agricultural land to non-agricultural uses, those lands do not include any mapped Farmland of Statewide Importance. As no other surrounding lands are Farmland of Statewide Importance or forest land, the proposed solar and energy storage project would not involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. The current General Plan land use designation for the proposed solar and energy storage project area is LV/AG (Lucerne Valley/Agriculture), which allows the development of renewable energy generation facility with a CUP (Development Code Section 85.06). The connected proposed Calcite Substation Project is located on vacant land parcels designated as 'vacant undifferentiated' and LV/AG. Infrastructure components for utilities are not subject to the County land use designations. The proposed project site and vicinity does not contain any forest land or forest use. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would have significant impacts related to converting Farmland to non-agricultural uses or forest lands to non-forest use. The proposed project would have less than significant impacts related to the conversion of Farmland 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 proposed project is not identified specifically in the County General Plan, it would not generate new homes or employment opportunities that would change the County's projections. Though the proposed project would not alter the population or employment projections considered during the development of the AQMP, and the emissions attributable to the proposed 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 proposed 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 proposed 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 regards to long-term operations, the proposed project would have routine inspection and maintenance which would result in a net increase in emissions.

Over its lifetime, the proposed project will not violate the regulations set forth by the MDAQMD *Rule Book* or *CEQA and Federal Conformity Guidelines*. Electricity generation via the use of photovoltaic systems does not generate chemical emissions that would negatively contribute to air quality. The proposed project is designed to limit the amount of vegetation that would be removed and grading required for access and foundations. Throughout the remainder of the developed area on the solar and energy storage 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 solar and energy storage 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. The Calcite Substation project would involve grading for the foundations of the substation and for access and maintenance roads for the substation and associated loop-in transmission line. Grading is estimated to occur on approximately 2-acres of the 75-acre parcel for the Calcite Substation. 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 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 entrained 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 PM_{10} and $PM_{2.5}$ emissions. The project would comply with MDAQMD Rule 403 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, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement 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 NO_x, CO, 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;
- Rapid 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, NO_x, CO, SO_x, 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, 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 uses surrounding the proposed work areas consists primarily of undeveloped open space areas in the Mojave Desert. There is some development within the vicinity, generally consisting of scattered rural residences. Construction of the proposed project would result in the temporary (16 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 along the site and transmission line corridor 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 proposed 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 regards to long-term operations, the project would not change the routine inspection and maintenance of the existing transmission lines and would not result in any sources of substantial odors. Therefore, neither the proposed solar and energy storage project or the Calcite Substation Project would 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 proposed 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.

Short-Term Indirect Impacts

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 CDFW or USFWS. An assessment of the proposed solar and energy storage project site and the Calcite Substation 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? No Impact.** No jurisdictional wetlands or non-wetland waters, based on ACOE, RWQCB, and CDFW definitions, occur within the proposed project site. No jurisdictional wetlands or non-wetland waters were identified during previous surveys within the project site conducted by SWCA Environmental Consultants in 2010. Additionally, no USGS National Hydrography Dataset flow lines were found to occur on site or in the adjacent vicinity (USGS 2016). Thus, no wetlands potentially subject to ACOE, RWQCB, or CDFW are present within the proposed project site and no impacts would result. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in substantial adverse impacts to federally protected wetlands. No impacts would result from the proposed project and this topic will not 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**. Historical agricultural practices have removed the natural vegetation communities, limiting the quality and availability of habitat for wildlife. The land use (transportation, residential, and agricultural) of areas adjacent to the project site also limit the value to wildlife of the habitat in the vicinity. 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. 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 significant 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 or wetlands 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 proposed 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. 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, neither the proposed solar and energy storage project or the Calcite Substation Project would 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 proposed 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 proposed project has the potential to cause an adverse impact to a 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 proposed 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 proposed project site is mapped as younger alluvium overlying igneous and metamorphic bedrock (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, neither the proposed solar and energy storage project or the Calcite Substation project would result in substantial adverse impacts to paleontological resources. Less than significant impacts would result from the proposed 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 proposed 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 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, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the 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 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, neither the proposed solar and energy storage project or the Calcite Substation project would be anticipated to disturb human remains. Less than signficant impacts would result from the proposed 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 proposed 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 7 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 proposed project. Therefore, the proposed solar and energy storage project and the Calcite Substation project would result in less than significant impacts related to seismic ground rupture. Less than significant impacts would result from the proposed 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 proposed 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 35 miles to the southwest of the proposed project area. The San Andreas Fault as a whole is capable of generating significant seismic activity, but it has not been particularly active along the southern segment. The Helendale Fault, located approximately 7 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 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) and the International Code Council’s (ICC) 2013 California Building Code (CBC). Specific measures that may be used for the proposed project include proper fill composition and compaction; anchoring (or other means of for securing applicable structures); and 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 proposed solar and energy storage project and the Calcite Substation 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 proposed 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 proposed project area are well-drained and are not susceptible to liquefaction. Furthermore, the proposed 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 form 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 proposed solar and energy storage project and the Calcite Substation project would result in less than significant impacts related to seismic-related ground failure or liquefaction. Less than significant impacts would result from the proposed 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 proposed project would not have any risks associated with landslides. Landslides are the downslope movement of geologic materials. The stability of slopes is related to a variety of factors, including the slope's steepness, the strength of geologic materials, and the characteristics of bedding planes, joints, faults, vegetation, surface water, and groundwater conditions. The 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 1 mile to the northeast of the project area.

The geologic conditions present on the proposed project site would not expose the project to landslide and impacts would be less than significant. In combination, the proposed project would have less than significant impacts related to landslides. Therefore, the proposed solar and energy storage project and the Calcite Substation project would result in less than significant impacts related to landslides. No impacts would result from the proposed 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.** No substantial vegetation removal would occur for the installation of the proposed project. It is expected that vegetation would be cleared for the footprints of the individual tracker units, but those would be situated above the ground at a maximum height of approximately 6 feet. 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 throughout the project site. Though best practices and anticipated conditions of approval associated with the project will ensure minimization of windblown dust and soil erosion, reevaluation of the previously prepared Geotechnical Report for the Lucerne Valley Solar Energy Center in 2010 (Krazan and Associates Inc. 2010) is warranted. Additional analysis will occur for this issue in the EIR.

The connected proposed Calcite Substation project would include the installation of concrete pads to minimize exposed soil areas to erosion. The proposed substation would primarily be vertical in scale and would therefore have a smaller footprint compared to the proposed project. The ground disturbance for both projects in combination would be minimal in relation to the surrounding desert area. Therefore, potentially significant impacts to soil erosion would occur and will be further analyzed 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.** A Geotechnical Report was previously prepared for the Lucerne Valley Solar Energy Center in 2010 (Krazan and Associates Inc. 2010). As the proposed solar and energy storage project would introduce similar development and land use changes, an updated geotechnical report is not required. According to the Geotechnical Report, the surface soils consist of 6 to 12 inches of very loose silty sand add silty sand with trace clay and gravel. Approximately 6 to 12 inches of fill material consisting of silty san, sandy silt, and silty sand with gravel was encountered along the edges of the site. Below the loose surface soils and fill material, approximately 1 to 3 feet of loose to very dense silty sand, silty sand with trace clay and sandy silt with gravel or sand, were encountered. Below 3 to 4 feet, approximately 4 to 12 feet of dense to very dense silty sand, sand, clayey sand, and sandy clayey silt, sandy silt and sandy gravel were encountered. Below 8 to 16 feet, alternating layers of predominately very dense silty sand, sandy silt, silty sand/sandy silt, sandy clayey silt and sand were encountered.

All of the mapped soil types, with the exception of the fill material, moderately compressible and/or collapsible upper native soils, appear to be conducive to the development of the proposed solar and energy storage project (Krazan and Associates Inc. 2010). The surface soils are disturbed, have low strength characteristics and are highly compressible when

saturated. The proposed project design and construction methods, including recompacting surface soils in the area of structure would stabilize the surface soils; thereby, reducing potential impacts of the mapped soils to a less than significant level.

The proposed project area is relatively flat terrain where landslides have not historically been an issue. Furthermore, excavation associated with the proposed project would extend to maximum depths of approximately 5 feet, and would thus 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 proposed project design and construction methods, no significant impacts related to geologic instability are anticipated as a result of proposed project implementation.

The connected proposed Calcite Substation project would be located within proximity to the proposed solar and energy storage project and therefore would located on similarly stable soil types. The relatively flat terrain has not been historically susceptible to instability, landslides, or liquefaction events. Because both the proposed solar and energy storage project and the proposed Calcite Substation project are not likely to have soil instability, the proposed project would have less than significant impacts. Therefore, his 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 (Krazan and Associates Inc. 2010). The clayey soils are considered to be slightly expansive, which could present a significant geologic hazard to the proposed project. Surficial materials within the proposed project site would be limited predominantly to fill deposits and alluvium. These materials exhibit a low potential for expansion, based on their general lack of significant clay content.

Because the connected proposed Calcite Substation project would be located on surface soils with similar characteristics as the proposed solar and energy storage project, there would be a potential for expansion during a seismic event. Therefore, potentially significant impacts 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 proposed project would be unmanned and does not propose to use

septic tanks or alternative wastewater disposal systems. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in impacts to wastewater. No impacts would result from the proposed 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 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 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 proposed 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 proposed 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 GHG Reduction Plan (2011), with the application of the GHG performance standards, small projects that do not exceed 3,000 MT CO_2E per year are considered to be consistent with the GHG Plan. As previously

discussed in Section VII(a), the proposed 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.

	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 proposed 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 NPDES General

Construction Permit. Operation of the proposed project would include chemical use such as mineral oil in the substations and Lithium ion in the battery structures. The proposed 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. All materials would be used in stable applications and contained in accordance with applicable regulatory requirements, which include RCRA, CERCLA, the Hazardous Materials Transportation Act, the 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 proposed project. The photovoltaic panels proposed are environmentally sealed collections of photovoltaic cells that require no chemicals and produce no waste materials. The substations would host equipment and associated mineral oils. 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 energy storage system however, would house batteries in a steel structure of approximately 35,000 square feet. The energy storage structure would have a fire rating in conformance with County standards and have specialized fire suppression systems installed for the battery areas. All non-battery areas would have County approved standard sprinkler systems.. 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.

The risk to workers or the public from damage to the project as a result of intentionally destructive acts would be low because public access would be controlled by security fencing. A 6-foot-tall chain-link fence topped with 1 foot of three-strand barbed wire would be installed around the project site perimeter, including the energy storage system, on-site substation, and Calcite Substation. Potentially significant impacts may occur, 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 proposed project site. The nearest school is located approximately 6.5 miles to the southwest of the proposed project site in Lucerne Valley. Additionally, operation and maintenance of the

proposed project would not produce hazardous emissions. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed project site is not located on a known site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The proposed project shall not create a significant hazard to the public or the environment. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would be located on a site which is listed on a list of hazardous materials sites pursuant to government code Section 65962.5 and would not, as a result, create a significant hazard to the public or the environment. No impacts would result from the proposed 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 public use airport, would the project result in a safety hazard for people residing or working in the project area? No Impact.** The proposed 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 7.5 miles to the west of the proposed project area. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed project area is not located within the vicinity of a private airstrip; therefore, it would not result in a safety hazard for people residing or working in the proposed project area. The nearest airport is the privately owned Holiday Ranch Airport, which is located approximately 7.5 miles to the west of the project area. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed project would not impede existing emergency response plans for the project site and/or other land uses in the project vicinity. The project would not result in any closures of SR-247 that might have an effect on emergency response or evacuation plans in the vicinity of the project site, and Desert Lane, running east-west through the solar and energy storage project site, would be kept open for public use during construction and operation. The proposed project would improve road conditions by paving access and access points to SR-247 and would not obstruct any existing accesses or roadways. In addition, all vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No impacts would result from the proposed 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. While the majority of the solar and energy project site has been previously disturbed for agricultural purposes, there are areas of scattered vegetation and the gen-tie and Calcite Substation are in undeveloped areas that consist of native vegetation. The vegetation in the area is very low 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 proposed project and would minimize the occurrences of fire due to project activities during construction and for the life of the project. 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.** No waters or habitats that fall under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), California Regional Water Quality Control Board (RWQCB), or the California Department of Fish and Wildlife (CDFW) are found on the proposed project area.

Potential water quality impacts from the proposed 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 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 or the Calcite Substation project. The SWPPPs 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, inspections drive motor repair, tracker repair, electrical connection repair, and panel replacement. Cleaning is expected to be conducted annually and water used would not contain any cleaning agents or other additives. Maintenance of the proposed Calcite 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, neither the proposed solar and energy storage project or the Calcite Substation Project would violate any water quality standards or waste discharge requirements. Less than significant impacts would result from the proposed 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**. All water for the proposed project, apart from drinking water, would be sourced from an on-site well or wells and would be procured and produced through a transfer of a portion of the Gabrych 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 proposed project would be acquired pursuant to a temporary transfer from Gabrych of sufficient BAP/FPA to produce approximately 75 acre-feet (AF) for the 10-month construction period and 6.6 AF per year during operation. Additionally, approximately 38 acre-feet would be needed to be acquired for the Calcite Substation. The availability and reliability of the adjudicated groundwater supplies in the Basin are secured through the diverse water supply portfolio held by the 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 to determine whether groundwater availability is sufficient for the proposed 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 proposed solar and energy storage project. Minor grading shall occur to allow the installation of PV panels, transmission line poles, and aggregate base access roads. Minor grading shall occur to allow the installation of PV panels, transmission line poles, and aggregate base access roads. A road will be installed generally around the perimeter of the site. Additionally, several interior roads shall be constructed to enhance access within the PV field. An unimproved maintenance road would be constructed within the right- of-way of the transmission line.

At locations where foundations are installed, it is expected that minor cuts would be required to place the foundations on a level pad. It is expected that the cut material will be placed around the pre-cast foundation to divert small localized flows away from the foundation and prevent undermining.

There will 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 is proposed to be left as-is to assist in erosion control and to maintain the existing soil characteristics (i.e. infiltration rates). Minor vegetation removal shall take place at the areas where the concrete pads for the trackers shall be placed and for gravel road installation. The addition of the foundations and inverter pads shall create a very slight increase in area that can be considered impervious. However, these foundations are small in size and located throughout the 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 is small in comparison with the entire site and the gravel roads do allow some level of infiltration. Though grading will be kept to a minimum, additional formal analysis within the EIR is warranted to determine the extent of the impacts upon

drainage patterns and the potential for erosion.

The connected proposed Calcite Substation project would include concrete foundations and improved roads increasing impervious surface area on a relatively small portion (approximately 2 acres) of the approximately 75-acre parcel. As with the proposed solar and energy project the drainage alterations would not be significant and implementation of BMPs pursuant to the NPDES General Construction Permit would be required. The proposed project would require minimal alterations to existing drainage and would comply with NPDES requirements. Therefore, neither the proposed solar and energy storage project or the Calcite Substation 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. Though grading will be kept to a minimum, additional formal analysis within the EIR is warranted to determine the extent of the impacts upon 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 proposed project components. Although there shall 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 shall create a slight increase in area that can be considered impervious. However, the foundations and roads area is relatively small in size in proportion of the approximately 480-acre site. The connected proposed Calcite Substation project would include concrete foundations and an improved access road increasing impervious surface area. The majority of the site would be covered with a 4-inch-thick layer of gravel base and thus would remain pervious. Only approximately 1.7 acres would be impervious cover, most of which would be attributed to the 20-foot-wide asphalt paved driveway traversing through the interior of the substation. While alteration will 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 proposed project are 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 SWPPPs would be prepared for the proposed solar and energy storage project or the Calcite Substation project. The SWPPPs 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 annually and water used would not contain any cleaning agents or other additives.

The connected proposed Calcite Substation project would include concrete foundations and improved roads increasing impervious surface area. As with the proposed solar and energy storage project and discussed previously in IX(d), the drainage alterations would not be significant and implementation of BMPs pursuant to the NPDES General Construction Permit would be required. Therefore, impacts to runoff would be less than significant. Both the proposed solar and energy storage project and the proposed Calcite Substation project would require minimal alterations to existing drainage and would comply with NPDES requirements. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed 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, SWPPPs 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 will 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 proposed project does not involve the development of any housing and would not create or result in housing within a 100-year flood hazard area. Furthermore, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (0607IC5900H, dated August 28, 2008) indicates that the proposed project area is within Zone D - an Undetermined Risk Area (FEMA 2016). In addition, a review of the San Bernardino County Dam Inundation mapping for the Desert Region indicates that the site is not located within any areas susceptible to inundation from flooding caused by dam failure, lake flooding or river flooding. The nearest area of potential flooding is approximately 1 mile south of the site associated with the Lucerne Dry Lake. No indicators of hydrologic activity (topographical or geological), hydric soils, or hydrophytic vegetation were observed on site. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would involving placing housing within a 100-year flood hazard area. No impacts would result from the proposed 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? No Impact.** As previously discussed in Section IX.g, the proposed project is not witin 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. Furthermore, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (0607IC5900H, dated August 28, 2008) indicates that the proposed project area is within Zone D - an Undetermined Risk Area (FEMA 2016). In addition, a review of the San Bernardino County Dam Inundation mapping for the Desert Region indicates that the site is not located within any areas susceptible to inundation from flooding caused by dam failure, lake flooding or river flooding. The nearest area of potential flooding is approximately 1 mile south of the site associated with the Lucerne Dry Lake. No indicators of hydrologic activity (topographical or geological), hydric soils, or hydrophytic vegetation were observed on site. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would place within a 100-year flood hazard area structure which would impede or redirect flood flows. No impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further 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? No Impact.** The proposed project shall not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, because the proposed project site is not within any identified path of a potential inundation flow that might result in the event of a dam or levee failure or that might occur from a river, stream, lake or sheet flow situation. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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. No impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further 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 proposed project, tsunamis are not considered a threat (California Department of Conservation 2016). 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 proposed 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 proposed project area are moderately well-drained, the terrain is relatively flat, and mudflows have not historically been an issue in the proposed project area. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would be exposed to inundation by seiche, tsunami, or mudflow. No impacts would result from the proposed 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 proposed project site is characterized by rural desert terrain modified by power lines, roads, fallow agricultural fields, and scattered residences located throughout. The surrounding area is also dominated by the SR-247 transportation corridor running north-south just to the west of the proposed solar and energy storage project site and east of the proposed Calcite Substation project. In addition to electrical and transportation infrastructure, there are 32 modest single-family rural residential structures located within 0.5 mile of the proposed project boundary, 22 of which were determined to show signs of inhabitation. These residences are scattered throughout the area, are generally undeveloped, and many of the parcels are currently used as storage space for vehicles and/or machinery. Based on its general sparsely developed and rural character, the surrounding area would not be considered an established community (County of San Bernardino 2007). The proposed project would maintain all existing access routes. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would physically divide an established community. Less than significant impacts would result from the proposed 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? Less than Significant Impact**. The current General Plan Land Use Element designation for the proposed solar and energy storage project area is Agriculture (AG), which allows 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 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, a Draft Renewable Energy and Conservation Element was prepared for the General Plan in July 2016 and updated in November 2016 and April 2017. The Draft Renewable Energy and Conservation Element is intended to establish goals and policies to manage renewable energy development and conservation. Under the Draft Renewable Energy and Conservation Element (2017), a newly proposed policy, **Policy 4.10.02** states that the County will "(prohibit) development of utility-oriented RE projects within the boundaries of existing community plans, which at the time of adoption of this Element are the Bloomington, Muscoy, Bear Valley, Crest Forest, Hilltop, Lake Arrowhead, Lytle Creek, Oak Glen, Homestead Valley, Joshua Tree, Lucerne Valley, Morongo Valley, Oak Hills and Phelan/Pinon Hills Community Plans." Due to the time the application was accepted as complete for review, the proposed policies are not applicable to the project, and will not be applied to the environmental review nor considered during the preparation of the Land Use Services staff recommendation for the Ord Mountain Solar Project (P201600510). The policies in effect at the time the application was accepted as complete will be applied to this project.

The land use regulations of the County are not applicable to the proposed Calcite Substation project because it would be conducted by the local utility SCE. Neither the proposed solar and energy storage project or the Calcite Substation project would 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. Impacts would be less than significant and no mitigation is required. This topic will not be analyzed further 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 proposed project does not conflict with any applicable habitat conservation plans or natural community conservation plans. Specifically, the Santa Ana Watershed Planning Authority (2002) has identified several "Essential Resource Conservation Areas" within San Bernardino County (County of San Bernardino 2007). The proposed 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 proposed project would not impact these areas. Of these conservation planning areas, Johnson Valley and Soggy Dry Lake are located closest to the proposed project site, at 22.5 miles and 16.5 miles respectively. The proposed 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 proposed project site is not located on or near any conservation areas. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would conflict with any applicable habitat conservation plan or natural community conservation plan. No impacts would result from the proposed 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 USGS Mineral Resources Spatial Data Mapper was used to determine that no metallic or nonmetallic mineral resources have been mapped on the proposed project area. In addition, although mining claims have been registered for much of the region surrounding the proposed project area, no active mines or mining claims are located on or in the immediate vicinity of the proposed project site and the site is not within a Mineral Resource Zone Overlay. 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 proposed project would not result in the loss of any known mineral resources on the proposed site. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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.** Neither the proposed solar and energy storage project or the Calcite Substation project would 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 XI (a)). Therefore, no impacts would result from the proposed 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 result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

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

a) **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 proposed project is adjacent to rural residences, undeveloped and/or vacant land; therefore, noise generated from the proposed 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 proposed 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 proposed 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 proposed project would not generate audible levels of noise or perceptible levels

of vibration in the surrounding community. On-site noises would be limited to the one- half (0.5) horse 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, nor would it have the potential to generate any additional vibration after construction is completed. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in exposure of persons to or generation of excessive groundbourne vibration or groundbourne noise levels during operation. Less than significant impacts would result from the proposed project's groundbourne operational vibration or groundbourne 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 proposed 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 proposed 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 proposed 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. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would result in exposure of people residing or working in the project area to excessive noise levels. No impacts would result from the proposed 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 proposed 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 7.5 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 proposed project area. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed project does not include development of residents 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 proposed project and ensuring existing access routes are not impeded. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project are 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 proposed project. Accordingly, the proposed project would not result in any impacts to housing or related infrastructure, nor require construction of additional housing. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere. No impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further in the EIR.

c) **Would the Project displace substantial number of people, necessitating the**

construction of replacement housing elsewhere? No Impact. As previously discussed in Section XII.b, no inhabited houses or other residences would be removed or otherwise displaced by the proposed project. Accordingly, the proposed project would not result in any impacts to housing or related infrastructure, nor require construction of additional housing. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would displace a substantial number of people necessitating the construction of replacement housing elsewhere. No impacts would result from the proposed 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:				
Fire Protection?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

SUBSTANTIATION:

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 Fire Protection services? Less than Significant Impact.** The proposed project area is serviced by the North Desert Division of the San Bernardino County Fire Department. Lucerne Valley Stations 111 and 112 are located approximately 7.5 miles to the south of the proposed 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 proposed project that would minimize the occurrences of fire due to proposed project activities during construction and for the life of the proposed project. Because of the low probability and short-term nature of potential fire protection needs during construction, the proposed project would not result in associated significant impacts. During

operations and maintenance the proposed 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 lithium ion 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 site's inverters and solar panels represent potential ignition sources that have a low likelihood of causing fires. All of this equipment represents a risk of sparking or igniting nearby off-site flammable vegetation. However, all battery components would be on concrete, 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. However, the proposed project would be constructed in compliance with requirements from San Bernardino County Fire (conditions of approval) and the proposed solar and energy storage project will be subject to the public safety services impact fee of the County's Solar Ordinance (§ 84.29.040(c)) to ensure that the proposed project will not affect fire performance objectives.

Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further in the EIR.

b) **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? Less than Significant Impact.** The proposed project area and other unincorporated portions of the County are served by the San Bernardino County Sheriff's Department. The Barstow Sheriff's Station is located approximately 7.5 miles to the south of the proposed 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 proposed project would not impact

service ratios, response times, or other performance objectives related to police protection. However, 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 proposed solar and energy storage project will be subject to the public safety services impact fee of the County's Solar Ordinance (§ 84.29.040(c)) to ensure that the proposed project will not affect police performance objectives.

Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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. Less than significant impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further in the EIR.

c) **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 proposed project would be unmanned and would not increase demand on school facilities. Construction of the proposed 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 proposed project would not result an increase in population into the area that would necessitate additional schooling services. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed project and no mitigation is required. This topic will not be analyzed further in the EIR.

d) **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 proposed project would be unmanned and would not increase demand on park facilities. Construction of the proposed 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 proposed project would not result an increase in population into the area that would necessitate additional park services. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed project and no mitigation is required. This topic will not be analyzed further in the EIR.

e) **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 proposed project would be unmanned and would not increase demand on other public facilities (such as libraries). Construction of the proposed 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 proposed project would not result an increase in population into the area that would necessitate additional other public facilities (such as libraries). Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed project would be unmanned and would not increase demand on recreational facilities. Construction of the proposed 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 proposed project would not result an increase in population into the area that would increase the use of recreational facilities. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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 proposed 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 proposed 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 proposed project would not result an increase in population into the area that would increase the use of recreational facilities. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 proposed 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.** Construction activities would not require closure of SR-247, but would likely require short-term traffic control to minimize traffic disruption during the crossing. To further ease potential traffic congestion as a result of the proposed project, 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, the construction activities would result in up to 500 worker trips and additional trips associated with deliveries (components, material, etc). This would result in a potentially significant impact on the local road ways including SR 247 and Old Woman Springs Road. To ensure that the construction activities do not conflict with the performance of the existing circulation system , review and approval of a construction management plan will 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 the proposed project construction, equipment that may include water trucks, backhoes, trenchers, plows, and trackhoes, would be mobilized to the proposed 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 the machinery that would be used during the lifetime of proposed project would also be necessary. As a result, impacts to local traffic on SR- 247 due to mobilizing construction equipment and delivery of machinery would be extremely short-term.

Access to the proposed project area would be made primarily via Fern Road and Desert Lane, and a new access road from SR-247. Construction of the proposed project may require the short-term closure of these two unpaved existing roadways. Once construction has been completed, any closed roads would be reopened and returned to preconstruction conditions. Therefore, closure of these roadways during construction would not significantly impact traffic levels. 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 no homes or businesses to the immediate west of the project site. Daily increases to traffic volumes during construction would primarily result from project personnel commuting to and from the work site. Based on the number of construction personnel anticipated for the proposed project, the volume increase would be equivalent to less than the 15% of the lowest volume segment of typical traffic volume on SR-247 (Table XVI-1). The numbers of construction workers and associated construction trips for the proposed project would potentially affect the levels of service along SR-247 and Old Woman Springs Road, which would be adverse. In addition, installation of the transmission line would require crossing SR-247. At this time, construction activities would not require closure of SR-247, but would likely require short-term traffic control to minimize traffic disruption during the crossing. To further ease potential traffic congestion as a result of the proposed project, designated ingress and egress routes will be used. Due to these potential impacts, additional analysis in the EIR is warranted.

Table XVI-1
Traffic Volume in the Vicinity of the Project

Road	Interchange/Location	Average Daily Traffic Volume – Both Directions (2008)
State Route 247	Junction with St. Rte. 18	4,600
State Route 247	Rabbit Spring Rd.	3,550
State Route 247	Lucerne Valley Cutoff Rd.	3,700
State Route 247	Stoddard Wells Rd.	3,650
State Route 247	Junction with U.S. Rte. 15	18,000

Source: Caltrans 2014

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 7.5 miles to the west of the proposed project area. The tallest components of the proposed project would be the seven transmission support structures, which would be up to 150 feet. The support structures would be either lattice steel towers or tubular monopoles made of steel or concrete, and would be spaced approximately 500 feet apart for approximately 0.6 mile. The proposed solar and energy storage project would be surrounded by a fence that would consist of 6-foot-high chain-link topped with three-strand barb wire. The on-site substation would consist

of a 55-foot-tall A-frame, a 16-foot-tall 220-kV disconnect switch, 16-foot-tall metering units, a 16-foot-tall 230-kV circuit breaker, a 28-foot-tall step-up transformer, and a 15-foot-tall power distribution center (25 feet x 60 feet), all of which will have at least a 15-foot clearance from the fence. The 34.5-kV feeders connecting to the substation would consist of 45-foot and 60-foot tall poles, for single and double circuits, respectively.

The energy storage structure would be approximately 20-feet tall with associated inverters, transformers, and switchgear located immediately adjacent to the structure on concrete pads. Connecting the proposed solar and energy storage project and the Calcite Substation project, the 220-kV gen-tie transmission line would consist of approximately seven structures, up to 150 foot tall concrete or steel poles, spaced on an average of approximately every 500 feet. The Calcite Substation would measure approximately 629 feet by 480 feet.

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 proposed project would not affect air traffic patterns.

While the solar arrays height would be less than many of the other components of the proposed project, at approximately 12 feet tall, solar panels common preconceptions of solar panels associate solar panels with glare. 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 described in Section I(a), the proposed project's contribution to the reflectivity within the area and the resultant potential negative effect on air traffic patterns would be less than significant.

Therefore, neither the proposed solar and energy storage project or the Calcite Substation project operation would 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)? Less than Significant Impact.** The proposed project would include use of existing exits (Fern Road and Desert Lane) off SR-247 during construction activities as well as construction of a new exit and paved access road directly off SR-247. The angles of the existing exits in relation to SR-247 are not ideal from a turn angle and sight distance perspective, which is why the proposed project includes construction of a new exit and access road from SR-247 for the proposed solar and

energy storage project. The new exit intersection would be constructed to achieve County standards intended to avoid design features that would affect traffic safety, and allow use by construction and maintenance vehicles. The proposed Calcite Substation project would use Fern Road and Desert Lane as ingress and egress routes that would be improved to reach County standards. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project operation would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts would be less than significant and no mitigation is required. This topic will not be analyzed further in the EIR.

e) **Would the Project result in inadequate emergency access? Less than Significant Impact**. The project includes paved access off SR-247 suitable for emergency vehicles access and perimeter 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 this topic will not be analyzed further in the EIR.

The proposed project would not result in any closures of SR-247 that might have an effect on emergency access in the vicinity of the proposed project site. During project construction, all vehicles would be parked off public roads and would not block emergency access routes. The short-term closure of two unpaved roadways (Fern Road and Desert Lane) across the site could limit emergency access to areas east of the project site. These roads typically experience minimal use since there are a limited number of homes and businesses to the immediate east of the project site. Traffic control would be required during construction of the transmission line crossing of SR-247. Should an emergency arise requiring access during closures of these roads, project personnel shall open the roads. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project operation would 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 proposed project area. The nearest public transit provider is the Victor Valley Transit Authority, which provides bus service to the cities of Victorville, Hesperia, Apple Valley, Adelanto, Lucerne Valley, and Helendale. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project operation would 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, featu cultural landscape that is geographically defined in terms the siz 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:

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 proposed 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 proposed project in the geographic area that is traditionally and through formal notification of proposed 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 will be performing 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 proposed project would be compliant with AB 52. However, the proposed project has the potential to affect tribal cultural resources determined by the lead agency and a California Native American tribe. 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? No Impact**. The proposed project would not exceed wastewater treatment requirements of the Colorado River RWQCB. Construction of the proposed project would result in the generation of various waste materials including soil, vegetation, and sanitation waste (portable toilets). Soil excavated for the proposed 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. The proposed solar and energy storage project would discharge uncontaminated water that is used to clean the solar panels, with no toxicants or cleaning agents used. The County General Plan defers to applicable Regional water control requirements, and neither of the proposed project's water discharge requires treatment or permitting according to the regulations of the Colorado River RWQCB. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

No impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further 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 proposed solar and energy storage project and Calcite Substation project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environment effects. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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 impacts would result from the proposed 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? No Impact**. A Hydrology and Hydraulics Report (RRC 2016) was prepared for the proposed solar and energy storage project and a Drainage Report was prepared for the proposed Calcite Substation project (CASC 2016). The report evaluated the potential on- and off-site storm water that might impact the proposed project site. The proposed solar and energy storage 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 within the proposed project area would not be covered with impermeable material. The report determined that due to the various factors including high infiltration rates on site, essentially no off-site water would reach the proposed project site and would not impact development at the site. Additionally, report results indicate that storm water not only would not reach the site, but no storm water from precipitation falling directly on the site would leave the site due to infiltration of the storm water into the ground before it can exit the site.

The proposed Calcite Substation project would be anticipated to use approximately 37 acre-feet of water during construction and no water would be expected to be necessary for operations. Like the proposed solar and energy storage project, the quantity of discharged water would be minimal and would likely be absorbed into the 4-inch thick layer of gravel base and underlying on-site soils (CASC 2016). Construction of the concrete pad underlying the proposed Calcite Substation may increase impermeable surfaces on site, however, due to the minimal volume of water anticipated to be used or generated on the project site, no impacts to storm water drainage would result. Therefore, neither the proposed solar and energy storage project or the Calcite Substation project would 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. No impacts would result from the proposed project and no mitigation is required. This topic will not be analyzed further 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? Less than Significant Impact**. The water demand for the proposed project would consist of short-term construction water demand and the long-term operational water demand for the proposed project.

Table XVII-1
Projected Water Demand

Project Phase	Duration (Years)	Average Annual Water Demand (AF)
Solar and Energy Storage Project Construction	1.33 (16 mo.)	75
Solar and Energy Storage Project Operation	30	6.6
Calcite Substation Project Construction	30	38

Total water consumption during construction is estimated to be approximately 113 AF for the purpose of dust suppression and earthwork. This water use is spread out over an estimated 16-month construction period and would be provided by groundwater. Operational water, irrigation, and panel rinsing would be provided by groundwater. The solar and energy storage project proposes the use of up to 6.6 AF of groundwater per year during operation. The majority of this water demand is for routine panel washing (approximately 6.0 AF per year). A very minor amount of groundwater (i.e., approximately 0.6 AF) would be used for maintenance and repair dust suppression, and for the specialized fire suppression system installed for the energy storage building. It is assumed that this water demand is the consumptive use for the proposed project as there would likely be negligible return flow to the groundwater supply underlying the proposed project site from the proposed uses.

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 operations. Given a 60 MW AC plant, with four cycles per year, the annual water usage is expected to consume up to approximately 6.0 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 periods. Untreated well water is expected to be used for the on-site portable lavatories. Potable water would be supplied via filtered well water or bottled water for drinking purposes.

The water supply to be used in serving the proposed project's demands are adjudicated production rights to be transferred from Gabrych, the current owner of the proposed solar and energy storage project site, to the project Applicant. Gabrych is a Party to the Judgment and holds a total BAP right of 2,201 acre-feet per year (AFY) in the Este Subarea. Under the 80% ramp down currently in effect for the Este Subarea, Gabrych's FPA is approximately 1,761 AFY (Judgement 2015). The proposed project would acquire temporary transfer of sufficient BAP/FPA (which may include carryover water) from Gabrych to produce approximately 113 AFY for construction: 75 acre-feet for the 1-year construction period of the proposed solar and energy storage project; and approximately 38 AFY would be required for the Calcite Substation. Additionally, permanent transfer of sufficient BAP from Gabrych to allow the production of up to 10 AFY of water for operation of the proposed solar and energy storage project.

Therefore, the proposed solar and energy storage project or the Calcite Substation project have sufficient water supplies available from existing entitlements, and no new, or expanded, entitlements are needed. Less than significant impacts would result from the proposed project and no mitigation is required. The degree to which existing groundwater supply is sufficient for the project will be addressed in the EIR under Hydrology and Water Quality as identified in IX.b).

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 proposed project would be unmanned and would not require wastewater service. Therefore, neither the proposed solar and energy storage project or the Calcite Substation Project would 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 proposed 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 proposed project would be unmanned and solid waste would largely result from short-term construction activities (with short-term waste generation limited to minor quantities of construction debris) and would not result in long-term solid waste generation. Solid wastes associated with the proposed project would be disposed as appropriate in local landfill or at a recycling facility.

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 counting the motors and control systems) typically consist of aluminum and concrete. All of these materials can be recycled. Concrete from deconstruction shall be recycled through local recyclers. Metal and scrap equipment and parts that do not have free flowing oil would be sent for salvage. There are currently three industrial recycling facilities within a 30-mile radius of the proposed project site that would accept deconstructed, recyclable wastes. Equipment containing any free flowing oil shall be managed as hazardous waste and shall be evaluated before disposal at a properly permitted and licensed disposal facility. Oil and lubricants removed from equipment shall be managed as used oil and disposed in accordance with applicable State hazardous waste disposal requirements.

The proposed Calcite Substation project would include similar materials as the proposed solar telecommunication facilities and related construction activities and waste materials. The proposed Calcite Substation would not be decommissioned. Therefore, neither the proposed solar and energy storage project or the Calcite Substation Project would result in impacts related to landfill capacity. No impacts would result from the proposed 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 proposed project would comply with all federal, state, and local statutes and regulation related to solid waste. The proposed project would be unmanned and thus waste generation would consist of short-term construction activities (with short-term waste generation limited to minor quantities of construction debris) and thus would not result in long-term solid waste generation. Solid wastes produced during the construction phase of the proposed 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, neither the proposed solar and energy storage project or the Calcite Substation Project would result in impacts related to solid waste. No impacts would result from the proposed 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 proposed 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 eliminate important examples of the major periods of California history or prehistory. The proposed project, as described throughout the various sections of this checklist, has the potential to impact these resources and these 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 proposed 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 proposed 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 proposed 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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