

Draft **Environmental Impact Report**

San Bernardino County Overnight Solar Project

VOLUME 1 OF 2

SCH No. 2024010434

October 2024

Lead Agency:



Land Use Services Department
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187
Contact: Jon Braginton

Preparer:



TETRA TECH

17885 Von Karman Avenue, Suite 500
Irvine, CA 92614

Draft Environmental Impact Report

San Bernardino County Overnight Solar Project

VOLUME 1 OF 2

SCH No. 2024010434

Lead Agency:



Preparer:



OCTOBER 2024

EXECUTIVE SUMMARY

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15123, this section of the Environmental Impact Report (EIR) includes:

- Purpose of the Environmental Impact Report
- Project Synopsis
- Scope of the Environmental Impact Report
- Summary of Significant Effects
- Issues to Be Resolved by the Decision-Making Body
- Summary Table
- Summary of Project Alternatives

ES.1.1 Purpose of the Environmental Impact Report

This EIR has been prepared for San Bernardino County (County), acting as the lead agency under CEQA Guidelines Sections 15050 and 15367, to analyze the potential environmental effects associated with implementation of the Overnight Solar Project (project).

An EIR is a public informational document used in the planning and decision-making process. The purpose of the EIR is to demonstrate that the County has made a good faith effort at disclosing the potential for the project to result in significant impacts to the physical environment. As such, the EIR does not consider potential fiscal impacts, cost-benefit assessment, or social impacts. Nor does the EIR present recommendations to the decision-making bodies for approval or denial of the project based on the environmental findings. Rather, the EIR is intended to provide additional information about the project when, if, and at which time it is reviewed and considered by the County in its discretionary decision-making.

This EIR is being distributed to agencies, organizations, and interested groups and persons for a 45-day review period in accordance with CEQA Guidelines Section 15087. The County will consider and respond to all written comments received during the review period prior to any action being taken on the project. The County will consider the information in the EIR, public and agency comments on the EIR, and testimony at public hearings in their decision-making process. The public review comments will be incorporated and addressed in the Final EIR. The purpose of an EIR is to identify:

- Significant impacts of the proposed project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated and
- Reasonable and feasible alternatives to the proposed project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less than significant level.

An EIR also discloses cumulative impacts, growth-inducing impacts, and impacts found not to be significant. CEQA requires that an EIR reflect the independent judgment of the lead agency regarding

the impacts, disclose the level of significance of the impacts both without and with mitigation, and discuss the mitigation measures proposed to reduce the impacts.

The EIR is circulated to the public and other agencies that may have jurisdiction over affected lands or resources, such as the California Department of Fish and Wildlife. The purposes of public and agency review of an EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting counter proposals.

ES.1.2 Project Synopsis

Overnight Solar, LLC (Applicant) proposes constructing and operating a utility-scale, solar photovoltaic (PV) electricity generation and battery energy storage system (BESS) facility with an on-site substation, inverters, fencing, access roads, and supervisory control and data acquisition (SCADA) system that would produce up to 150 megawatts (MW) of power and include up to 150 MW of battery storage capacity on approximately 596 acres of land (project site). A generation interconnect (gen-tie) corridor, spanning approximately 1.1 miles in length, would connect the proposed on-site substation to an existing gen-tie line associated with the Mojave Solar Facility. The proposed project would interconnect at the existing Sandlot Substation via the 230-kilovolt (kV) Southern California Edison Kramer-Coolwater Transmission Line, to deliver renewable energy to the electric grid.

The project site is primarily flat and located entirely on private land in unincorporated Lockhart, approximately 10 miles northwest of Hinkley and 10 miles east of Kramer Junction. State Route (SR) 58 is located approximately 5.6 miles south of the project site; U.S. Route 395 is approximately 10.5 miles west; Grass Valley Wilderness Area and the existing Lockhart Solar are north of the project site; and the existing Mojave Solar Facility is east of the project site.

ES.1.3 Scope of the Environmental Impact Report

In accordance with CEQA Guidelines Section 15082, the County prepared and circulated a Notice of Preparation (NOP) of Environmental Impact Report for the proposed project for public review on January 18, 2024. The NOP comment period is intended to notify responsible agencies, trustee agencies, and the public that the County, acting as the lead agency, would be preparing an EIR for the project. The County determined the scope of the analysis for this EIR as a result of initial project review and consideration of agency and public comments received in response to the NOP.

Section 1.0, Introduction, summarizes issues and areas of concern and/or controversy related to the proposed project, as presented to the County by agencies and the public during the NOP review period. For more information regarding the NOP process, refer to Section 1.0. The NOP and the NOP comments are included as **Appendix A** to this EIR. Comment letters were received from the Mojave Desert Air Quality Management District, Lahontan Regional Water Quality Control Board, Defenders of Wildlife, Desert Tortoise Council, and Mohave Ground Squirrel Conservation Council.

As demonstrated in the comments received from State and local agencies and members of the public, issues of concern and/or opposition include concerns regarding: impacts to desert tortoise, Mohave ground squirrel, burrowing owl, and other special-status species; air quality impacts and dust control impacts to water resources and hydrology; and evaluation of alternatives.

ES.1.4 Summary of Significant Effects

Based on the analysis within this EIR, all potentially significant environmental impacts can be mitigated to less than significant levels, and the proposed project would not result in any significant and unavoidable impacts.

ES.1.5 Issues to be Resolved by the Decision-Making Body

An EIR is an informational document intended to inform decision-makers and the public of the significant effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the proposed project. As the lead agency, the County must respond to each significant effect identified in this EIR by making “findings” for each significant effect. As part of the decision-making process, the County must determine whether or how to mitigate the associated significant effects of the project, including whether to implement a project alternative. Approval of the project despite identified significant and unavoidable environmental impacts would require a Statement of Overriding Considerations, explaining why the benefits of the project outweigh the environmental effects, as set forth in this document. However, in the case of the proposed project, a Statement of Overriding Considerations would not be required as no significant and unavoidable impacts would occur.

ES.1.6 Summary Table

Table ES-1, Environmental Impact Summary, identifies the areas of environmental impact the project will generate, and when feasible, mitigation measures to reduce those potential impacts.

Table ES-1. Environmental Impact Summary

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Aesthetics			
3.1-1: Would the project have a substantial adverse effect on a scenic vista?	No Impact	None required	No Impact
3.1-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less than Significant	None required	Less than Significant
3.1-3: Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	Less than Significant	None required	Less than Significant
3.1-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant	None required	Less than Significant
3.1-5: Would the project result in cumulative impacts related to aesthetics?	Less than Significant	None required	Less than Significant
Air Quality			
3.2-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant	None required	Less than Significant
3.2-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region if non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant	None required	Less than Significant
3.2-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Less than Significant	None required	Less than Significant
3.2-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant	None required	Less than Significant
3.2-5: Would the project result in cumulative impacts related to air quality?	Less than Significant	None required	Less than Significant
Biological Resources			
3.3-1: Would the project have a substantial adverse effect, either directly or through habitat	Potentially Significant	BIO-1 In compliance with the California Desert Native Plants Act (CDNPA), biologists familiar with silver cholla shall mark all the plants prior to ground-	Less than Significant with Mitigation

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
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 Wildlife or US Fish and Wildlife Service?		disturbing activities. All cacti and other plants protected by the CDNPA shall be transplanted outside of a disturbance area whenever feasible. Required permits shall be obtained to allow for take and other impacts to CDNPA protected species. BIO-2 Prior to any construction and decommissioning activity, the Applicant, in coordination with the Designated Biologist and Biological Monitor, shall provide all workers on the project with a Worker Environmental Awareness Program (WEAP) briefing informing them of the biological resources on site and the required measures to avoid unnecessary impact or take of these resources or their habitat. The WEAP shall place special emphasis on protected species including those listed below, and nesting birds protected under the California Fish and Game Code (FGC) and Migratory Bird Treaty Act (MBTA), and any special status plants. • Federally Threatened and State Threatened Mojave Desert Tortoise • State Threatened Mohave Ground Squirrel • California SSC/ Protected: ○ Western Burrowing Owl ○ Le Conte's Thrasher ○ Loggerhead Shrike ○ American Badger ○ Desert Kit fox • California Watch-list Species: ○ Bell's Sparrow ○ Prairie Falcon ○ Golden Eagle The program shall include the following elements: • A presentation, developed by or in consultation with a biologist familiar with special-status species in the vicinity of the project, discusses the sensitive biological resources with potential to occur	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		on-site. The presentation should include an explanation for resource protection and penalties incurred for non-compliance; • Brochures or booklets containing written descriptions and photographs of protected species as well as a list of site rules pertaining to biological resources to be provided to all WEAP participants; • Contact information for the project biological monitor and instructions to contact the monitor with any questions regarding the WEAP presentation or booklets; • An acknowledgement form to be signed by each worker indicating that they received WEAP training and will abide by the site rules protecting biological resources; and • Conspicuous stickers identifying the project and signifying WEAP completion to be distributed immediately following WEAP training and required on personnel hard hats. BIO-3 The Applicant shall designate a Designated Biologist and/ or Biological Monitor(s) for all disturbance activities during construction and decommissioning of the project, outside of cleared areas or areas that are not encompassed by desert tortoise exclusionary fencing. • Designated Biologist(s) and Biological Monitor(s) – Applicant shall ensure that the Designated Biologist(s) and Biological Monitor(s) are knowledgeable and experienced in the biology and natural history of the covered species. The Designated Biologist(s) and Biological Monitor(s) shall be responsible for monitoring covered activities to help minimize and fully mitigate or avoid the incidental take of individual covered species and to minimize disturbance of covered species habitat. BIO-4 Desert tortoise exclusionary fencing shall be installed around the facility, in conjunction with the security fence, according to the specifications provided by the (United States Fish and Wildlife Service) USFWS Desert Tortoise Field Manual (2009). The installation of desert tortoise exclusionary fencing will precede any ground-disturbing construction activities. Installation of desert	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		tortoise exclusionary fencing will be supervised by a Designated Biologist or Biological Monitor. Biological Monitors shall perform a clearance survey for desert tortoise within the exclusionary perimeter fencing, in accordance with the 2019 USFWS Clearance Survey Protocol for the Mojave Desert Tortoise. If the species is determined present within the project site, individual(s) shall be allowed to leave the site on their own or will be relocated by a biologist that is authorized to relocate desert tortoise by USFWS and California Department of Fish and Wildlife (CDFW). Disturbance activities shall be monitored, as follows: • Environmental awareness training (see BIO-2) shall include education on desert tortoise and Mohave ground squirrel (MGS), protective status, and avoidance measures to be implemented by all personnel, including looking under vehicles and equipment prior to moving. If desert tortoises or other protected species are encountered, such vehicles shall not be moved until they have voluntarily moved away from the vehicle and out of harm's way, or a qualified biologist has moved them. • If a desert tortoise is present, a Biological Monitor shall be present during all disturbance activities in the vicinity of exclusionary fencing (if required) and shall have the authority to stop work as needed to avoid direct impacts to desert tortoises. Periodic biological inspections and maintenance shall be conducted during the construction period to ensure the integrity of exclusionary fencing (if required). Work may proceed within the excluded area when the Biological Monitor confirms all desert tortoises have left the excluded area. • Should desert tortoises be found during construction activities, the Biological Monitor shall have the authority to stop work as needed to avoid direct impacts to tortoises, and further consultations with the USFWS and CDFW shall take place prior to relocating the desert tortoises. Trash and food items shall be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators of desert tortoise	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		(e.g., ravens, coyotes, feral dogs). Employees shall not bring pets to the construction site. BIO-5 The Applicant shall acquire land to offset impacts to Mojave desert tortoise, MGS, and Western Burrowing Owl as applicable, as well as follow any regulations pertaining to applicable agency permits and agency coordination, such as Incidental Take Permits (ITPs). As applicable and as required and approved by USFWS and CDFW, offsite compensatory mitigation land shall be put into a conservation easement and managed with the goal of providing suitable habitat and ensuring long-term protection for these species. BIO-6 An MGS trapping routine shall be implemented prior to project site blading and clearing, or other significant impacts to vegetation that may directly affect this species. The trapping routine shall be similar in scope and scale to what is required to determine presence/absence in accordance with the 2023 CDFW Conservation Strategy for the Mohave Ground Squirrel <i>Xerospermophilus mohavensis</i>. Live trapped animals shall be moved offsite to a translocation area preapproved by CDFW. A Mohave Ground Squirrel Translocation Plan will provide details on the trapping and translocation of this species. A CDFW approved Mohave Ground Squirrel Translocation Plan will be in place at least 60-days prior to the start of construction. BIO-7 Not more than 30 days prior to project disturbance activities, a qualified biologist(s) familiar and experienced with western burrowing owl shall perform a pre-construction clearance survey for this species in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. If western burrowing owl are not detected during pre-construction surveys, and if no burrows have active sign (tracks or scat), then construction related activities may begin and no further action shall be required and no further mitigation under this measure is necessary. If western burrowing owl is present on-site, a non-disturbance buffer will be implemented. Fencing or flagging shall be installed to create a non-disturbance buffer area where no work activities may be conducted. The non-disturbance buffer will be a 200-meter radius from the occupied burrow during the breeding season (February 1st – August 31st), unless authorized by a qualified biologist. During the non-breeding season (September 1st – January 31st), no ground disturbing activities shall be permitted within 50-meters of an occupied burrow. A smaller buffer may be established in consultation with a qualified biologist.	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		If avoidance of an occupied burrow is infeasible, western burrowing owl may be passively relocated by a qualified biologist during the non-breeding season, or when owls have not laid eggs, or whenever juveniles are capable of independent survival. Passive translocation will follow a CDFW approved Burrowing Owl Exclusion Plan or Passive Relocation Plan that will be prepared and approved by CDFW prior to implementing relocation efforts. At a minimum, the plan will be prepared by a qualified biologist in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. The Burrowing Owl Exclusion Plan or Passive Relocation Plan shall include the following performance standards: - Excavation shall require nonpowered hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow and monitored for at least 48 hours after installation. If burrows will not be directly impacted by the project, one-way doors shall be installed to prevent use and shall be removed after ground-disturbing activities have concluded in the area. Only burrows that will be directly impacted by the project shall be excavated and filled. - Detailed methods and guidance for passive relocation of burrowing owls to off-site "replacement burrow site(s)" consisting of a minimum of two suitable, unoccupied burrows for every Burrowing Owl or pair to be passively relocated. - Monitoring and management of the replacement burrow site(s) and a reporting plan. The objective shall be to manage the replacement burrow sites for the benefit of Burrowing Owls (e.g., minimizing weed cover), with the specific goal of maintaining the functionality of the burrows for a minimum of 2 years. - Monitoring active burrows during construction periods to ensure Burrowing Owls are not detrimentally affected. The Applicant, in consultation with CDFW, shall respond to monitoring results and implement additional measures to avoid disturbances that could result in nest failure during the breeding season, or impacts that	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		could result in injury or mortality at any time. - Compensatory Mitigation to offset impacts by purchasing and managing off-site habitat or by purchasing mitigation credit, as approved by CDFW. (see BIO-5). BIO-8 To avoid construction-level impacts to nesting birds during the nesting breeding bird season (February 1st through August 31st), no earlier than 7 days prior to commencement of scheduled ground disturbance activities, a qualified biologist with prior nesting bird survey experience shall perform a nest survey within 150-meters of the disturbance footprint, as accessible. If active nests are found, project disturbance activities shall be postponed or halted within a non-disturbance buffer surrounding each active nest (to be established by a qualified biologist) that is suitable to the particular bird species and nest location(s) until the nest(s) are vacated and juveniles have fledged or failed, as determined by the qualified biologist. Any such buffer(s) shall be clearly demarcated in the field with highly visible construction fencing or flagging, and construction personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall monitor construction activities near all such buffer(s) to ensure no inadvertent impacts on active nest(s). If special status species are involved and a non-disturbance buffer cannot be established, CDFW and/or USFWS shall be notified immediately for consultation on how to proceed. BIO-9 To reduce the subsidies available to Common Ravens, a qualified biologist shall ensure the following measures are taken throughout the pre-construction, construction, operations and maintenance, and decommissioning stages of the project: - Water used for construction and operation shall not be applied in such a manner to create pools or puddles. Availability of water subsidies to Common Ravens will be minimized to the extent practical. - Roadkill and common wildlife killed during construction shall be removed and disposed of in ways that do not encourage scavenging. Availability of food subsidies to Common Ravens will be minimized to the extent practical. - Sensitive species killed by Common Ravens shall be collected and	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		reported to CDFW. • Inactive Common Raven nests shall be removed, and deterrents erected, if possible, to reduce onsite presence. • Active Common Raven nests will be reported to the appropriate agency for management and removal. • Trash receptacles shall be covered and secured to prevent scavenger access. WEAP training shall inform all workers about the need to prevent scavenger access to open trash and food scraps. • The Applicant will contribute \$105/acre of disturbance to the Regional Raven Management Program. BIO-10 The following best management practices (BMPs) shall be implemented during project grading and construction and decommissioning activities to address potential indirect impacts: • Backfill trenches. At the end of each workday, all potential wildlife pitfalls (e.g., trenches, bores, excavation pits) shall be backfilled, covered, or sloped to allow wildlife egress. Should wildlife become trapped, the biological monitor shall be notified by construction personnel to remove and relocate the individual(s). • Cover materials. All open ends of pipes, culverts, or other hollow materials temporarily installed in open trenches or stored in staging/laydown areas shall be covered/capped at the end of each workday. Any such materials that have not been capped shall be inspected by construction personnel for wildlife before being moved, buried, or handled. Should wildlife become trapped, a qualified biologist shall be notified by construction personnel to remove and relocate the individual(s). • Soil binding and weighting agents used on unpaved surfaces shall be nontoxic to wildlife and plants. • All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly handled or disposed of at a licensed facility.	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		Servicing of construction equipment shall take place only at a designated staging area. The project shall incorporate methods to control runoff, including a stormwater pollution prevention plan to meet National Pollutant Discharge Elimination System (NPDES) regulations. Implementation of stormwater regulations is expected to substantially control adverse edge effects (e.g., erosion, sedimentation, habitat conversion) during and following construction, both adjacent to and downstream from the project area. Typical construction BMPs specifically related to reducing impacts from dust, erosion, and runoff generated by construction activities shall be implemented. During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns, which will protect sensitive vegetation from being inundated with sediment-laden runoff. Dewatering shall be conducted in accordance with standard regulations of the Regional Water Quality Control Board (RWQCB). An NPDES permit, issued by the RWQCB to discharge water from dewatering activities, shall be required prior to the start of dewatering. This permit will minimize erosion, siltation, and pollution in sensitive vegetation communities. BIO-12 Qualified biologists shall conduct pre-construction den surveys for desert kit fox and American badger on the project site 14-30 days and 24 hours prior to any vegetation removal or ground disturbing construction activities. Because Mojave desert tortoises will utilize shelter sites created by American badger and desert kit fox, these surveys may take place concurrently with desert tortoise preconstruction clearance surveys. Pre-construction surveys for desert kit fox and American Badger will include disturbance areas and a 30-meter buffer to the extent allowable. The locations of American badger and desert kit fox dens will be recorded. Current status and use by American badger and desert Overnight Solar Biological Resources Technical Report 56 kit fox will be determined through the use of wildlife cameras, scopes, and/or tracking substrate. Inactive and unoccupied dens will be collapsed during clearance surveys. Active dens will be monitored, and a qualified biologist will establish a 50-meter non-disturbance buffer during the non-breeding season and a 150-meter non-disturbance buffer during the breeding/ pupping season (February 1 – May 15). The buffer size may be amended by a qualified	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		biologist through consultation with CDFW. Active burrows shall be avoided until they are confirmed unoccupied by a qualified biologist. Burrow occupancy will be determined using a tracking medium such as diatomaceous earth or fine clay, or infrared cameras placed at the entrance. If no tracks or evidence of activity is observed after 3 consecutive nights of monitoring, the burrow shall be scoped and backfilled using nonpowered tools. If tracks or evidence of burrow occupancy is observed, burrows shall be fitted with one-way trap doors for exclusion purposes. Infrared cameras will be used in conjunction with one-way trap doors to assess the effectiveness of exclusion efforts. At least forty-eight hours after installing one-way exclusion doors, and after confirming the effectiveness of exclusion efforts through photo review, the burrow will be scoped and backfilled using nonpowered tools. If occupancy monitoring reveals the burrow is being used for breeding/ reproductive purposes, CDFW will be consulted to determine the course of action pertaining to exclusion efforts and passive translocation. To guard against the spread of distemper and other diseases, equipment and tools used for burrow occupancy monitoring and excavation will be treated with a disinfectant that's proven effective. This includes but is not limited to accelerated hydrogen peroxide, potassium peroxymonosulfate, or a 1:20 dilution of household bleach. Fieldworker clothing will be washed in hot water and dried using a dryer. CDFW will be notified in dealing with injured, sick, or dead American badger or desert kit fox.	
3.3-2: Would the project have a substantial adverse effect on any riparian habitats or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Potentially Significant	Mitigation measures BIO-1 , BIO-2 , and BIO-10	Less than Significant with Mitigation
3.3-3: Would the project have a substantial adverse effect on federally protected wetlands as defined by Clean Water Act Section 404 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially Significant	BIO-11 The project will avoid direct and indirect impacts to jurisdictional waters by excluding them from the development area. No construction related activities shall occur within 50 feet of the areas delineated as jurisdictional waters.	Less than Significant with Mitigation

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
3.3-4: 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?	No Impact	None required	No Impact
3.3-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant	Mitigation measures BIO-1 through BIO-12	Less than Significant with Mitigation
3.3-6: Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	No Impact	None required	No Impact
3.3-7: Would the project result in cumulative impacts related to biological resources?	Potentially Significant	Mitigation measures BIO-1 through BIO-12	Less than Significant with Mitigation
Cultural and Tribal Cultural Resources			
3.4-1: Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	Potentially Significant	CUL-1 The project proponent/owner shall conduct a WEAP for relevant construction personnel working on the proposed project and conducting subsurface activities. Development of the WEAP shall include consultation with an archaeologist who meets Secretary of the Interior Professional Qualifications in Archaeology (Lead Archaeologist). The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the Lead Archaeologist. CUL-2 The Lead Archaeologist shall prepare a Cultural Resources Monitoring and Treatment Plan to be implemented during ground-disturbing activities associated with project construction. The plan shall outline monitoring procedures and the process for the identification of cultural and tribal resources during project construction. The Morongo Band of Mission Indians and the Yuhaaviatam of San Manuel Nation (YSMN) shall be given the opportunity to be present and provide monitoring of ground clearing and ground disturbing activities. The Project Applicant shall arrange for a Tribal Monitoring Services Agreement to be in place prior to the start of construction by contacting the Morongo Band of Mission Indians and the YSMN. After monitoring has been completed, the Lead Archaeologist shall prepare a Monitoring and Treatment Report detailing the results of	Less than Significant with Mitigation

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		monitoring, to be submitted to the Director of the San Bernardino County Planning Division. CUL-3 In the event that previously unknown pre-contact or historic-period archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all work occurring within 100 feet of the find shall immediately stop until the Lead Archaeologist can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the County. Pursuant to CEQA Guidelines Section 15126.4(b)(3), proposed project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with the County, which may include testing for California Register of Historical Resources (CRHR)-eligibility, data recovery or other appropriate measures. The Monitoring and Treatment Report shall also document the evaluation and/or treatment of the resource.	
3.4-2: Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5?	Potentially Significant	Mitigation measures CUL-1 through CUL-3	Less than Significant with Mitigation
3.4-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Potentially Significant	CUL-4 In accordance with California Health and Safety Code Section 7050.5, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. The Morongo Band of Mission Indians requests no photographs are to be taken except by the coroner, with written approval by the consulting tribes. The project lead/foreman shall designate an Environmentally Sensitive Area physical demarcation/barrier 100 feet around the remains and no further excavation or disturbance of the Environmentally Sensitive Area shall occur while the County Coroner makes his/her assessment regarding the nature of the remains. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with Public Resources Code (PRC) Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the Environmentally Sensitive Area. The MLD shall then determine, in consultation with the property owner, the disposition of the human remains. Reburial of human remains and/or funerary objects (those artifacts	Less than Significant with Mitigation

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		associated with any human remains or funerary rites) shall be accomplished in compliance with the California PRC Sections 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The applicant/developer/landowner should accommodate on-site reburial in a location mutually agreed upon by the Parties. It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The County Coroner, parties, and Lead Agencies shall be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code Section 6254 (r).	
3.4-4: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section	Potentially Significant	Mitigation measures CUL-1 through CUL-4	Less than Significant with Mitigation

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			
3.4-5: Would the project result in cumulative impacts related to historical, archaeological, or tribal cultural resources?	Potentially Significant	Mitigation measures CUL-1 through CUL-4	Less than Significant with Mitigation
Energy			
3.5-1: Would the project result in significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant	None required	Less than Significant
3.5-2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant	None required	Less than Significant
3.5-3: Would the project result in cumulative impacts related to energy?	Less than Significant	None required	Less than Significant
Geology and Soils			
3.6-1: Would the project directly or indirectly cause 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 or strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?	Less than Significant	None required	Less than Significant
3.6-2: Would the project result in substantial soil erosion or the loss of topsoil?	Less than Significant	None required	Less than Significant
3.6-3: Would the project site 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	None required	Less than Significant
3.6-4: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform	Less than Significant	None required	Less than Significant

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Building Code (1994), creating substantial direct or indirect risks to life or property?			
3.6-5: 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?	Less than Significant	None required	Less than Significant
3.6-6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	GEO-1 Paleontological Resources Impact Mitigation Program: Prior to the commencement of ground-disturbing activities, the project applicant shall retain a paleontologist qualified according to industry standards (SVP 2010) (Project Paleontologist) to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) which shall include WEAP training regarding paleontological resources, paleontological resources monitoring requirements, and requirements and contingencies in the event of an unanticipated find of paleontological resources during project construction, operation, or decommissioning. Worker Environmental Awareness Program (WEAP) – Paleontological Resources: Before starting any ground-disturbing construction or decommissioning activities, all on-site personnel shall receive training related to paleontological resources as part of the project's WEAP. This shall include (1) background on laws and ordinances protecting fossil resources, (2) types of fossil resources that may be encountered in the project area, (3) information regarding basic recognition of fossils, (4) the role of the paleontological monitor, and (5) appropriate notification procedures in the event that fossils are discovered during project activities (an unanticipated find). This portion of the WEAP training shall stress the importance of immediate notification of the paleontological monitor of any suspected find as well as contact information for the Project Paleontologist. The paleontological resources section of the WEAP training shall be developed by the Project Paleontologist and can be delivered concurrent with other training. GEO-2 Paleontological Monitoring: Paleontological resource monitoring shall be implemented at the start of any ground-disturbing activities (e.g., grading, excavation, etc.) more than 5 feet below ground surface (bgs). At this depth the likelihood of encountering the geologic formation (Qya) with the greatest potential for containing fossils is expected. GEO-3 Unanticipated Find Contingency: If a paleontological resource is discovered, the paleontological monitor shall have the authority to temporarily divert the construction equipment around the find until it is	Less than Significant with Mitigation

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following: 1. Salvage of Fossils. If a fossil is discovered, all work in the immediate vicinity shall be halted to allow the paleontological monitor, and/or the Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossil is assessed as potentially significant, the paleontological monitor or Project Paleontologist shall recover the fossil, following standard field procedures for collecting paleontological resources, as outlined in the PRIMP. Typically, fossils can be safely and quickly salvaged by a single paleontologist without significant disruption to construction activity. In the case of a larger fossil assemblage (such as complete skeletons or multiple parts of large mammals) the effort shall require more extensive excavation and longer salvage periods. If such a situation occurs, the Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. 2. Fossil Preparation and Curation. Upon completion of laboratory preparation and fossil identification, all scientifically significant specimens recovered as a result of the project shall be delivered to the San Bernardino County Museum for permanent curation and storage, as outlined in the PRIMP. The fossil specimens shall be accompanied by field notes, photographs, locality data, a signed deed of gift from the landowner, and a copy of the final technical report. The cost of delivery and curation is assessed by the repository and is the responsibility of the landowner, who shall provide confirmation to the San Bernardino County Land Use Services Department that such funding has been paid to the institution. Any non-significant fossils collected from the project area shall first be offered to the landowner, and if unwanted, be discarded or retained for educational purposes by the Project Paleontologist. 3. Paleontological Mitigation Report. After completing ground-disturbing activities and fossil curation, the Project Paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall specify the location, duration, and monitoring methods, as well as describe the stratigraphic sections, catalogue any recovered fossils, explain their scientific significance, and identify where fossils have been curated. The report shall be provided to the County for their records upon	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		completion.	
3.6-7: Would the project result in cumulative impacts related to geology and soils, including paleontological resources?	Potentially Significant	Mitigation measures GEO-1, GEO-2, and GEO-3	Less than Significant with Mitigation
Greenhouse Gas Emissions			
3.7-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant	None required	Less than Significant
3.7-2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant	None required	Less than Significant
3.7-3: Would the project result in cumulative impacts related to greenhouse gas emissions?	Less than Significant	None required	Less than Significant
Hazards and Hazardous Materials			
3.8-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant	None required	Less than Significant
3.8-2: 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?	Less than Significant	None required	Less than Significant
3.8-3: 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	None required	No Impact
3.8-4: 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	None required	No Impact
3.8-5: For a project located within an airport land use plan or, where such a plan has not been	No Impact	None required	No Impact

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?			
3.8-6: Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	Less than Significant	None required	Less than Significant
3.8-7: Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires?	Less than Significant	None required	Less than Significant
3.8-8: Would the project result in cumulative impacts related to hazards and hazardous materials?	Less than Significant	None required	Less than Significant
Hydrology and Water Quality			
3.9-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant	None required	Less than Significant
3.9-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant	None required	Less than Significant
3.9-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would: a) Result in substantial erosion or siltation on- or off-site? b) Substantially increase the rate or amount of surface run off in a manner which would result in flooding on- or off-site? c) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Less than Significant	None required	Less than Significant

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
d) Impede or redirect flood flows?			
3.9-4: Would the project risk release of pollutants due to inundation if located within flood hazard, tsunami, or seiche zones?	No Impact	None required	No Impact
3.9-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than Significant	None required	Less than Significant
3.9-6: Would the project result in cumulative impacts related to hydrology and water quality?	Less than Significant	None required	Less than Significant
Land Use and Planning			
3.10-1: Would the project physically divide an established community?	Less than Significant	None required	Less than Significant
3.10-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than Significant	None required	Less than Significant
3.10-3: Would the project result in cumulative impacts related to land use and planning?	Less than Significant	None required	Less than Significant
Noise			
3.11-1: Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than Significant	None required	Less than Significant
3.11-2: Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant	None required	Less than Significant
3.11-3: Would the project expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or within 2 miles of a public airport?	No Impact	None required	No Impact
3.11-4: Would the project result in cumulative impacts related to noise?	Less than Significant	None required.	Less than Significant

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Transportation and Traffic			
3.12-1: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less than Significant	None required	Less than Significant
3.12-2: Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	Less than Significant	None required	Less than Significant
3.12-3: 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	None required	Less than Significant
3.12-4: Would the project result in inadequate emergency access?	Less than Significant	None required	Less than Significant
3.12-5: Would the project result in cumulative impacts related to transportation and traffic?	Less than Significant	None required	Less than Significant
Utilities and Service Systems			
3.13-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	None required	Less than Significant
3.13-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less than Significant	None required	Less than Significant
3.13-3: 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?	Less than Significant	None required	Less than Significant
3.13-4: Would the project generate solid waste in excess of state or local standards, or in excess of	Less than Significant	None required	Less than Significant

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			
3.13-5: Would the project comply with federal, state, and local statutes and regulations related to solid waste?	Less than Significant	None required	Less than Significant
3.13-6: Would the project result in cumulative impacts related to utilities and service systems?	Less than Significant	None required	Less than Significant
Wildfire			
3.14-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less than Significant	None required	Less than Significant
3.14-2: Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less than Significant	None required	Less than Significant
3.14-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less than Significant	None required	Less than Significant
3.14-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less than Significant	None required	Less than Significant
3.14-5: Would the project result in cumulative impacts related to wildfire?	Less than Significant	None required	Less than Significant

ES.1.7 Summary of Project Alternatives

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to a project that could feasibly attain the basic objectives of a project and avoid or lessen the environmental effects of a project. Further, CEQA Guidelines Section 15126.6(e) requires that a “no project” alternative be evaluated in an EIR as well as any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process. Section 4.0, Alternatives to the Proposed Project, of this EIR includes a detailed discussion and a qualitative analysis of alternatives that have been rejected by the County, as well as the following scenarios considered to be feasible alternatives to the project as proposed.

ES.1.7.1 Alternatives to the Proposed Project

As noted previously, the CEQA Guidelines Section 15126.6(e) requires that the alternatives discussion include an analysis of the No Project Alternative. Pursuant to CEQA, the No Project Alternative refers to the analysis of existing conditions (i.e., implementation of current plans) and what would reasonably be expected to occur in the foreseeable future if the project was not approved. Potential environmental impacts associated with the No Project Alternative and two project alternatives are compared below to assess impacts from the proposed project. These alternatives include: (1) No Project Alternative, (2) Reduced Footprint Alternative, and (3) Kramer Junction Solar Site Alternative.

Table ES-2, Comparison of Alternatives and Environmental Considerations, summarizes the impact of each alternative on the environmental resources evaluated in the EIR when compared with the impact of the proposed project. Several criteria are considered for each resource topic and the conclusion considers the aggregate impact of each alternative relative to the impacts of the proposed project.

Table ES-2. Comparison of Alternatives and Environmental Considerations

Topic	1: No Project Alternative	2: Reduced Footprint Alternative	3: Kramer Junction Alternative
Aesthetics and Visual Resources	<	<	>
Air Quality	<	<	>
Biological Resources	<	<	>
Cultural and Tribal Cultural Resources	<	<	>
Energy	<	< ^{1/}	>
Geology and Soils	<	<	>
Greenhouse Gas Emissions	<	< ^{1/}	>
Hazards and Hazardous Materials	<	<	-
Hydrology and Water Quality	<	<	>
Land Use and Planning	<	-	-
Noise	<	<	>
Transportation and Traffic	<	<	-
Utilities and Service Systems	<	<	>
Wildfire	<	<	>
Attains Most Project Objectives	No	No	Yes

Note: “<” = less than proposed project impacts; “=” = similar to proposed project impacts; “>” = greater than proposed project impacts.

^{1/} Construction of Alternative 2 would require less energy usage during construction due to the reduced footprint and shortened construction timeline, thereby resulting in less GHG emissions during construction, but would not achieve the long-term benefits of generating as much renewable energy as the proposed project due to the reduced capacity.

Alternative 1: “No Project” Alternative

Description of Alternative

The CEQA Guidelines require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the project versus a No Project Alternative. Under the No Project Alternative, the proposed solar energy and storage facility, and associated generation interconnect (gen-tie) line, would not be constructed. The existing conditions in the project site would remain.

Alternative 1 Summary and Feasibility

Implementation of Alternative 1, the No Project Alternative, would avoid the mitigated and less than significant environmental impacts of the proposed project because no solar energy and storage facility and associated gen-tie line would be constructed. The baseline environmental conditions on the project site would remain under the No Project Alternative. The No Project Alternative would have fewer impacts than the proposed project on all environmental resources because no construction would occur, and land use patterns of the project site would remain as undeveloped and vacant land and the gen-tie corridor would remain as is, enclosed by the existing Mojave Solar Facility. The No Project Alternative would also result in no beneficial impacts related to energy generation and greenhouse gas (GHG) emissions because it is assumed that the production of renewable energy would offset energy and carbon dioxide emissions generated by fossil fuels, and the No Project Alternative would generate no renewable energy. The No Project Alternative is inherently feasible as it represents no change from existing conditions. However, the No Project Alternative would not meet any of the project objectives, including to develop a solar power and energy storage facility near existing utility infrastructure and produce reliable electricity at a competitive rate, to assist the State in achieving its Renewable Portfolio Standards (RPS) and GHG emissions reduction objectives, to promote the County’s Renewable Energy and Conservation Element policies, and to support the local economy through job creation and tax and fee revenue.

Alternative 2: Reduced Footprint Alternative

Description of Alternative

A conceptual layout and reduced footprint for the Alternative 2 solar energy and storage facility is provided on **Figure 4-2, Alternative 2: Reduced Footprint**. Alternative 2, the Reduced Footprint Alternative, would reduce the footprint of the solar energy and storage facility by increasing setbacks by 50 feet from the proposed solar array boundary. Alternative 2 would reduce the project footprint to the maximum extent possible while remaining economically feasible. Alternative 2 would further minimize impacts to desert tortoise and desert tortoise habitat in the project vicinity and would increase the distance between the solar and energy storage facility and the natural drainages along the northwest and southeast boundaries of the project site. Additionally, Alternative 2 would reduce aesthetics impacts from publicly accessible roadways in the project vicinity due the increased setbacks. Alternative 2 would also result in reduced overall water usage due to the reduction in construction activities and reduction in solar panels to be washed during project operation.

The Alternative 2 solar facility would encompass approximately 572 acres, approximately 96 percent of the 596 acres required for the proposed project. Alternative 2 would produce up to 144 MW of energy. Alternative 2 construction would occur over 25 months. An average of 150 workers would be on site during construction similar to the proposed project, depending on the activities. With the exception of water usage, operational assumptions for Alternative 2 would be the same as under the proposed project, including the frequency of panel washing and duration per occurrence.

The gen-tie line and on-site substation would remain generally the same under Alternative 2 as with the proposed project; however, the substation would be shifted 50 feet to the west and the gen-tie line would be 50 feet longer to account for this shift in placement of the substation. Accordingly, these project components are not further discussed below under the impact comparison between Alternative 2 and the proposed project as there would be no difference between the two scenarios, with the exception of noise impacts as the substation would be slightly farther from existing residences.

Alternative 2 Summary and Feasibility

Overall, implementation of Alternative 2 would result in reduced impacts on aesthetics, air quality, biological resources, cultural and tribal cultural resources, energy, geology and soils, GHG emissions, paleontological resources, hydrology and water quality, hazards and hazardous materials, noise, transportation and traffic, utilities and service systems, and wildfire when compared with the proposed project. Impacts related to land use and planning would be similar to the proposed project. However, Alternative 2 would also result in less beneficial impacts related to energy generation and GHG emissions because it is assumed that the production of renewable energy would offset energy and carbon dioxide emissions generated by fossil fuels, and the Alternative 2 would generate less renewable energy than the proposed project.

Alternative 2 would not produce the 150 MW of the proposed project and would fall short of this project objective. Alternative 2 attains most, but not all, of the project objectives (refer to **Table 4-3, Project Objectives Consistency Analysis**) and is potentially feasible. Specifically, Alternative 2 would meet the project objectives of developing a solar power and energy storage facility near existing utility infrastructure and producing reliable electricity at a competitive rate, promoting the County's Renewable Energy and Conservation Element policies, providing a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates, and supporting the local economy through job creation and tax and fee revenue. However, Alternative 2 would only partially meet the project objective of assisting the State in achieving its RPS and GHG emissions reduction objectives because it would not produce 150 MW of renewable electrical energy.

Alternative 3: Kramer Junction Solar Site Alternative

Description of Alternative

Alternative 3, the Kramer Junction Solar Site Alternative, would include 150 MW of electric generation capacity and 150 MW of battery energy storage capacity on Assessor's Parcel Number (APN) 0498-171-01, which comprises approximately 640 acres. Although the Alternative 3 parcel is larger than the proposed project parcel, Alternative 3 would utilize a similar number of acres to the proposed project, which is the size needed to achieve the target capacity of solar PV and battery energy storage. Similar

to the proposed project, Alternative 3 would involve the development of solar PV panels, battery storage, associated infrastructure, and a gen-tie line. Given the land area, Alternative 3 could have a similar generation capacity as the proposed project. The Alternative 3 site is located on Bureau of Land Management (BLM)-administered land, approximately 0.5-mile north of U.S. Route (US) 58 and 1.6 miles west of State Route (SR) 395. The site can be accessed via Pipeline Road, an existing unpaved roadway, which connects to Boron Frontage Road North, a paved roadway. The Alternative 3 site is just northeast of the community of Boron and just northwest of the Kramer Junction, as shown on **Figure 4-3, Alternative 3: Kramer Junction Solar Site Alternative**. The Alternative 3 site is in an undesignated area of the Desert Renewable Energy Conservation Plan (DRECP). The applicant does not currently control land rights for the Alternative 3 site or the Alternative 3 gen-tie line corridor.

The anticipated route of the Alternative 3 gen-tie is shown on **Figure 4-3, Alternative 3: Kramer Junction Alternative**, but has not been fully determined at this time. It is assumed that the gen-tie line would be approximately 5 miles in length with an associated right-of-way. The point of interconnection would be at the existing Kramer Junction Substation. Upgrades to the Kramer Substation may be required to allow for the interconnection. Depending on the final location of the gen-tie, existing rights-of-way may be required for the entirety, or a portion, of the gen-tie line.

Alternative 3 would locate the proposed solar facility and gen-tie line closer to existing residences than the proposed project. The closest existing residences would be located approximately 0.6 mile west of the Alternative 3 site and 0.1 mile west of the gen-tie line. Alternative 3 would also be consistent with the existing zoning of RC (Resource Conservation) and land use designation of RLM (Resource/Land Management).

Alternative 3 Summary and Feasibility

Implementation of Alternative 3 would not result in any reduced impacts as compared with the proposed project. Implementation of Alternative 3 would result in greater impacts on aesthetics, air quality, biological resources, cultural and Tribal cultural resources, energy, geology and soils, paleontological resources, GHG emissions, hydrology and water quality, noise, utilities and service systems, and wildfire than the proposed project. Implementation of Alternative 3 would result in similar impacts on hazards and hazardous materials, land use and planning, and transportation and traffic.

Alternative 3 is located wholly on BLM-administered land and would require a BLM right-of-way grant for development, in addition to a Conditional Use Permit from the County for development of an overhead gen-tie line. Obtaining BLM approval would increase the cost and length of time required for permitting the project. Alternative 3 would meet some of the project objectives and is considered potentially feasible because it is located within DRECP land use areas that are suitable for solar development. Specifically, Alternative 3 would meet the project objectives of producing reliable electricity at a competitive rate, supporting the local economy through job creation and tax and fee revenue, providing a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates, and assisting the State in achieving its RPS and GHG emissions reduction objectives by producing 150 MW of renewable electrical energy. However, Alternative 3 would not meet the project objectives of developing a solar power and energy storage facility near existing utility infrastructure and promoting the County's Renewable Energy and Conservation Element policies.

ES.1.7.2 Environmentally Superior Alternative:

CEQA requires that an environmentally superior alternative be identified; that is, an alternative that would result in the fewest or least significant environmental impacts. If the No Project Alternative is the environmentally superior alternative, CEQA Guidelines Section 15126.6(e)(2) requires that another alternative that could feasibly attain most of the project's basic objectives be chosen as the environmentally superior alternative.

The No Project Alternative is the environmentally superior alternative. However, in accordance with CEQA Guidelines Section 15126.6(e)(2), a secondary alternative must be chosen since the No Project Alternative is environmentally superior. Therefore, the County has preliminarily identified the Reduced Footprint Alternative (Alternative 2) as the environmentally superior alternative because it would result in the fewest adverse environmental effects aside from the No Project Alternative. Alternative 2 would reduce impacts under all environmental resource areas except land use and planning, which would be the same as under the proposed project. Alternative 2 also attains most or all of the basic project objectives, however it would not allow for the project to achieve its key goal of producing 150 MW of renewable energy. Furthermore, Alternative 2 would also result in less beneficial impacts related to energy generation and GHG emissions because it is assumed that the production of renewable energy would offset energy and carbon dioxide emissions generated by fossil fuels, and the Alternative 2 would generate less renewable energy than the proposed project. Nonetheless, County decision-makers may weigh the relative benefits of the alternatives differently and, with additional information received in or developed during the project approval process, reasonably could reach a different decision.

Table of Contents

EXECUTIVE SUMMARY	1
ES.1.1 Purpose of the Environmental Impact Report	1
ES.1.2 Project Synopsis	2
ES.1.3 Scope of the Environmental Impact Report	2
ES.1.4 Summary of Significant Effects.....	3
ES.1.5 Issues to be Resolved by the Decision-Making Body.....	3
ES.1.6 Summary Table.....	3
ES.1.7 Summary of Project Alternatives	25
ES.1.7.1 Alternatives to the Proposed Project.....	25
ES.1.7.2 Environmentally Superior Alternative:	29
1.0 INTRODUCTION	1-1
1.1 Purpose of the EIR	1-1
1.2 EIR Scope, Issues, and Comments	1-1
1.2.1 Notice of Preparation of Environmental Impact Report.....	1-1
1.2.2 Scoping Meeting	1-2
1.3 Draft EIR Public Review and Comment.....	1-3
1.4 Report Organization	1-3
1.5 Incorporation by Reference	1-4
1.5.1 San Bernardino Countywide Plan/Policy Plan (as amended September 2022).....	1-4
1.5.2 County of San Bernardino General Plan Final EIR (SCH No. 2005101038, February 2007).....	1-5
1.5.3 San Bernardino County Zoning Ordinances.....	1-5
1.5.4 Mojave Basin Area Adjudication and Stipulated Judgment	1-5
2.0 PROJECT DESCRIPTION	2-1
2.1 Project Location and Setting.....	2-1
2.1.1 Project Objectives.....	2-4
2.1.2 Regional Setting	2-4
2.1.3 Natural Features	2-6
2.1.4 Land Use Designations and Zoning	2-6
2.2 Project Overview.....	2-10
2.2.1 Proposed Project	2-10
2.2.2 Construction	2-17

2.2.3	Operations	2-20
2.2.4	Decommissioning	2-22
2.3	Intended Uses of the EIR	2-22
3.0	INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS.....	3-1
3.1	Aesthetics and Visual Resources	3.1-1
3.1.1	Environmental Setting	3.1-1
3.1.2	Regulatory Framework.....	3.1-6
3.1.3	Thresholds for Determination of Significance.....	3.1-11
3.1.4	Project Impacts and Mitigation	3.1-11
3.2	Air Quality	3.2-1
3.2.1	Environmental Setting	3.2-1
3.2.2	Regulatory Framework.....	3.2-8
3.2.3	Thresholds for Determination of Significance.....	3.2-15
3.2.4	Project Impacts and Mitigation.....	3.2-16
3.3	Biological Resources	3.3-1
3.3.1	Environmental Setting	3.3-1
3.3.2	Regulatory Framework.....	3.3-11
3.3.3	Thresholds for Determination of Significance.....	3.3-18
3.3.4	Project Impacts and Mitigation	3.3-19
3.4	Cultural and Tribal Cultural Resources.....	3.4-1
3.4.1	Environmental Setting	3.4-2
3.4.2	Native American Coordination and Assembly Bill 52 / Senate Bill 18 Tribal Consultation	3.4-7
3.4.3	Regulatory Framework.....	3.4-9
3.4.4	Thresholds for Determination of Significance.....	3.4-16
3.4.5	Project Impacts and Mitigation	3.4-16
3.5	Energy	3.5-1
3.5.1	Environmental Setting	3.5-1
3.5.2	Regulatory Framework.....	3.5-3
3.5.3	Thresholds for Determination of Significance.....	3.5-9
3.5.4	Project Impacts and Mitigation.....	3.5-9
3.6	Geology and Soils	3.6-1
3.6.1	Environmental Setting	3.6-1
3.6.2	Regulatory Framework.....	3.6-11
3.6.3	Thresholds for Determination of Significance.....	3.6-16

3.6.4	Project Impacts and Mitigation.....	3.6-16
3.7	Greenhouse Gas Emissions	3.7-1
3.7.1	Environmental Setting	3.7-1
3.7.2	Regulatory Framework.....	3.7-5
3.7.3	Thresholds for Determination of Significance.....	3.7-13
3.7.4	Project Impacts and Mitigation.....	3.7-13
3.8	Hazards and Hazardous Materials	3.8-1
3.8.1	Environmental Setting	3.8-1
3.8.2	Regulatory Framework.....	3.8-5
3.8.3	Thresholds for Determination of Significance.....	3.8-14
3.8.4	Project Impacts and Mitigation.....	3.8-15
3.9	Hydrology and Water Quality	3.9-1
3.9.1	Environmental Setting	3.9-1
3.9.2	Regulatory Framework.....	3.9-8
3.9.3	Thresholds for Determination of Significance.....	3.9-13
3.9.4	Project Impacts and Mitigation.....	3.9-14
3.10	Land Use and Planning.....	3.10-1
3.10.1	Environmental Setting	3.10-1
3.10.2	Regulatory Framework.....	3.10-2
3.10.3	Thresholds for Determination of Significance.....	3.10-14
3.10.4	Project Impacts and Mitigation.....	3.10-14
3.11	Noise.....	3.11-1
3.11.1	Environmental Setting	3.11-1
3.11.2	Existing Conditions	3.11-4
3.11.3	Regulatory Framework.....	3.11-7
3.11.4	Thresholds for Determination of Significance	3.11-10
3.11.5	Project Impacts and Mitigation.....	3.11-10
3.12	Transportation and Traffic	3.12-1
3.12.1	Environmental Setting.....	3.12-1
3.12.2	Regulatory Framework.....	3.12-3
3.12.3	Thresholds for Determination of Significance.....	3.12-7
3.12.4	Project Impacts and Mitigation.....	3.12-7
3.13	Utilities and Service Systems	3.13-1
3.13.1	Environmental Setting	3.13-1
3.13.2	Regulatory Framework.....	3.13-4

3.13.3	Thresholds for Determination of Significance.....	3.13-12
3.13.4	Project Impacts and Mitigation.....	3.13-13
3.14	Wildfire	3.14-1
3.14.1	Environmental Setting	3.14-1
3.14.2	Regulatory Framework.....	3.14-6
3.14.3	Thresholds for Determination of Significance.....	3.14-12
3.14.4	Project Impacts and Mitigation.....	3.14-13
3.15	Effects Found Not to Be Significant	3.15-1
3.15.1	Agriculture and Forestry Resources.....	3.15-1
3.15.2	Mineral Resources	3.15-4
3.15.3	Population and Housing.....	3.15-5
3.15.4	Public Services	3.15-5
3.15.5	Recreation.....	3.15-8
4.0	ALTERNATIVES TO THE PROPOSED PROJECT	4-1
4.1	Introduction.....	4-1
4.2	Impacts of the Proposed Project	4-2
4.3	Alternatives Considered But Rejected	4-4
4.3.1	Solar Layout Northwestern Corner (Original Project Footprint)	4-4
4.3.2	Solar and Substation Alternative Southeast Corner	4-5
4.3.3	Alternative Solar Layout Western Strip	4-6
4.3.4	Distributed Generation Alternative	4-6
4.4	Alternatives to the Proposed Project.....	4-8
4.4.1	Alternative 1: No Project Alternative.....	4-9
4.4.2	Alternative 2: Reduced Footprint Alternative	4-14
4.4.3	Alternative 3: Kramer Junction Solar Site Alternative	4-22
4.4.4	Environmentally Superior Alternative.....	4-34
5.0	OTHER CEQA CONSIDERATIONS.....	5-1
5.1	Growth-Inducing Impacts	5-1
5.1.1	Removal of a Barrier to Growth.....	5-2
5.1.2	Economic Growth.....	5-2
5.1.3	Population Growth.....	5-2
5.1.4	Establishment of a Precedent-Setting Action	5-3
5.1.5	Encroachment on Open Space.....	5-3
5.2	Significant and Unavoidable Impacts.....	5-4
5.3	Significant Irreversible Environmental Changes	5-4

6.0 PREPARERS.....	6-1
7.0 REFERENCES.....	7-1

Tables

Table ES-1.	Environmental Impact Summary	4
Table ES-2.	Comparison of Alternatives and Environmental Considerations.....	25
Table 2-1.	Anticipated Construction Schedule, Trips, and Equipment.....	2-18
Table 2-2.	Matrix of Potential Approvals Required	2-23
Table 3-1.	Cumulative Projects	3-4
Table 3.2-1.	Ambient Air Quality Monitoring Data	3.2-7
Table 3.2-2.	Federal and State Ambient Air Quality Attainment Status.....	3.2-8
Table 3.2-3.	MDAQMD Air Quality Thresholds of Significance	3.2-15
Table 3.2-4.	Unmitigated Daily Construction Emissions (Pounds per Day)	3.2-19
Table 3.2-5.	Unmitigated Annual Construction Emissions (Short Tons per Year)	3.2-19
Table 3.2-6.	Daily Operational Emissions (Pounds per Day)	3.2-20
Table 3.2-7.	Annual Operational Emissions (Tons per Year).....	3.2-20
Table 3.4-1.	Previously Identified Cultural Resources in the API.....	3.4-5
Table 3.4-2.	Eligibility of Historical Resources in the Project Site	3.4-6
Table 3.5-1.	Electric Power Mix Delivered to Retail Customers in 2022	3.5-2
Table 3.5-2.	Fuel Consumption of Construction and Operations.....	3.5-10
Table 3.6-1.	Surficial Geologic Units in the Vicinity of the Project Site	3.6-2
Table 3.6-2.	Earthquake Probabilities	3.6-5
Table 3.6-3.	Primary Soil Series in the Vicinity of the Project.....	3.6-8
Table 3.7-1.	Global Warming Potentials and Atmospheric Lifetimes.....	3.7-4
Table 3.7-2.	Estimated Maximum Daily Construction Emissions (Pounds per Day)	3.7-14
Table 3.7-3.	Estimated Annual Construction Emissions (Short Tons per year)	3.7-14
Table 3.7-4.	Estimated Daily Operational Emissions (Pounds per Day)	3.7-15
Table 3.7-5.	Estimated Annual Operational Emissions (Short Tons per Year)	3.7-15
Table 3.9-1.	Groundwater Sources and Recharge.....	3.9-7
Table 3.11-1.	Typical Noise Levels	3.11-1
Table 3.11-2.	Typical Levels of Groundborne Vibration.....	3.11-3
Table 3.11-3.	Summary of Ambient Noise Measurements.....	3.11-4
Table 3.11-4.	Summary of Noise Sensitive Areas	3.11-5
Table 3.11-5.	FTA Construction Noise Criteria	3.11-7
Table 3.11-6.	Land Use Compatibility for Community Noise Environments	3.11-8
Table 3.11-7.	Noise Standards for Stationary Noise Sources	3.11-10
Table 3.11-8.	Construction Equipment Noise Levels by Stage (dBA L _{max})	3.11-11
Table 3.11-9.	Received Construction Noise Levels by Stage (dBA L _{eq})	3.11-12
Table 3.11-10.	Received Traffic Noise Levels (dBA L _{eq})	3.11-13
Table 3.11-11.	Operational Acoustic Modeling Results, dBA.....	3.11-17

Table 3.12-1.	Construction Project Trip Generation	3.12-8
Table 3.12-2.	VMT Screening Criteria and Project Evaluation	3.12-11
Table 4-1.	Summary of Environmental Impacts of the Proposed Project	4-3
Table 4-2.	Comparison of Alternatives and Environmental Considerations	4-8
Table 4-3.	Project Objectives Consistency Analysis	4-9

Figures

Figure 2-1.	Project Location	2-2
Figure 2-2.	Project Site Map	2-3
Figure 2-3.	Surrounding Land Uses.....	2-5
Figure 2-4.	Land Use Categories	2-8
Figure 2-5.	Zoning Districts	2-9
Figure 2-6.	Preliminary Plot Plan	2-11
Figure 3-1.	Cumulative Projects Map	3-5
Figure 3.3-1.	Regional Hydrology.....	3.3-4
Figure 3.3-2.	Jurisdictional Waters Delineations from Field Efforts	3.3-5
Figure 3.3-3.	Sensitive Species Data from Field Efforts.....	3.3-7
Figure 3.3-4.	Mohave Ground Squirrel Camera Trap Locations.....	3.3-10
Figure 3.6-1.	Regional Setting.....	3.6-3
Figure 3.6-2.	Geology.....	3.6-4
Figure 3.6-3.	NRCS Soils	3.6-9
Figure 3.9-1.	Water Resources Setting.....	3.9-2
Figure 3.9-2.	Surface Water Features.....	3.9-4
Figure 3.9-3.	Groundwater Features	3.9-6
Figure 3.11-1.	Project Site Map	3.11-6
Figure 3.11-2.	Project Operation, Received Sound Levels	3.11-16
Figure 3.12-1.	Traffic Study Area.....	3.12-2
Figure 3.14-1.	Fire Hazard Severity Zones for State Responsibility Area	3.14-3
Figure 3.14-2.	Fire Hazard Severity Zones for Local Responsibility Areas.....	3.14-4
Figure 3.15-1.	Farmland Map	3.15-3
Figure 4-1.	Rejected Alternative: Solar Layout Western Strip.....	4-7
Figure 4-2.	Alternative 2: Reduced Footprint	4-16
Figure 4-3.	Alternative 3: Kramer Junction Alternative.....	4-23

List of Appendices

- Appendix A – Notice of Preparation and Scoping Comments
- Appendix B – Visual Simulations
- Appendix C – Air Quality and Greenhouse House Technical Report
- Appendix D - Biological Resources Technical Report
- Appendix E – Cultural Resource Assessment

Appendix F – Geotechnical Reports

F1 – Geotechnical Investigation

F2 – Geological Fault Investigation

F3 – Gen-Tie Geotechnical Investigation

Appendix G – Paleontological Resource Assessment

Appendix H – Phase I Environmental Site Assessment

Appendix I – Stormwater Drainage Report

Appendix J – Water Supply Assessment

Appendix K – Acoustical Analysis Report

Appendix L – Traffic Impact Study

1.0 INTRODUCTION

1.1 Purpose of the EIR

This Environmental Impact Report (EIR) addresses the environmental effects of the proposed Overnight Solar Project (project). The California Environmental Quality Act (CEQA) requires that government agencies consider the environmental consequences of projects over which they have discretionary approval authority.

San Bernardino County (County) is the lead agency under CEQA and has determined that an EIR is required for the proposed project (State Clearinghouse [SCH] No. 2024010434). An EIR is an informational document that provides both government decision-makers and the public with an analysis of the potential environmental consequences of a proposed project in their jurisdiction. This EIR has been prepared in accordance with the requirements of CEQA as set forth in Public Resources Code (PRC) Section 21000 et seq., and 14 California Code of Regulations (CCR) Section 15000 et seq. (CEQA Guidelines).

This EIR addresses the project's environmental effects, in accordance with CEQA Guidelines Section 15161. As referenced in CEQA Guidelines Section 15121(a), the primary purpose of an EIR is to inform decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects of a project, and describe reasonable alternatives to a project.

This document analyzes the project's environmental effects to the degree of specificity appropriate to the current proposed actions, as required by CEQA Guidelines Section 15146. The analysis considers the activities associated with the project to determine the short- and long-term effects associated with their implementation. This EIR also considers the project's direct and indirect impacts, and the cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

Where potentially significant impacts are identified, the EIR specifies mitigation measures that are required to be adopted as conditions of approval or may be incorporated into the project to avoid or minimize the significance of impacts resulting from the project. In addition, this EIR is the primary reference document in the formulation and implementation of the project's Mitigation Monitoring and Reporting Program (MMRP).

The Final EIR will be considered for certification and approval by the County. A decision to approve the project would be accompanied by specific, written findings, in accordance with CEQA Guidelines Section 15091, and a specific, written Statement of Overriding Considerations, in accordance with CEQA Guidelines Section 15093, if potentially significant impacts remain significant and unavoidable despite mitigation.

1.2 EIR Scope, Issues, and Comments

1.2.1 Notice of Preparation of Environmental Impact Report

In accordance with CEQA Guidelines Section 15082, a Notice of Preparation (NOP) was distributed to agencies and the public to initiate the County's CEQA review process for the project, identify and seek

public input for the project's potential environmental effects, and identify a date for the project's public scoping meeting. The NOP was distributed on January 18, 2024, and identified a public review period through February 19, 2024, in compliance with the State's mandatory 30-day public review period.

1.2.2 Scoping Meeting

A scoping meeting was held to discuss the proposed project on January 31, 2024, from 4:00 to 4:45 p.m. via webinar (Zoom). Hard copies of the notice were mailed to all property owners within a 1,300-foot radius of the project site and were also posted at the following locations:

Jerry Lewis High Desert Government Center
15900 Smoke Tree Street, First Floor
Hesperia, CA 92345

San Bernardino County Government Center
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415

San Bernardino County Library
Barstow Branch
304 East Buena Vista Street
Barstow, CA 92311

At the scoping meeting, a presentation was provided, including an overview of the project and the CEQA process. Following the presentation, participants were encouraged to provide oral or written comments to aid the County in refining the scope of issues to be addressed in the EIR.

One individual from the public attended the scoping meeting. In addition, a total of five written comment letters were received in response to the NOP and scoping meeting. Comment letters were received from the Mojave Desert Air Quality Management District, Lahontan Regional Water Quality Control Board, Defenders of Wildlife, Desert Tortoise Council, and Mojave Ground Squirrel Conservation Council.

Key issues of environmental concern expressed by individuals and/or agencies during the scoping period include:

- Impacts to Desert Tortoise;
- Impacts to Mohave Ground Squirrel;
- Impacts to Burrowing Owl;
- Impacts to air quality, especially dust control;
- Impacts to water resources; and
- Alternatives.

Appendix A includes a copy of the NOP, comment letters received in response to the NOP and scoping meeting, and a scoping meeting summary memorandum. The County has made a good faith effort to address all the identified concerns in this EIR.

1.3 Draft EIR Public Review and Comment

This Draft EIR, with an accompanying Notice of Completion (NOC), is being circulated to the State Clearinghouse, trustee agencies, responsible agencies, other government agencies, and interested members of the public for a 45-day review period in accordance with CEQA Guidelines Sections 15087 and 15105. The review period will begin the day the document is released for public review and will end 45 calendar days thereafter.

During this period, public agencies and members of the public may submit written comments on the analysis and content of the EIR. In reviewing a Draft EIR, readers should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and on ways in which the significant effects of the proposed project might be avoided or mitigated.

Comment letters should be sent to:

Jon Braginton, Planner
San Bernardino County
Land Use Services Department
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415
Phone: (760) 776-6144
Email: Jon.Braginton@lus.sbcounty.gov

Following the close of the public comment period, a Final EIR will be prepared to respond to all substantive comments related to environmental issues. The Final EIR will be completed and made available prior to any public hearings on the project.

1.4 Report Organization

The EIR is organized as follows:

- **Section ES, Executive Summary.** Summarizes the description and background of the proposed project, addresses the EIR format, discusses project alternatives, and identifies potential environmental impacts and mitigation measures for the proposed project.
- **Section 1.0, Introduction.** Describes the process and purpose of the EIR and gives an overview of the EIR content.
- **Section 2.0, Project Description.** Describes the project location, setting, objectives, and development components, and lists various agency approvals that are likely required for the project to move forward.
- **Section 3.0, Introduction to the Environmental Analysis.** Contains a detailed analysis of existing (baseline) conditions, potential project impacts, and required mitigation measures for the following environmental issue areas:
 - Aesthetics and Visual Resources (Section 3.1)
 - Air Quality (Section 3.2)
 - Biological Resources (Section 3.3)

- Cultural and Tribal Cultural Resources (Section 3.4)
- Energy (Section 3.5)
- Geology and Soils (Section 3.6)
- Greenhouse Gas Emissions (Section 3.7)
- Hazards and Hazardous Materials (Section 3.8)
- Hydrology and Water Quality (Section 3.9)
- Land Use and Planning (Section 3.10)
- Noise (Section 3.11)
- Transportation and Traffic (Section 3.12)
- Utilities and Service Systems (Section 3.13)
- Wildfire (Section 3.14)
- Effects Not Found to Be Significant (Section 3.15)
- **Section 4.0, Alternatives to the Proposed Project.** Analyzes alternatives to the proposed project and their potential environmental effects.
- **Section 5.0, Other CEQA Considerations.** Summarizes the project’s potential significant and unavoidable impacts and significant irreversible environmental changes and addresses the issues of growth inducement and energy conservation.
- **Section 6.0, Preparers.** Identifies persons and organizations responsible for authoring the technical reports and EIR.
- **Section 7.0, References.** Identifies reference resources used during preparation of the EIR.
- **Appendices.** Contains the project’s technical reports and documentation of the NOP and scoping process.

1.5 Incorporation by Reference

In accordance with CEQA Guidelines Section 15150, this EIR incorporates by reference the following documents (available for review at the San Bernardino County Planning Department, 385 North Arrowhead Avenue, San Bernardino, CA 92415; or online at <https://lus.sbcounty.gov/planning-home/environmental/desert-region/>, and described in further detail in the subsections below:

- San Bernardino Countywide Plan/County Policy Plan (as amended September 2022)
- County of San Bernardino General Plan Final EIR (SCH No. 2005101038, February 2007)
- San Bernardino County Zoning Ordinances
- Mojave Basin Area Adjudication and Stipulated Judgement

1.5.1 San Bernardino Countywide Plan/Policy Plan (as amended September 2022)

The San Bernardino Countywide Plan/County Policy Plan serves as the County’s General Plan and is a long-range policy-planning document that defines the framework by which the County’s physical and economic resources are to be managed over time. The goals and policies in the Countywide Plan/County Policy Plan are intended to guide the County’s decision-makers. The following elements

are included in the Countywide Plan/County Policy Plan: Land Use, Infrastructure and Utilities, Housing, Transportation and Mobility, Natural Resources, Renewable Energy and Conservation, Cultural Resources, Hazards, Personal and Property Protection, Economic Development, and Health and Wellness. Information contained in the Countywide Plan/County Policy Plan is incorporated herein because it is the primary source for County policies, objectives, and Countywide planning analysis.

The County Board of Supervisors adopted an amendment to the Renewable Energy Conservation Element (RECE) on February 28, 2019, prohibiting utility-scale renewable energy development on lands designated as Rural Living (RL) or on lands located within the boundary of an existing community plan, unless an application for development of a renewable energy project has been accepted as complete in compliance with California Government Code Section 65943 before the effective date of the resolution.

1.5.2 County of San Bernardino General Plan Final EIR (SCH No. 2005101038, February 2007)

The General Plan EIR was prepared to assess the potential environmental impacts associated with the proposed General Plan. The EIR summarizes potential environmental impacts associated with implementation of the County's General Plan, including growth-inducing and cumulative impacts. Information from the General Plan EIR is incorporated herein because it contains relevant environmental information that pertains to the project.

1.5.3 San Bernardino County Zoning Ordinances

The San Bernardino County Development Code implements the goals and policies of the Countywide Plan/County Policy Plan by regulating land uses within the unincorporated areas of the County. Each piece of property is within a "zone" or "land use district" which describes the rules under which that land may be used. These districts generally cover the range of uses allowable within the land use district. The Code also establishes specific development standards for each district and the procedures to follow in order to approve a particular use. In 2013, the County of San Bernardino passed an ordinance amending Chapter 84.29, *Renewable Energy Generation Facilities*, and Chapter 81.01, *Definitions*, of the San Bernardino County Development Code, relating to the regulation of commercial solar energy generation facilities. The ordinance requires that the County make findings for solar renewable energy projects prior to approving such projects. The findings require that prior to 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.

1.5.4 Mojave Basin Area Adjudication and Stipulated Judgment

The project is within the Harper Valley Groundwater Basin, which is part of the Centro Subarea within the adjudicated Mojave River Basin. A Stipulated Judgment was issued by the Superior Court in January of 1996 (Superior Court, Judgment after Trial for *City of Barstow, et al. vs. City of Adelanto, et al.* Case No. 208568, January 10, 1996) to address water supply shortages in the Mojave Basin Area. The Adjudication of the Mojave Basin Area was the legal process that allocated the right to produce water from the natural water supply. As mandated in the Judgment, the Mojave Water Agency was appointed as the Basin Watermaster and tasked with the responsibility of sustainably managing water supplies in the Basin.

2.0 PROJECT DESCRIPTION

2.1 Project Location and Setting

The Overnight Solar Project (project) is located within unincorporated Lockhart, on primarily flat and undeveloped land. The project is in proximity to existing high-voltage electrical infrastructure and existing energy generation facilities and several transmission lines transect the northernmost portion of the project parcel from east to west. The project is generally bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped land to the south and west. The project is located approximately 10 miles northwest of Hinkley, approximately 10 miles east of Kramer Junction, and approximately 6 miles north of the State Route (SR) 58 and Harper Lake Road junction. Vehicular access to the project would be provided from Lockhart Ranch Road extending eastward to Harper Lake Road via SR-58 (**Figure 2-1, Project Location**, and **Figure 2-2, Project Site Map**).

The project would be located on approximately 596 acres of land (project site) within an approximately 825-acre parcel (project parcel). Refer to Section 2.2, Project Overview, below for additional project details. Overnight Solar, LLC (the applicant) selected the project site based on its proximity to existing electrical transmission infrastructure to minimize the need for new transmission infrastructure required to connect to the power grid. The project is being designed in accordance with San Bernardino County's Solar Ordinance (an ordinance amending Development Code Chapter 84.29, *Renewable Energy Generation Facilities*) and the Countywide Plan/Policy Plan Renewable Energy and Conservation Element (RECE), which strives to preserve the character of the project area and surrounding communities.

The project is seeking one Conditional Use Permit (CUP) along with a Zoning Amendment and a Countywide Plan/Policy Plan Amendment. Development would occur on land privately owned by the applicant.

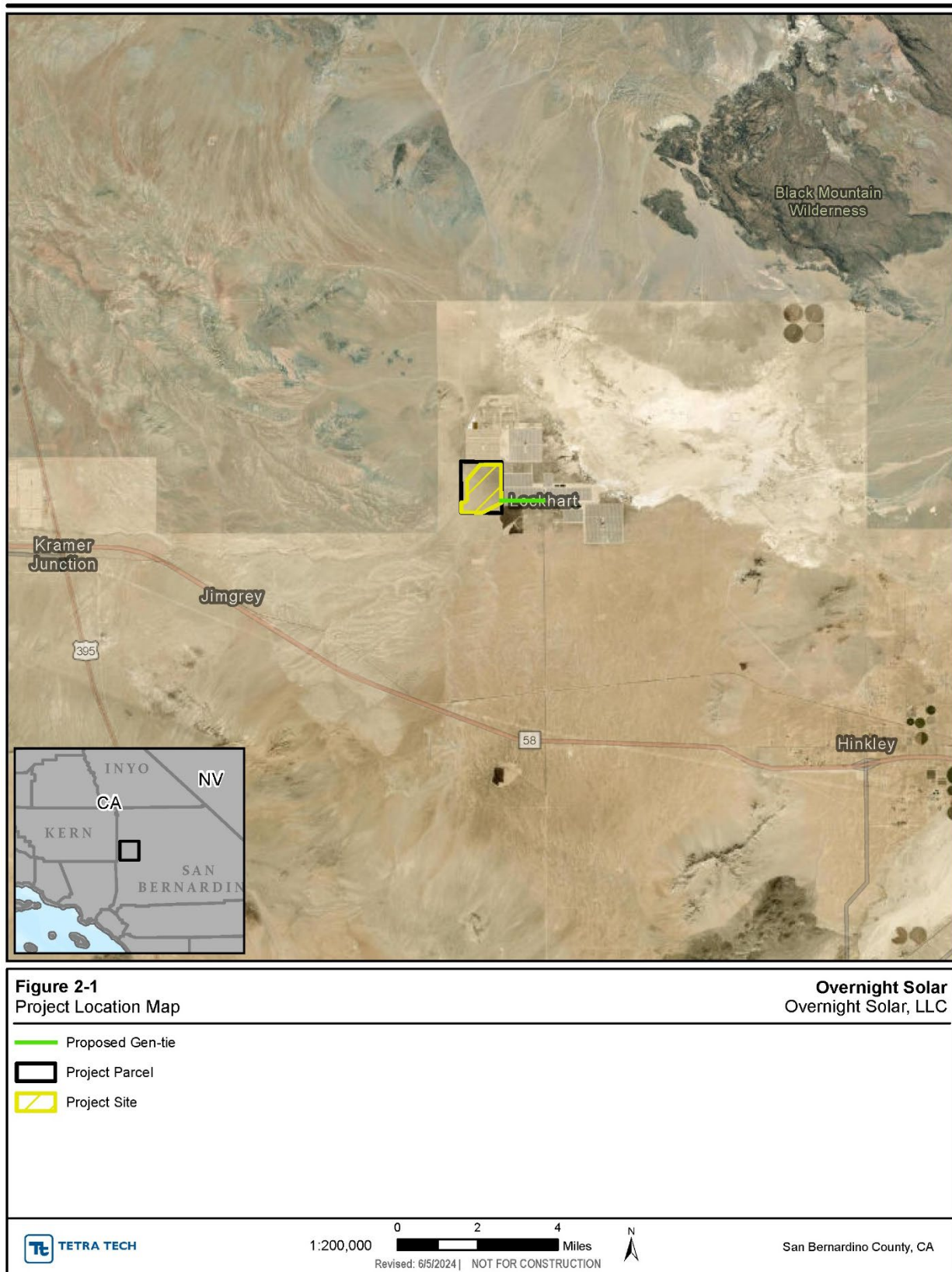


Figure 2-1. Project Location

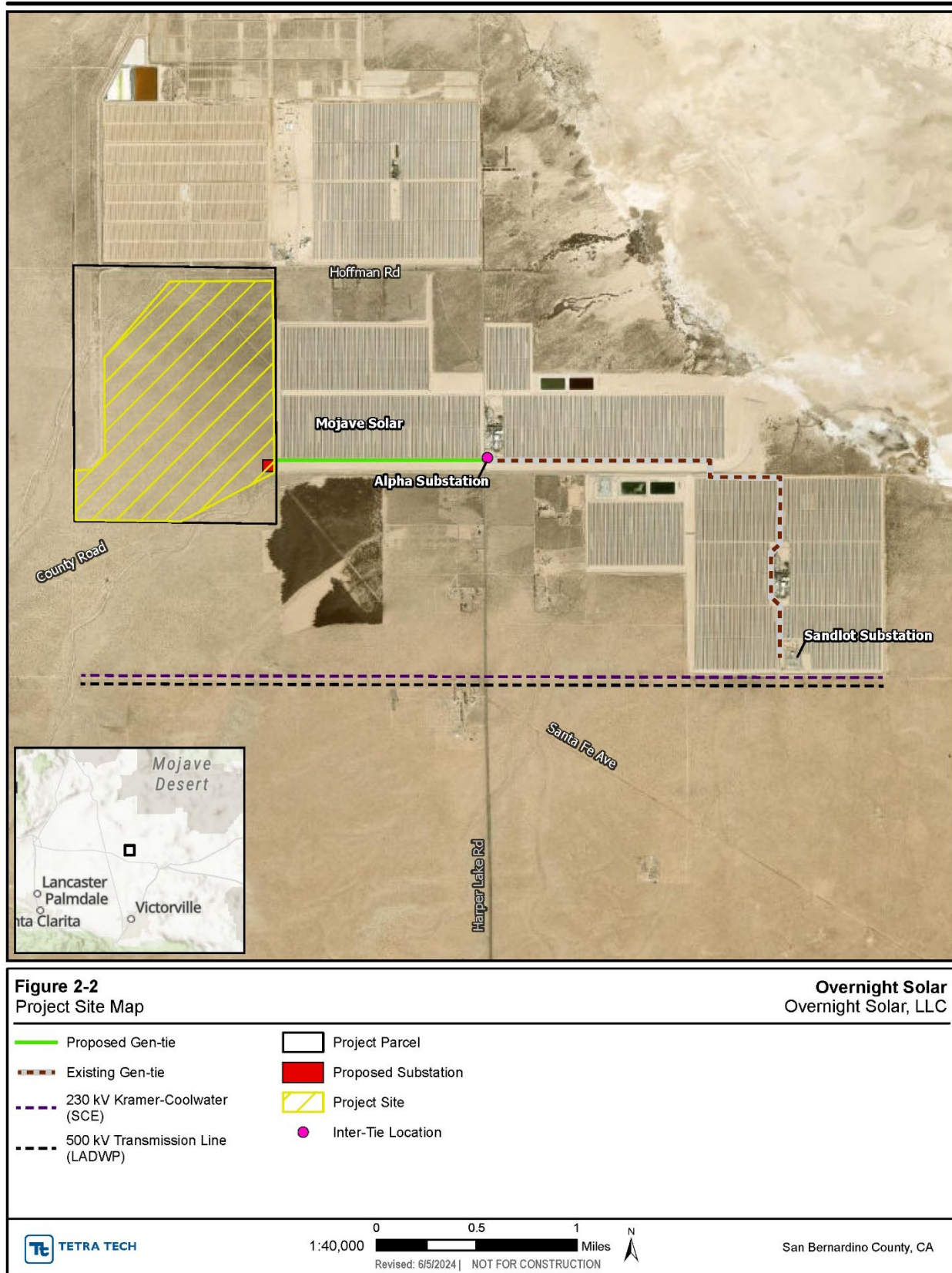


Figure 2-2. Project Site Map

2.1.1 Project Objectives

California Environmental Quality Act (CEQA) Guidelines Section 15124(b) requires the project description to contain a statement of objectives that includes the underlying purpose of the proposed project. The project objectives include:

1. Site solar photovoltaic (PV) power-generating facilities and energy storage near existing utility infrastructure, including existing Los Angeles Department of Water and Power (LADWP) and SCE transmission lines, thereby achieving economies of scale to maximize shared transmission facilities with existing solar operations.
2. Establish solar PV power-generating facilities and energy storage of sufficient size and configuration to produce reliable electricity at a competitive rate.
3. Use proven and established PV and energy storage technology that is efficient and requires low maintenance.
4. Assist the State of California in achieving or exceeding its Renewables Portfolio Standard (RPS) and greenhouse gas (GHG) emissions reduction objectives by developing and constructing new California RPS-qualified solar power generation facilities producing approximately 150 megawatts (MW) of renewable electrical energy.
5. Provide a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates.
6. Promote the County's RECE policies and be sited in an area identified as suitable for utility-oriented renewable energy generation projects and be consistent with County land use regulations.
7. Develop a solar power generation facility in San Bernardino County, which would support the economy by investing in the local community, creating local construction jobs, and increasing tax and fee revenue to the County.

2.1.2 Regional Setting

In addition to the existing solar energy generating facilities and electrical transmission lines in the vicinity of the project, the surrounding area includes a patchwork of undeveloped Bureau of Land Management (BLM) lands, other vacant lands, and other approved solar facilities (**Figure 2-3, Surrounding Land Uses**). Several rural residences are located south and east of the project site along Harper Lake Road, the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed generation interconnect (gen-tie) line. Sparse transportation infrastructure also exists in the project vicinity. SR-58 runs from east to west and is located approximately 5.6 miles south of the project site, SR-66 runs from east to west and is located approximately 16 miles southeast of the project site, U.S. Route 395 runs from north to south and is located approximately 10.5 miles west of the project site, and Interstate 15 runs from north to south and is located approximately 20 miles southeast of the project site. The Burlington Northern Santa Fe Railway, a Class I freight railroad, is also located approximately 5 miles south of the project site and 0.8 mile north of SR-58. Edwards Air Force Base is roughly 30 miles west of the project site. The Barstow Marine Corps Logistics Base (MCLB Barstow) is approximately 30 miles to the southeast of the project site.

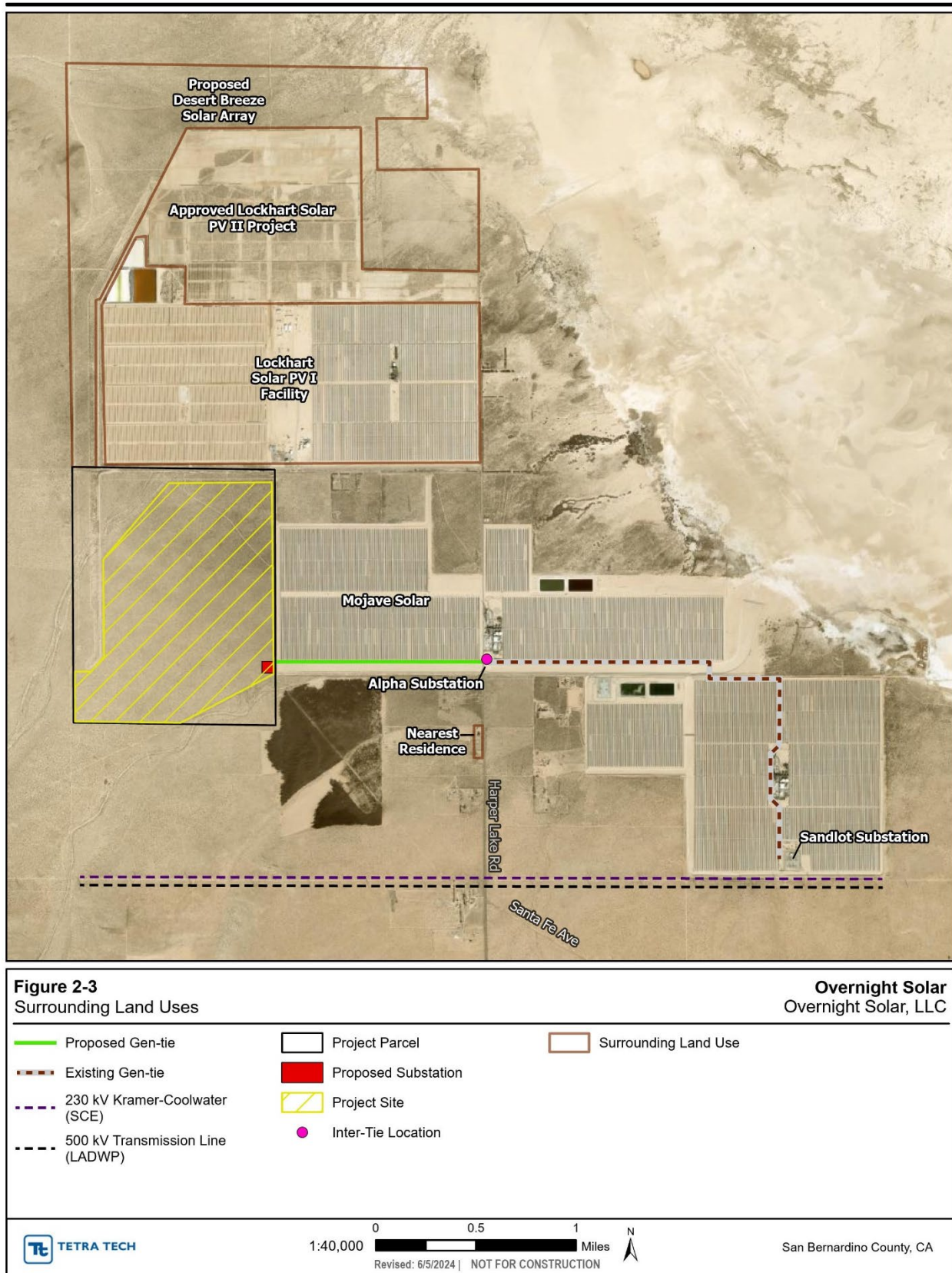


Figure 2-3. Surrounding Land Uses

2.1.3 Natural Features

The project site comprises vacant and undeveloped land, with some unpaved roads and existing drainage features. The gen-tie corridor is located within the existing fenceline of the adjacent Mojave Solar Facility, along an existing constructed drainage canal. The elevation of the project site ranges from approximately 2,100 feet to 2,150 feet above mean sea level (amsl), sloping gently upwards from northeast to southwest. The project site is primarily flat and contains desert vegetation. It is located within the Desert Planning Region of San Bernardino County. The Desert Planning Region consists of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Harper Lake, a dry lakebed, is approximately 2 miles north and east of the project site, with a difference in elevation of approximately 70 feet below the project site's lowest elevation. The southwest corner of Harper Lake includes a watchable wildlife area and has been designated by the BLM as an area of critical environmental concern (ACEC). Topography within the Desert Planning Region changes from near sea level to desert valleys between 1,000 and 4,000 feet amsl to mountain ridges greater than 8,000 feet amsl. The dominant habitat at the project site is saltbush scrub. The BLM Grass Valley Wilderness Area is approximately 20 miles northeast of the project site. The Angeles and San Bernardino National Forests are each approximately 60 to 80 miles south of the project site.

The applicable Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the project site is map number 06071C3250H (FEMA 2008). Based on the National Flood Insurance Program (NFIP) FIRM, the entire project site and surrounding area is in Zone D, which is defined as "undetermined Flood Hazard." Zone D indicates that a formal hydrologic and hydraulic study for the area has not been completed and has not been mapped and approved by FEMA with floodplains or floodways. Therefore, flood hazards are undermined in this area, and base flood elevations are not provided in Zone D areas. Furthermore, flood insurance for properties is not required at the federal level in Zone D areas. All parcels surrounding the project site are similarly marked as Zone D, and therefore, do not require flood insurance at the federal level.

An existing drainage berm feature also exists along the westernmost boundary of the project site within the western portion of the project site, running from northeast to southwest. Specifically, this drainage berm is located along the westernmost boundary of the project site and gently slopes downwards from east to west, away from the west extent of the proposed solar array. The project would retain this existing drainage berm.

2.1.4 Land Use Designations and Zoning

The project site and gen-tie corridor are currently zoned as Rural Living (RL). The project site is also designated as RL in the Countywide Plan/Policy Plan, which serves as the County's General Plan. The gen-tie corridor is designated as Resource/Land Management (RLM) in the Countywide Plan/Policy Plan (**Figure 2-4, Land Use Categories**, and **Figure 2-5, Zoning Districts**). While the County's Development Code Section 82.04.040 determines that renewable energy-generating facilities are allowed on RL-zoned land with a Conditional Use Permit (CUP), the County Board of Supervisors adopted an amendment to the RECE of the Countywide Plan/Policy Plan on February 28, 2019, to include RE Policy 4.10, prohibiting utility-scale renewable energy development on lands zoned RL or on lands located within the boundary of an existing community plan. Accordingly, the project would undergo a Zoning Amendment and Countywide Plan/Policy Plan Amendment as part of the approval process so that it would not conflict with RE Policy 4.10. The project site would be rezoned from RL to Resource

Conservation (RC) and redesignated from RL to RLM in the Countywide Plan/Policy Plan. The County's Development Code Section 82.03.040 determines that renewable energy generation facilities are allowed on RC-zoned land with the facilitation of a CUP. Thus, the project is also subject to approval of a CUP. The gen-tie corridor is already designated as RLM in the Countywide Plan/Policy Plan, and transmission lines are permitted within the RL zoning district. Therefore, the gen-tie corridor would not require a zoning amendment.

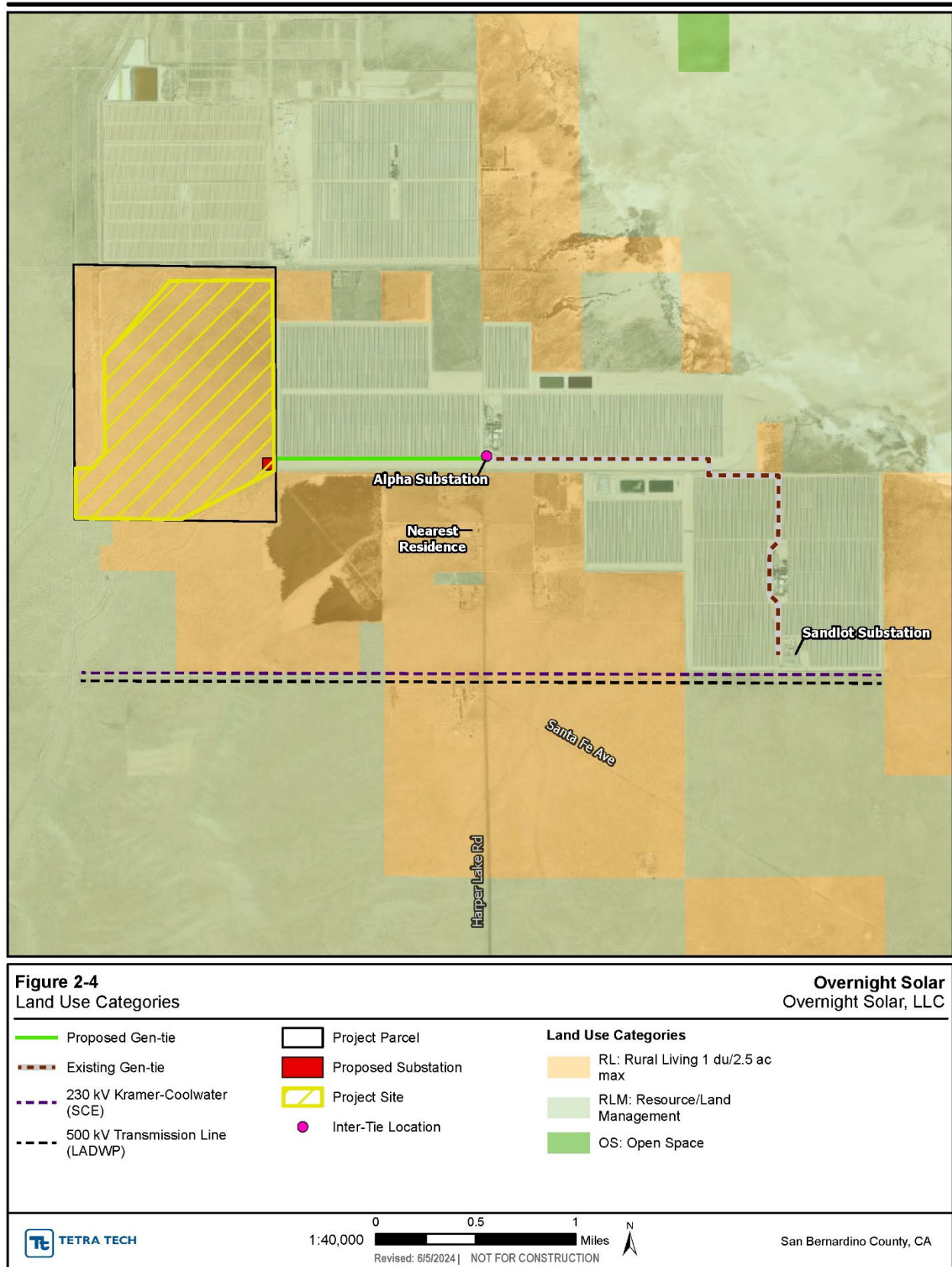


Figure 2-4. Land Use Categories

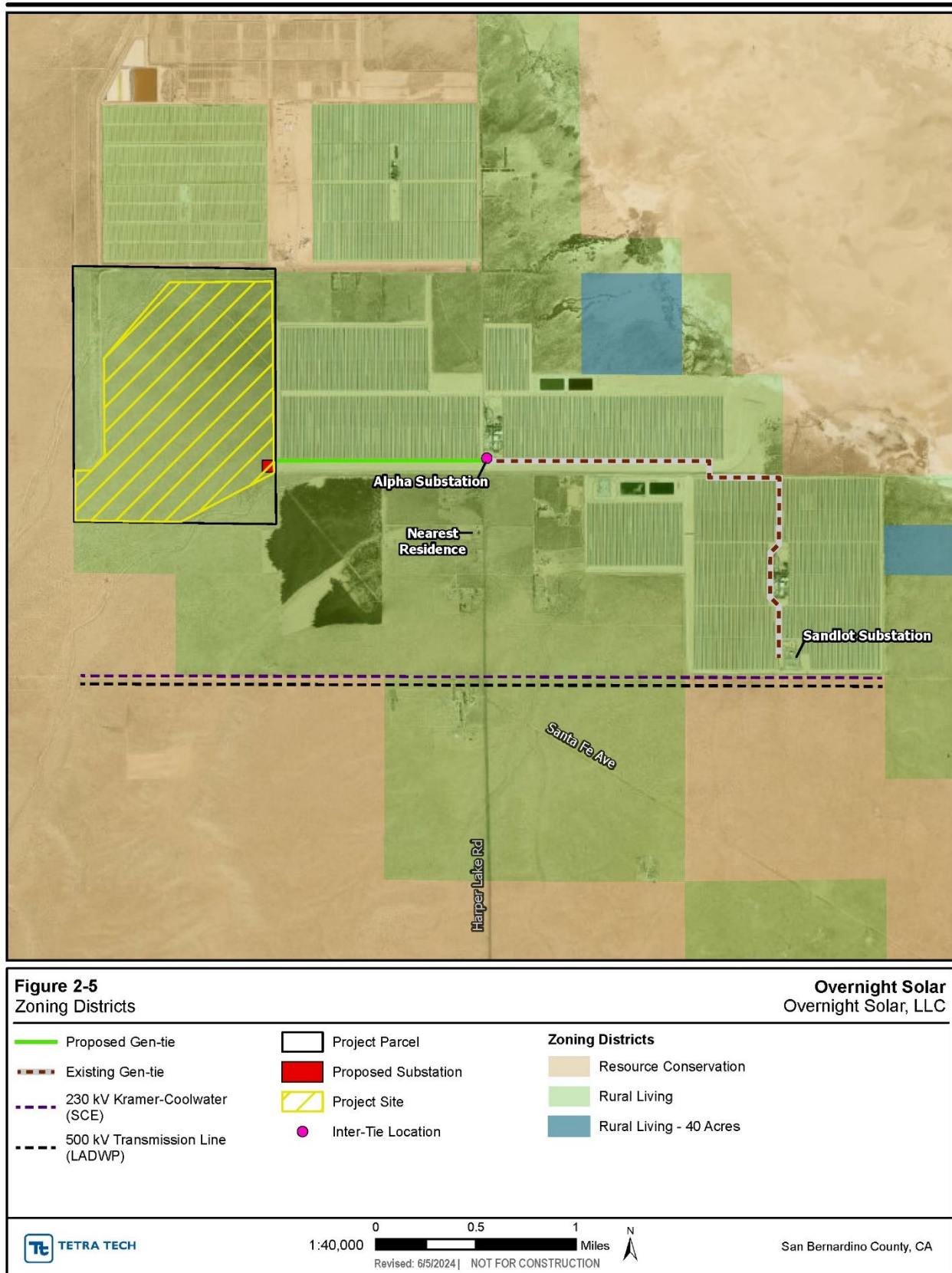


Figure 2-5. Zoning Districts

2.2 Project Overview

2.2.1 Proposed Project

The project would construct and operate an uncrewed, utility-scale, solar PV electricity generation and battery energy storage system (BESS) facility that would produce up to 150 MW of alternating current (AC) or direct current (DC) generating capacity. The project would also be coupled with the BESS and configured to allow for up to 150 MW of battery storage capacity and 8 hours of battery capacity. The configuration of the PV system would include single-axis trackers, bifacial PV modules, and central inverters. A preliminary plot plan is included as **Figure 2-6, Preliminary Plot Plan**.

The project would be located on approximately 596 acres of land (project site) within an approximately 825-acre parcel (project parcel), plus a gen-tie corridor approximately 1.1 miles in length, connecting the proposed on-site substation to an existing gen-tie line associated with the Mojave Solar Facility and just south of the existing Alpha Substation, which is owned by Mojave Solar, LLC. From this intertie location, the existing Mojave Solar Facility gen-tie line carries electrical power output to the existing Southern California Edison (SCE) Sandlot Substation, which then interconnects to the 230-kilovolt (kV) SCE Kramer-Coolwater Transmission Line, and ultimately ties into the Kramer Junction Substation at the point of interconnection (POI) where energy is delivered to the power grid. The project consists of two parcels: Assessor's Parcel Number (APN) 0490-183-65, which would contain the proposed solar facility, BESS, and supporting infrastructure on approximately 596 acres of the project parcel; and APN 0490-012-149, which would contain the proposed gen-tie line (**Figure 2-2, Project Site Map**).

The average life of a PV plant is generally considered to be 30 years, after which decommissioning and removal would be considered, or renewal of the CUP. Decommissioning would be determined by the PV plant owner, who would pay the costs for dismantling and having the materials transported off-site to either recyclers or permitted disposal sites. After materials removal, the project site would be restored to its original condition prior to the installation of the PV plant so the land can be reused for other useful purposes.

Electricity produced by the solar arrays may also include a 1,200-megawatt-hour (MWh) BESS (8 hours of 150 MWac [megawatt alternating current]) and would be routed to a proposed on-site substation to be developed as part of the project. From the on-site substation, voltage would be increased to the interconnection voltage to connect the project to the existing SCE-owned 230-kV Kramer Junction Substation at the POI. The project would also include security fencing, a supervisory control and data acquisition (SCADA) system, and telecommunications equipment. These project components are described in detail in the following subsections.

The project is subject to CUP approval and includes a request for a Zoning Amendment and Countywide Plan/Policy Plan Amendment as described above in Section 2.1.4, Land Use Designations and Zoning. These approvals are discussed in further detail below:

- **Zoning Amendment:** The project includes a Zoning Amendment to change the zoning designation from RL to RC in order to be in compliance with the Countywide Plan/Policy Plan adopted October 27, 2020, and the RECE adopted August 8, 2017 (amended February 28, 2019). Transmission lines are permitted within the RL zoning district and, therefore, the gen-tie corridor would not require a zoning amendment.
- **Countywide Plan/Policy Plan Amendment:** The project includes a Countywide Plan/Policy Plan Amendment to change the land use designation from RL to RLM in order to be in compliance with the Countywide Plan/Policy Plan adopted October 27, 2020, and the RECE adopted August 8, 2017 (amended February 28, 2019).
- **CUP:** The project requires a CUP, which would cover the approximately 596-acre project site and gen-tie corridor. The CUP would include the installation of solar facilities capable of generating up to 150 MW of renewable electrical energy via solar PV modules mounted on a single-axis tracking racking system or a fixed-tilt racking system. The solar array would be connected to inverters and the project BESS. The CUP would also include an on-site, fenced-in substation that would occupy an area of approximately 300 feet by 300 feet. Within the substation fence, the electrical equipment would be approximately 65 feet in height at the highest points, which meets the maximum allowable height for solar energy facilities pursuant to County Development Code Section 83.02.040(c)(2)(Q). A small one-story, rectangular control building, housing the communication and SCADA equipment (if required), would also be located within the substation footprint. These project components are described in detail in the following subsections.
- **Variance:** The gen-tie poles would be 95 feet tall and the substation equipment would be 65 feet tall at the highest point, both requiring a Major Variance. The project would obtain a height variance for both the gen-tie poles and the substation equipment, as these components would exceed the maximum allowable height of 52.5 feet for the RL and RC zoning districts. The height limit for these zoning districts is 35 feet; however, in accordance with County Development Code Section 83.02.040(c)(2)(T), the maximum structure height specified in a land use zoning district may be exceeded by no more than 50 percent for structures including distribution and transmission cables and towers. The poles would be designed to meet all the latest National Electrical Safety Code (NESC) requirements for high-voltage transmission lines.

2.2.1.1 Solar Array

Solar panels would be mounted on a single-axis tracking racking system or a fixed-tilt racking system that would be supported by driven piers (piles) or helical ground anchors directly embedded into the ground. Panels would be organized in rows in a uniform grid pattern, with each row separated by approximately 10 to 20 feet (from post to post). Panels are proposed to be a minimum of 20 inches above ground for hydrology purposes.

The specific equipment chosen for the proposed project would be determined prior to final design and construction.

2.2.1.2 Inverters and Switchgear

Individual PV panels would be electrically connected in series to create a “string” to carry DC electricity. Strings of DC electricity would be routed to inverters, which would take the DC output and convert it to AC electricity.

The centralized inverters and transformers would be supported on concrete or steel equipment pads approximately 10 feet by up to 50 feet in size. Support piers may be used in lieu of equipment pads. The inverters and transformers would be anywhere from 5 to 10 feet in height and placed so as to minimize shading on the array. The AC power from inverters/transformers would be collected and transported to an on-site substation where the AC would be further transformed to 230 kV.

2.2.1.3 Project Substation

The project would include one on-site substation containing high-voltage equipment, which would be unenclosed, occupy an area of approximately 300 feet by 300 feet, and be separately protected with security fences meeting the requirements of the 2023 NESC. The on-site substation would be located within the southeastern corner of the project site (**Figure 2-2**). Within the substation fence, the electrical equipment would reach to approximately 65 feet tall at the highest points, which exceeds the maximum allowable height for the RC zoning district plus the 50 percent allowable increase, pursuant to County Development Code Section 83.02.040(c)(2)(T). Accordingly, the project would obtain a height variance for the substation electrical equipment, and for the gen-tie poles as discussed in Section 2.2.1.5, Gen-Tie Line and Grid Interconnection, below. A small one-story, rectangular control building, housing the communication and SCADA equipment (if required), would also be located in the substation footprint. The control building footprint would be 15 feet by 15 feet, with a maximum height of 8 feet.

From the new project substation, a gen-tie line would be constructed to connect the solar facility to its intertie location, which would be an existing gen-tie line located approximately 1.1 miles east of the proposed solar facility, just south of the existing Alpha Substation.

2.2.1.4 Battery Storage

The 150-MW BESS is expected to be constructed adjacent to and just west of the on-site substation on approximately 4.2 acres. The key components of the BESS are described below:

- **Batteries.** Individual lithium-ion cells form the core of the BESS. Individual cells are assembled either in series or parallel connection, to make up sealed battery modules. The battery modules would be installed in self-supporting racks electrically connected either in series or parallel to each other. The operating rack-level DC voltage currently can range between 700 and 1,500 volts. The regulated output would be set to match the inverter DC input operating voltage, which is generally around 1,300 volts DC. The individual battery racks are connected in a series or a parallel configuration to deliver the battery storage system energy and power rating.

- **BESS Enclosure and Controller.** The BESS enclosure would house the batteries and the BESS controller. The BESS controller is a multilevel control system and includes the battery modules, power conversion system (PCS), and medium-voltage (MV) system where the BESS would connect to the project substation, and then connect to the electrical grid via the proposed gen-tie line and grid interconnection as described in Section 2.1.5.5, Gen-Tie Line and Grid Interconnection, below. The controllers ensure the BESS effectively mimics conventional turbine generators when responding to grid emergency conditions. The BESS enclosure would also be equipped to house required heating, ventilation, and air conditioning (HVAC) and fire protection/suppression systems.
- **DC/DC Converter.** In a DC-coupled system, the DC/DC converter usually allows the connection of the BESS to the DC side of the PV inverter. The DC/DC converter manages the battery and PV bus voltage and provides appropriate protections for the PV inverter.
- **Power Conversion System – Inverter.** The PCS typically consists of an inverter, protection equipment, circuit breakers, air filter equipment, equipment terminals, and cabling installed throughout the project site. Electricity is transferred from the PV array to the project batteries during a battery charging cycle and from the project batteries to the power grid during a battery discharge cycle through BESS connection with the project substation, which connects the project to the power grid via the proposed gen-tie line. The inverter is bi-directional, with the ability to convert power from AC to DC when the energy is transferred from the grid to the battery and from DC to AC when the energy is transferred from the battery to the grid.
- **MV Transformer.** A separate MV transformer may be present if not integrated into the inverter skid. This would be a pad-mounted transformer used to increase voltage on the AC side of the inverter from low to MV. MV transformers are used to increase the efficiency of power transmission by reducing resistive power losses at the higher voltage.

Batteries would be installed adjacent to the substation and would be contained within either steel enclosures similar to a shipping container or a freestanding building, approximately 10 feet in height. The color of the metal enclosure has not yet been determined; it typically varies by manufacturer. Fencing is proposed along the perimeter of the BESS, which would include 13-foot-high chain link sections on the east and south faces with acoustic mitigation surfaces. The north and west faces of the BESS fencing would be constructed in compliance with standard NESC safety clearance requirements.

The proposed battery storage system would be designed, constructed, operated, and maintained in accordance with applicable industry best practices and regulatory requirements, including fire safety standards. The BESS safety system typically includes a fire detection and suppression control system that would be triggered automatically when the system senses imminent fire danger. A fire suppression control system would be provided within each on-site battery enclosure. Components of the system would include a fire panel, aspirating hazard detection system, smoke/heat detectors, strobes/sirens, and suppression tanks. The safety system would operate in three phases: pre-alarm, stage 1, and stage 2. If the safety system detects a potential issue, the pre-alarm phase would be initiated and would shut down the HVAC units and fans to help contain the potential fire. It would also send a remote alert signal to locations on- and off-site to alert personnel of the imminent danger. The alarm and alert signals are typically cleared at the project site enclosure where the problem is occurring. The control system would

then wait approximately 5 minutes to determine whether the initiation of stage 1 occurs. This would shut down the HVAC and fans indefinitely. If reached, stage 2 would result in the fire panel discharging the suppression agent onto the fire. The safety system would either use a waterless evaporating fluid, sustainable clean agent (not a hydrofluorocarbon clean agent), or an alternative suppression agent, such as an inert gas.

2.2.1.5 Gen-Tie Line and Grid Interconnection

From the on-site project substation, the proposed gen-tie line would be constructed along property already owned and operated by the applicant to connect the proposed solar facility's output to the intertie location, which would be an existing Mojave Solar Facility gen-tie line located 1.1 miles to the east, just south of the existing Alpha Substation. The ultimate POI with the electrical grid would be located at the existing SCE-owned 230-kV Kramer Junction Substation (approximately 12 miles to the west). Once the proposed gen-tie line is connected at the intertie location, energy produced by the project would reach the POI via existing electrical infrastructure. After the proposed gen-tie line is connected at the intertie location, the existing Mojave Solar Facility gen-tie line connects to the existing Sandlot Substation, which then connects with the POI at the Kramer Junction Substation via the existing 230-kV Kramer-Coolwater Transmission Line. Once connected with the Kramer Junction Substation via existing transmission infrastructure, the power is ultimately delivered to the SCE power grid. The new gen-tie line would be approximately 1.1 miles in length and would run within the existing Mojave Solar Facility, along the northern or southern side of an existing drainage canal, as Option A and Option B, respectively, shown in **Appendix B, Visual Simulations**. Both options would be located within the existing Mojave Solar Facility and are evaluated in this Draft EIR, and generally referred to throughout as the gen-tie and gen-tie corridor, due to their close proximity to one another (approximately 275 feet apart). No easements or rights-of-way (ROW) would be required. The gen-tie corridor would temporarily be 120 feet wide during construction and would ultimately be 80 feet wide once operational.

The gen-tie poles would be 95 feet in height and the gen-tie line would be 230 kV to accommodate the electric circuit(s) necessary to interconnect the project substation with the existing gen-tie line just south of the Alpha Substation. As previously described, the project would obtain a height variance for the gen-tie poles and substation equipment due to the exceedance of the applicable height limit pursuant County Development Code Section 83.02.040(c)(2)(T), and these components would be designed to meet all the latest NESC requirements for high-voltage transmission lines.

No expansion of the existing Alpha or Sandlot Substations' footprints is anticipated. SCE would conduct a limited scope of work within and surrounding the existing substations, as needed, to facilitate connection of the solar project to the SCE system. Installing underground telecommunications (telecom) facilities both inside and outside the new on-site substation and any existing substation fence line would be performed by the applicant to meet SCE requirements.

2.2.1.6 Access Roads

On-site access routes would be constructed along the project's fence line and throughout the project site. All interior access roads would be a minimum of 20 feet wide. The perimeter road would be a minimum of 26 feet wide. All on-site roads would consist of compacted native soil in accordance with

San Bernardino County Fire Protection District requirements. All roads would be stabilized with soil stabilization material, if necessary. Improvements to off-site access roads, including potential paving and widening, would be completed as required according to County standards and in consultation with the County Department of Public Works and Land Development Division.

2.2.1.7 Perimeter Fencing

Fencing is proposed along the perimeter of the project site or set back a minimum of 15 feet from the existing/proposed ROW, as required by Section 84.29.050 of the County Development Code. Fencing would be at least 7 feet tall, in compliance with the NESC, around the project site boundary. The on-site substation would be separately fenced due to the high voltage presence of exposed electric equipment, and would be constructed in accordance with NESC safety clearance requirements including the NESC 7-foot fence height requirement. Fence construction can be 6 feet in height with a 1-foot extension of three rows of barbed wire to give an overall fence height meeting the 7-foot requirement. Chain-link fencing would likely be used, potentially topped with 1 foot of barbed wire. In consultation with the County, slats or mesh may be added to the chain-link fence, as appropriate and in areas where needed, to manage windblown sand. Access gates would be installed at each project site entry point.

2.2.1.8 Lighting and Signage

Manual, timed, and motion sensor lights would be installed at access gates, equipment pads, and substations for maintenance and security purposes. Lighting would be shielded and aimed downward to the ground. The project lighting would comply with the County's outdoor lighting standards per Section 83.07.060 of the Development Code (Mountain and Desert Requirements). In addition, remote-controlled cameras would be installed. No other lighting is planned. Signage is proposed at the entrance of the project site along Lockhart Ranch Road and would be installed at other locations as required to comply with Chapter 83.13 of the County Development Code.

2.2.1.9 Stormwater Facilities

Project site drainage would be designed to follow natural drainage patterns. None of the on-site facilities, including fences and panel posts, would be expected to prevent stormwater flow. Long shallow strip retention basins are proposed to capture the anticipated 100-year, 24-hour increase in runoff volume resulting from clearing of vegetation, compacting of soil, and any limited impervious (paved or structural) improvements. These would be shallow swales located along each solar array.

The project would be subject to compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). In compliance with the Construction General Permit, the project would be required to develop and implement a Stormwater Pollution Prevention Plan, which would include site-specific best management practices to minimize erosion on-site and reduce or otherwise prevent conditions of erosion and stormwater runoff. Planned improvements to the perimeter stormwater controls would include maintenance of a drainage easement to the west of the existing berm; construction of small retention basins throughout the solar panel areas and project site; installation of culverts and drainage channels to facilitate the controlled conveyance of runoff across

the project site; and BMPs such as vegetated swales, permeable surfaces, and infiltration trenches to reduce surface runoff.

2.2.1.10 Other Infrastructure

Telecommunications equipment, such as a fiber-optic lines, a SCADA system, and auxiliary power, would be installed throughout the project site at each inverter equipment pad and the substation. Telecommunications equipment would be brought to the project from existing telecommunications infrastructure in the project vicinity and may be co-located on aboveground structures, such as transmission lines. Trenching could be required to install some of the telecommunications equipment. Fire protection would also be included in accordance with applicable requirements.

2.2.2 Construction

2.2.2.1 Construction Activities, Timing, and Workforce

Construction of the project is expected to occur in one phase, over an approximately 26-month period, from approximately September 2024 until the end of October 2026. The September 2024 construction start date represents the earliest date construction would initiate and assumes the earliest start date for construction represents the conservative-case scenario. The project would be constructed in multiple overlapping stages including: 1) site preparation and grading (including mobilization, fencing, preparation of laydown areas, and trenching); 2) solar array installation (including the installation of solar array structural components including cables, piles, racking systems, inverters, modules, and panels); and 3) BESS construction (including BESS, commissioning, and testing). The order in which the project would be constructed is further described below, and **Table 2-1, Anticipated Construction Schedule, Trips, and Equipment**, includes a list of anticipated construction equipment.

1. Fencing, site preparation, grading, and preparation of construction staging areas and on-site access routes;
2. Installation of the racking system, equipment pads, and foundations;
3. Installation of solar panels and other electrical components;
4. Installation of project substation equipment, the gen-tie line, and all other balance of systems equipment including the BESS system;
5. Interconnecting the project gen-tie line with the existing gen-tie at the intertie location; and
6. Startup, testing, and placing the solar array facility into operation.

After the project site is fenced and secured, equipment would be delivered to the various construction staging areas within the project site. Delivery would typically be by flatbed or enclosed semi-trailer truck. The largest piece of equipment would be the transformer for installation within the on-site substation. This would not be delivered until toward the end of construction as the lead time is typically 12 to 24 months from date of order. This item may require special over-the-road oversize permitting as well as road restrictions due to its weight. Rail delivery may be a possibility.

If a pile foundation is considered the best design instead of helical ground anchors, placement of solar panels would require driving piles approximately 6 to 10 feet into the ground. In areas where geotechnical analysis has determined that piles may not be feasible or cost effective, conventional

foundations (such as isolated spread foundations, continuous footings, or ballasted racking, which uses concrete or other heavy material to stabilize the feature) may be used, but this is not anticipated. Alternatively, piles may need to be driven deeper based on further geotechnical analysis. During the installation of the foundation pilings, noise concerns may develop from the machines driving the piles into the ground. The nearest sensitive receptors are rural residences located along Harper Lake Road, the closest being approximately 1 mile east of the project site and 0.3 mile south of the proposed gen-tie line.

Table 2-1. Anticipated Construction Schedule, Trips, and Equipment

Construction Stage	Equipment Used			Daily Vehicle Trips
	Type	Number	Hours/Day	
Site Preparation/Grading September 1, 2024 – October 30, 2025 (304 working days)	Tractors/Loaders/Backhoes	1	12	Assumed a maximum of 600 one-way worker trips for all stages at any time.
	Off-Highway Truck	1	12	
	Scrapers	1	12	
	Graders	2	12	
	Rubber-Tired Bulldozers	1	12	
Solar Array Construction and Gen-tie October 1, 2024 – October 30, 2025 (283 working days)	Cranes	1	12	No one-way vendor trips for all stages at any time.
	Forklifts	5	12	
	Trenchers	2	12	
	Skid Steer Loaders	2	12	50 one-way on-site haul truck trips for all stages at any time.
	Generator Sets	12	12	
	Bore/Drill Rigs	1	12	Assumed 2 miles of on-site truck travel for each stage.
	Aerial Lift	2	12	
	Tractors/Loaders/Backhoes	1	12	
	Other Construction Equipment (Pile Driver)	1	12	
	Welders	12	12	
BESS Construction and Gen-tie October 31, 2025 – October 31, 2026 (261 working days)	Cranes	2	12	Assumed a maximum of 600 one-way worker trips for all stages at any time.
	Forklifts	5	12	
	Off-Highway Truck	1	12	
	Generator Set	10	12	No one-way vendor trips for all stages at any time.
	Bore/Drill Rigs	1	12	
	Trenchers	2	12	
	Aerial Lifts	3	12	50 one-way on-site haul truck trips for all stages at any time.
	Skid Steer Loader	1	12	
	Tractors/Loaders/Backhoes	3	12	
	Other Construction Equipment (Pile Driver)	1	12	Assumed 2 miles of on-site truck travel for each stage.
	Welders	3	12	
Road Paving October 20, 2026 – October 31, 2026 (9 working days)	Pavers	1	12	
	Paving Equipment	1	12	

Source: Air Quality and Greenhouse Gas Technical Report (**Appendix C** of this EIR)

Other construction equipment may include pickup trucks, automobiles, cement trucks, water carriers, and the like. Equipment deliveries would of necessity occur during the daylight hours of 7 a.m. to 6 p.m. on weekdays. Deliveries outside these hours would be kept to a minimum.

An average of 150 workers would be on-site during each stage of construction, depending on the activities. The peak number of workers on the project site at any one time is anticipated to be 300. The workforce would consist of laborers, craftspeople, supervisory personnel, and support personnel. On average, it is anticipated that each worker would generate one round trip to the project site per workday.

Construction would only occur during daylight hours, and no nighttime work would occur.

Workers would reach the project site using Harper Lake Road to Lockhart Ranch Road. Portable toilet facilities would be installed for use by construction workers. Waste disposal would occur in a permitted off-site receiving facility. Domestic water for use by employees would be provided by the construction contractor through deliveries to the project site.

2.2.2.2 Site Preparation and Grading

Site preparation may consist of clearing, grubbing, scarifying, recompact, and grading to level the project site and removing any mounds or holes that remain from the existing land use. Though grading is expected to occur throughout the project site, the project site's cut and fill would balance, and no importing or exporting of materials would be necessary. Actual quantities of earth to be moved is unknown at this time but would be determined once the engineering is started and completed. Anticipated depths for ground disturbance are up to 1 foot for concrete pads and grading. Pylons will be driven to a depth of 7 feet, but no drilling or excavation will be required. During the entire construction period, the project would use up to approximately 200 acre-feet of water for construction activities. The project would purchase water supplied by existing on-site wells at the adjacent Mojave Solar Facility.

Prior to grading, temporary desert tortoise exclusion fences would be placed around the project site, which would prevent any desert tortoises potentially occurring in the project vicinity from moving on-site. These temporary fences would also allow materials and equipment to be securely stored on-site and prevent theft and vandalism. The proposed gen-tie corridor is located within an area already fenced off by the existing Mojave Solar Facility with permanent desert tortoise exclusion fencing. Thus, no new fencing is proposed around the gen-tie corridor. Storage containers may be used to house tools and other construction equipment. In addition, security guards would regularly monitor the project site. In accordance with Mojave Desert Air Quality Management District (MDAQMD) requirements, the project would develop a dust control plan that describes all applicable dust control measures to address and suppress construction-related dust. Components of the plan would likely include water trucks to spread water, as well as road stabilization with chemicals, gravel, or asphaltic pavement to mitigate visible fugitive dust from vehicular travel and wind erosion.

2.2.2.3 Construction Access Routes and Laydown Areas

Construction vehicles would access the project site from Harper Lake Road via SR-58. Most workers would commute to the project site from nearby communities such as Boron and Barstow. Additional workers may travel to the project site from the cities of Victorville, Hesperia, and San Bernardino. The

project would utilize the proposed BESS site, adjacent to the proposed on-site substation, as the laydown area for project components and construction equipment. Access to the gen-tie line would be provided via the existing entrance to the Mojave Solar Facility at the intersection of Lockhart Ranch Road and Harper Lake Road.

During construction, project components and construction equipment would be staged within the project site boundaries and would not restrict any existing off-site roadways. County Road, an unimproved and unpaved road, runs along the southeastern boundary of the project site and is within the project parcel. However, the project's perimeter fenceline would be constructed north of this road to maintain public access. The project would not remove or limit access along this road.

2.2.2.4 Solid and Nonhazardous Waste

The project would produce solid waste from construction activities. This may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty nonhazardous containers, and vegetation waste. These wastes would be segregated, where practical, for recycling. Nonrecyclable wastes would be placed in covered dumpsters and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill. The closest Class III regional landfill is the Barstow Sanitary Landfill, located approximately 22 miles southeast of the project site. Vegetation waste generated by site clearing and grubbing would be chipped/mulched and spread on-site or hauled off-site to an appropriate green waste facility.

2.2.2.5 Hazardous Materials

Hazardous materials used during project construction would be typical of most construction projects of this type. Materials may include small quantities of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliative, herbicides, and welding materials/supplies. A Hazardous Materials Business Plan (HMBP) would be provided to the County Environmental Health Services Division (EHS) that would include a complete list of all materials used on-site and information regarding how the materials would be safely stored and transported and in what form they would be used. This information would be recorded to maintain safety and prevent possible environmental contamination or worker exposure. During project construction, material safety data sheets (MSDS) for all applicable materials present at the project site would be made readily available to on-site personnel.

2.2.2.6 Hazardous Waste

Hazardous waste may be generated during project construction. These wastes may include waste paint, spent construction solvents, waste cleaners, waste oil, oily rags, waste batteries, and spent welding materials. Workers would be trained to properly identify and handle all hazardous materials. Hazardous waste would be either recycled or disposed of, as allowed by permit, at a permitted and licensed treatment and/or disposal facility.

2.2.3 Operations

The project would generate solar electricity from the PV system during daylight hours and may discharge power for sale onto the power supply grid from the BESS at various times during the daytime and nighttime. A small one-story, rectangular control building, housing the communication and SCADA

equipment (if required), would be located within the substation footprint. While project operations would be monitored remotely via the SCADA system, and the project site would not require the presence of full-time, on-site employees, occasional operational and maintenance visits would occur. In the case that unanticipated issues arise, staff would be available to respond and be on-site within 15 minutes. The control building footprint would be 15 feet by 15 feet, with a maximum height of 8 feet. The building would not be occupied except for during routine maintenance activities, and it would not require water or sewer connections. Temporary operations and maintenance employees would use the existing operations and maintenance facilities at the adjacent Mojave Solar Facility for domestic water and toilet facilities.

Operational vehicles would include light-duty trucks (e.g., flatbed pickup) and other light equipment for maintenance and PV module washing. Heavy equipment would not be used during normal operation. Large or heavy equipment may be brought to the facility infrequently for equipment repair or replacement or for vegetation control.

Water would be required for panel washing activities, general maintenance, and fire suppression purposes. Operational water demands would total approximately 11 acre-feet per year. The frequency of panel washing would be determined based on soiling of the PV panels and expected benefit from cleaning. However, panel washing would be required at least once per year and potentially up to 4 times per year. Panel washing would require up to 12 employees with water trucks and would take approximately 20 days to complete for each panel washing event. When cleaning is necessary, water would be sprayed on the PV panels to remove dust. This water would be obtained from existing on-site wells at the adjacent Mojave Solar Facility. Operational water for fire suppression would be contained within a water tank located next to one of the existing wells within the adjacent Mojave Solar Facility. San Bernardino County Fire Protection District maintains keys for all access gates at the Mojave Solar Facility.

2.2.3.1 Solid and Nonhazardous Waste

The project would produce a small amount of waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning modules, electrical materials, empty containers, and other miscellaneous solid waste, including the typical refuse generated by workers. Most of these materials would be collected and delivered back to the manufacturer or to recyclers. Nonrecyclable waste would be handled and hauled from the project site by temporary operations and maintenance workers and would be disposed of at existing trash bins within the adjacent Mojave Solar Facility. Shipping materials, construction waste, and other general solid wastes would be separated for recycling where possible/available.

2.2.3.2 Hazardous Materials

Limited amounts of hazardous materials would be stored or used on- the site during operations, which include diesel fuel, gasoline and motor oil for vehicles, mineral oil to be sealed within the transformers, and lithium-ion batteries as part of the BESS. Appropriate spill containment and cleanup kits would be maintained during operation of the project.

2.2.3.3 Hazardous Waste

The proposed project would produce a small amount of hazardous waste associated with maintenance activities, which could include defective or malfunctioning modules, electrical materials, unused paint, solvents, cleaners, waste oil, oily rags, and batteries. Workers would be trained to properly identify and handle all hazardous wastes. Fuels and lubricants used in operations would be subject to the Spill Prevention, Control, and Countermeasure Plan to be prepared for the proposed project.

Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste shipped off-site for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location.

2.2.4 Decommissioning

When operations at the project site are permanently terminated after 30 years, the facility would be decommissioned if the CUP is not renewed. Most components of the proposed system are recyclable or can be resold for scrap value. Panels typically consist primarily of silicon, glass, and an aluminum frame. Tracking systems typically consist of steel and concrete, in addition to motors and control systems. All these materials can be recycled. Numerous recyclers for the various materials to be used on the project site operate in San Bernardino and Riverside Counties. Metal, scrap equipment, and parts that do not have free-flowing oil can be sent for salvage. Equipment containing any free-flowing oil would be managed as waste and would require evaluation. Oil and lubricants removed from equipment would be managed as used oil, which is a hazardous waste in California. Decommissioning would comply with federal, State, and local standards and all regulations that exist when the project is decommissioned, including the requirements of San Bernardino County Development Code Section 84.29.070.

Many components of energy storage systems are recyclable. However, at the time of decommissioning, batteries may be considered hazardous waste in California when they are discarded, whether or not they are rechargeable. Accordingly, the battery modules included in the BESS eventually would be disposed of in accordance with the applicable hazardous waste requirements. These materials would be stored and handled in a manner to prevent accidental release. Standard construction practices would be observed such that any incidental releases would be appropriately contained and remediated as required by regulation.

The decommissioning would be performed by the applicant or at such time by the successor owner of the PV plant in accordance with the County's RECE Goal RE-4 Environmental Compatibility Policy in general and Policy RE-4.5 in particular, which governs the decommissioning requirements. A bond would be provided at the outset of construction to cover the agreed-upon costs of decommissioning and would be returned when decommissioning is satisfactorily accomplished.

2.3 Intended Uses of the EIR

This EIR is an informational document intended to inform public agency decision-makers and the public of significant environmental effects of the proposed project described above, identify ways to minimize the significant effects, and describe and evaluate a reasonable range of alternatives to the project.

San Bernardino County is the Lead Agency for the project, as it is the agency with primary authority over the project's discretionary approvals. Several other agencies, identified as responsible and trustee

agencies, will also use the EIR for their consideration of approvals or permits under their respective authorities.

For the purpose of CEQA, the term “trustee agency” means a State agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. The term “responsible agency” includes all public agencies other than a lead agency that may have discretionary actions associated with the implementation of the proposed project or an aspect of subsequent implementation of the project. Accordingly, **Table 2-2, Matrix of Potential Approvals Required**, identifies a list of approvals that could be required from the lead agency, trustee agencies, and responsible agencies.

Table 2-2. Matrix of Potential Approvals Required

Permit/Action Required	Approving Agency	Lead/Trustee/Responsible Agency Designation
Environmental Impact Report Certification	County	Lead Agency
Conditional Use Permit	County	Lead Agency
Zoning Amendment	County	Lead Agency
Countywide Plan/Policy Plan Amendment	County	Lead Agency
Major Variance for Height of Gen-Tie Poles and Substation Electrical Equipment	County	Lead Agency
Non-residential Solar Permit	County	Lead Agency
Encroachment Permits	County	Lead Agency
General Order 131-D Review	California Public Utilities Commission	Responsible Agency
Air Quality Construction Management Plan	Mojave Desert Air Quality Management District (MDAQMD)	Responsible Agency
Dust Control Plan	MDAQMD	Responsible Agency
Clean Water Act Permit, if required (Section 401)	Lahontan Regional Water Quality Control Board (RWQCB)	Responsible Agency
General Permit and Storm Water Pollution Prevention Plan	Lahontan RWQCB	Responsible Agency
Clean Water Act Permit, if required (Section 404)	U.S. Army Corps of Engineers (USACE)	Responsible Agency
Assembly Bill (AB) 52 Consultation	County	Lead Agency
National Historic Preservation Act, Section 106	Historic Preservation Office	Responsible Agency
Waste Discharge Permit, if required	Lahontan RWQCB	Responsible Agency
Streambed Alteration Agreement, if required (Section 1600)	California Department of Fish and Wildlife (CDFW)	Trustee Agency
Incidental Take Permit, if required (Section 2081)	CDFW	Trustee Agency
Incidental Take Permit, if required (Section 10(a))	U.S. Fish and Wildlife Service (USFWS)	Responsible Agency
Fire Department Review	San Bernardino County Fire Protection District	Responsible Agency
Grading and Building Permit(s)	County	Lead Agency

3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

This Environmental Impact Report (EIR) analyzes those environmental issue areas identified during project scoping as having the potential for significant impacts.

The EIR examines the following environmental topics outlined in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist Form:

- 3.1 Aesthetics and Visual Resources
- 3.2 Air Quality
- 3.3 Biological Resources
- 3.4 Cultural and Tribal Cultural Resources
- 3.5 Energy
- 3.6 Geology and Soils
- 3.7 Greenhouse Gas Emissions
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Land Use and Planning
- 3.11 Noise
- 3.12 Transportation and Traffic
- 3.13 Utilities and Service Systems
- 3.14 Wildfire
- 3.15 Effects Not Found to be Significant

The following environmental issue areas are addressed in Section 3.15, Effects Not Found to Be Significant:

- Agriculture and Forestry
- Mineral Resources
- Population and Housing
- Public Services
- Recreation

Each potentially significant environmental issue is addressed in a separate section of the EIR (Sections 3.1 through 3.14) and is organized into the following general subsections:

- **Environmental Setting** describes the physical conditions that exist at this time and that may influence or affect the issue under investigation.
- **Regulatory Framework** describes the pertinent policy, standards, and codes that exist at this time and which may influence or affect the regulatory environment of the proposed project.

- **Thresholds for Determination of Significance** identifies the environmental impact threshold questions from Appendix G of the CEQA Guidelines, which are the basis for identifying the potential impacts associated with implementation of the proposed project.
- **Impact Analysis and Mitigation Measures** identifies direct and indirect environmental effects associated with implementation of the proposed project and identifies proposed measures to mitigate environmental effects, where applicable.

Impact Analysis

The level of significance identifies the degree or severity of an impact with implementation of the proposed project. Impacts are classified as potentially significant impact, less than significant impact, or no impact. Project impacts are the potential environmental changes to the existing physical conditions that may occur if the project is implemented.

Major sources used in crafting significance criteria include the CEQA Guidelines; San Bernardino County, State, federal, or other standards applicable to an impact category; and officially established significance thresholds. “An ironclad definition of significant effect is not possible because the significance of any activity may vary with the setting” (CEQA Guidelines Section 15064[b]). Principally, “a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic and aesthetic significance” constitutes a significant impact (CEQA Guidelines Section 15382).

Evidence, based on factual and scientific data, is presented to show the cause-and-effect relationship between the proposed project and the potential changes in the environment. The exact magnitude, duration, extent, frequency, range, or other parameters of a potential impact are ascertained, to the extent possible, to determine whether impacts may be significant when compared to the presented criteria. The discussion considers all of the potential direct and reasonably foreseeable indirect, construction-related (short-term), and operational and maintenance (long-term) effects. Each section also addresses cumulative impacts (described further below) and identifies any significant and unavoidable impacts. The project applicant submitted technical data, information and analysis related to the project and the County conducted a third-party, independent review of all submitted materials before presenting it in this document.

Mitigation Measures

Mitigation measures are those project-specific measures that would be required of the proposed project to avoid a significant adverse impact, to minimize a significant adverse impact, to rectify a significant adverse impact by restoration, to reduce or eliminate a significant adverse impact over time by preservation and maintenance operations, or to compensate for the impact by replacing or providing substitute resources or environment. Mitigation measures are included throughout Sections 3.1 through 3.14, where necessary, to address an identified potentially significant impact.

Where significant impacts cannot be feasibly mitigated to less than significant levels, they would be considered significant and unavoidable impacts. To approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency is required to balance the benefits of a project against its unavoidable

environmental impacts in determining whether to approve the project. As stated in CEQA Guidelines Section 15093(a), if the benefits of a project are found to outweigh the unavoidable adverse environmental effects, the adverse effects may be considered “acceptable” and the project approved.

Cumulative Impact Evaluation

Cumulative impacts are defined in CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from a “change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.” Consistent with CEQA Guidelines Section 15130(a), the discussion in this EIR focuses on the identification of any significant cumulative impacts and, where present, the extent to which the project would constitute a considerable contribution to the cumulative impact. CEQA Guidelines Section 15130(b) states the following:

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 for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

Methodology

To identify the projects to be analyzed in the evaluation of cumulative impacts, CEQA Guidelines Section 15130(b) requires that an EIR employ either:

- **The List Approach** – entails listing past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- **The Projection Approach** – uses a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The approach and geographic scope of the cumulative impact evaluation vary depending on the environmental topic area being analyzed. The individual Cumulative Impact Analysis subsection in the section addressing each environmental topic discusses cumulative impacts and, if necessary, includes mitigation measures for the proposed project. Each impact begins with a summary of the approach and the geographic area relevant to that environmental topic area. The cumulative setting and methodology are discussed in each resource section.

Past projects include those land uses that have been previously developed and comprise the existing environment. Present projects include those projects recently approved or under construction. Probable future projects are those that are reasonably foreseeable, such as those for which an application is on file and in process with a local planning department. The cumulative projects listed in

Table 3-1, Cumulative Projects, have been determined to be reasonably foreseeable and have been developed in consultation with the County Planning Department. As provided by the County, the cumulative projects are solar. No other types of projects are near the proposed project. These projects are considered in the cumulative impact analysis as appropriate. Refer to **Figure 3-1, Cumulative Projects Map**, for the location of each project relative to the project site.

Table 3-1. Cumulative Projects

Map No.	Project Number	Project Name	Community	Approx. Distance to Project Site	Description
1	Proj-2021-00003	Harper Lake Solar PV	Hinkley	1.25 miles NE	65-MW PV solar energy facility on approximately 80 acres. Currently under review and the technical studies and environmental document are being prepared.
2	Proj-2022-00110	Desert Breeze Solar LLC	Hinkley	1 mile N	130-MW solar facility on approximately 923 acres. A Notice of Determination was filed on January 18, 2024 and the Final EIR was published on January 5, 2024.
3	Proj-2019-00041	Jazmin Solar Energy	Hinkley	2 miles SE	8-MW solar facility on approximately 40 acres. Conditionally approved by the San Bernardino Planning Commission on July 8, 2021.
4	Proj-2020-00141	Kramer South Solar Farm – 37BF 8me, LLC	Kramer Junction	12 miles W	130-MW solar facility on approximately 386 acres. Conditionally approved by the San Bernardino County Planning Commission on June 4, 2020. An Extension of Time was approved until June 16, 2026.
5	P201900125	Lockhart Solar PV I	Hinkley	0.1 mile N	160-MW PV solar energy facility on approximately 1,073 acres. Conditionally approved by the San Bernardino County Planning Commission on October 3, 2019. San Bernardino County Board of Supervisors upheld the approval on January 7, 2020.
6	P201700392	Kramer North Solar Farm – 12AT 8ME, LLC	Kramer Junction	11 miles W	70-MW solar facility on approximately 191 acres. Project has been conditionally approved but no permits have been issued.
7	Proj-2021-00019 and Proj-2021-00079	Resurgence Solar I & II	Kramer Junction	10 miles W	50-MW PV solar energy facility on approximately 1,172 acres. Conditionally approved by the San Bernardino County Planning Commission on September 9, 2021. The San Bernardino County Board of Supervisors upheld the approval on November 16, 2021.
8	Proj-2021-00029, Proj-2021-00072, Proj-2021-00073, Proj-2021-00141, and Proj-2021-00135	Lockhart Solar PV II	Hinkley	1 mile N	150-MW PV solar energy facility on approximately 600 acres. Conditionally approved by the San Bernardino County Board of Supervisors on June 28, 2022.

Source: San Bernardino County 2023.

EIR – environmental impact report; MW – megawatt; PV – photovoltaic

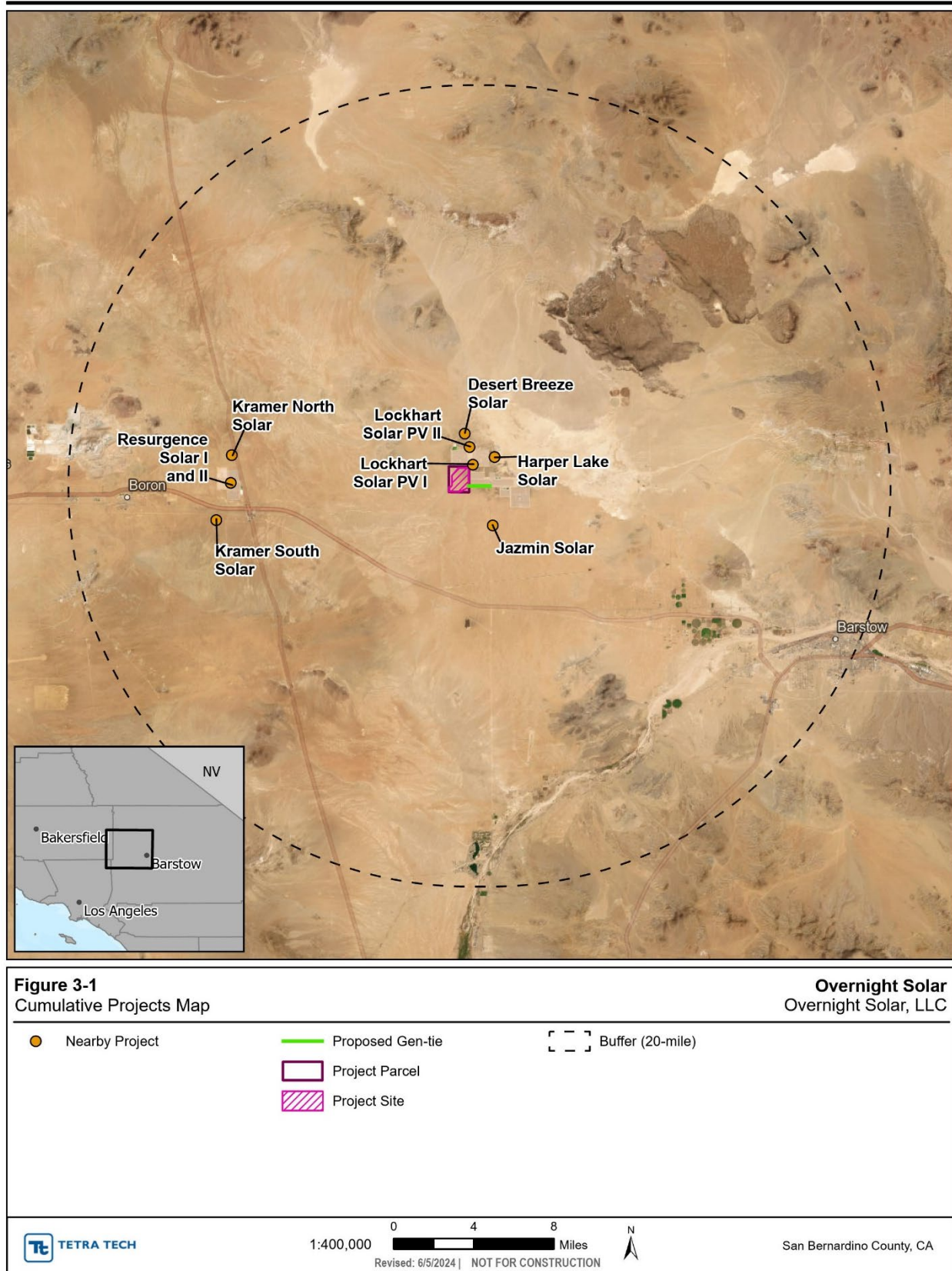


Figure 3-1. Cumulative Projects Map

3.1 Aesthetics and Visual Resources

This section evaluates the potential aesthetics and visual resources impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to aesthetics and visual resources, and includes mitigation measures required to reduce or avoid these impacts, as applicable. Visual simulations of the project prepared by SWCA Environmental Consultants are provided in **Appendix B**. San Bernardino County (County) did not receive any scoping comments related to aesthetics and visual resources.

3.1.1 Environmental Setting

3.1.1.1 Fundamentals of Aesthetics and Visual Resources

Visual impacts are generally defined in terms of a project's physical characteristics and potential visibility, as well as the extent to which the project's presence would change the perceived visual character and quality of the environment in which it would be located. The contrast rating system used by the Bureau of Land Management (BLM) objectively measures potential changes to the visual environment (BLM 1986). The BLM's contrast rating system is commonly used by federal agencies to assess potential visual resource impacts from proposed projects and is widely accepted as a standard approach for analyzing potential changes to the visual environment for non-federal projects.

Potential visual impacts are characterized by determining the level of visual contrast introduced by the project. Visual contrast is a means to evaluate the level of modification to existing landscape features. Existing landscape is defined by the visual characteristics (form, line, color, and texture) associated with the landform (including water), vegetation, and existing development. The level of visual contrast introduced by a project can be measured by changes in the visual characteristics that would occur as a result of project implementation. The greater the difference between the character elements found within the existing landscape and with a proposed project, the more apparent the level of visual contrast. The following general criteria were used when evaluating the degree of contrast:

- None — The contrast is not visible or perceived.
- Weak — The contrast can be seen but does not attract attention.
- Moderate — The element contrast begins to attract attention and begins to dominate the characteristic landscape.
- Strong — The element contrast demands attention, would not be overlooked, and is dominant in the landscape.

3.1.1.2 Regional Setting

San Bernardino County contains three distinct geographic regions: (1) the Mountain Region, (2) the Valley Region, and (3) the Desert Region. The project site and surrounding area are in the Desert Region. The region's visual character is defined by its arid landscape, consisting of sparsely vegetated mountain

ranges and broad valleys with expansive bajadas¹ and scattered dry lakes. In addition, the Desert Region features extensive open space and expansive vistas (San Bernardino County 2007).

Topography within the Desert Planning Region changes from near sea level to desert valleys between 1,000 and 4,000 feet above mean sea level (amsl) to mountain ridges greater than 8,000 feet amsl. Harper Lake, a dry lakebed, is approximately 2 miles north and east of the project site, with a difference in elevation of approximately 70 feet below the project site's lowest elevation. The southwest corner of Harper Lake includes a watchable wildlife area and has been designated by the BLM as an area of critical environmental concern (ACEC). The dominant habitat at the project site is saltbush scrub. The BLM Grass Valley Wilderness Area is approximately 20 miles northeast of the project site. The Angeles and San Bernardino National Forests are each approximately 60 to 80 miles south of the project site.

In addition to the existing Lockhart PV I Solar Facility to the north and the Mojave Solar Facility to the east of the project site, the surrounding area includes a patchwork of undeveloped BLM lands, other vacant lands, and other approved solar facilities (**Figure 2-3, Surrounding Land Uses**). Several rural residences are located south and east of the project site along Harper Lake Road, the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed generation interconnect (gen-tie) line. Sparse transportation infrastructure also exists in the project vicinity. State Route (SR)-58 runs from east to west and is located approximately 5.6 miles south of the project site. SR-66 runs from east to west and is located approximately 16 miles southeast of the project site. U.S. Route 395 runs from north to south and is located approximately 10.5 miles west of the project site. Interstate 15 runs from north to south and is located approximately 20 miles southeast of the project site. The Burlington Northern Santa Fe Railway, a Class I freight railroad, is also located approximately 5 miles south of the project site and 0.8 mile north of SR-58. Edwards Air Force Base is roughly 30 miles west of the project site. The Barstow Marine Corps Logistics Base is approximately 30 miles to the southeast of the project site.

3.1.1.3 Project Setting

Visual Elements

General

The project site comprises vacant and undeveloped land, with some unpaved roads and existing drainage features. The gen-tie corridor is located within the existing fenceline of the adjacent Mojave Solar Facility, along an existing constructed drainage canal (see Section 2.2.1.5, Gen-Tie Line and Grid Interconnection, of Section 2, Project Description for more details). The two potential gen-tie routes, Option A (north) and Option B (south) are approximately 275 feet apart and have both been included in this Draft EIR analysis. Due to their close proximity to one another, they are generally referred to as the gen-tie and gen-tie corridor. The elevation of the project site ranges from approximately 2,100 feet to 2,150 feet amsl, sloping gently upwards from northeast to southwest. The project site is primarily flat and contains desert vegetation. The project's substation equipment would be up to 65 feet tall at the highest point.

¹ A bajada is a broad slope of alluvial material at the foot of an escarpment or mountain.

The project is generally bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped land to the south and west. The project site and surrounding area are characterized by undeveloped land, unimproved roads, solar energy generating facilities, high-voltage transmission and electrical infrastructure, and residences. An existing drainage berm feature also exists along the westernmost boundary of the project site within the western portion of the project site, running from northeast to southwest. Specifically, this drainage berm is located along the westernmost boundary of the project site and gently slopes downwards from east to west, away from the west extent of the proposed solar array. The project would retain this existing drainage berm.

The desert landscape of the project site and immediate surrounding area is characterized by a broad, flat alluvial plain covered with exposed, tan soils that are intermixed with short golden grasses and dotted with low, mounded, coarse-textured desert shrubs. The dominant habitat at the project site is saltbush scrub. Dominant colors for the landscape are tans and greens with irregular, organic forms.

Solar Energy Generation Facilities

The surrounding landscape adjacent to the north and east of the project site consists of the existing Lockhart Solar PV I and Mojave Solar utility scale solar thermal facilities, respectively, and their supporting infrastructure (i.e., project-specific high-voltage transmissions lines, substations, steam turbines, and cooling arrays). The tallest existing structures associated with the existing SEGS VIII and IX Solar Thermal Power Plants are emission stack/cooling towers at a height of approximately 80 feet. These facilities have a developed, industrial composition with predominantly gray, white, and black colors, geometric shapes, and regular vertical and horizontal lines.

Residential Use

Several single-story rural residences are located south and east of the project site along Harper Lake Road, the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed gen-tie line.

Transportation Infrastructure

As noted above, the project site is bounded by Hoffman Road to the north and Lockhart Ranch Road to the east. SR-58 is approximately 5.6 miles south of the project site, U.S. Route 395 is approximately 10.5 miles west, and Interstate 15 runs from north to south and is located approximately 20 miles southeast of the project site. The Burlington Northern Santa Fe Railway, a Class I freight railroad, is also located approximately 5 miles south of the project site and 0.8 mile north of SR-58. These linear built elements are predominantly gray with white and yellow striping and regular horizontal lines.

Electrical Infrastructure

The surrounding landscape is characterized by regional transmission infrastructure associated with the existing solar energy facilities and other utility-related uses, including high-voltage transmission lines and two high-voltage substations. There is an approximately 350-foot-wide transmission corridor to the south of the project with existing transmission lines that run to the Southern California Edison (SCE)-owned Kramer Junction substation. These facilities have a developed, industrial composition with predominantly gray colors and regular vertical and horizontal lines.

Visual Quality

Vividness

Vividness refers to the visual power or memorability of landscape components as they combine in distinctive visual patterns. The flat, broad valley with rugged, prominent mountainous terrain in the background form a contrasting and moderately striking visual pattern. The texture and color of the desert vegetation are generally consistent and not overly striking. The project area mostly comprises unimproved desert space and industrial utility scale solar electricity generation facilities. The solar arrays and battery energy storage systems (BESS) at these existing facilities have a lower profile when compared against the mountain ranges that flank the valley; however, they have the potential to interrupt views of the flat desert landscape. Transmission and distribution poles and conductors are aligned along other linear landscape features (e.g., roads) and within the existing transmission corridor. The scale of high-voltage electrical transmission towers in the area makes these features visible throughout the landscape and reduces the overall vividness of the project setting.

Intactness

Intactness refers to the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. Intactness can be present in developed urban and rural landscapes, as well as in natural settings. The existing built environment (solar facilities, transmission infrastructure, roadways) adjacent to the project site reduces the intactness of the desert landscape in the immediate area. Beyond the adjacent existing built environment, the undeveloped desert landscape in other areas surrounding the project site is mostly intact. Long vistas that extend toward Harper Dry Lake and the Black Mountain and Grass Valley Wilderness Areas remain intact due to the lack of improvements and developments in the area.

Unity

Unity refers to the visual coherence and compositional harmony of the landscape considered as a whole. Unity frequently attests to the careful design of individual built components in the landscape. The existing built environment of high-voltage electrical infrastructure and energy generation facilities with a developed, industrial composition contrast in form, line, and color with the adjacent, undeveloped, flat, desert plain with exposed tan soils and short vegetation and, in the background, the sparsely vegetated mountainous terrain. Beyond the adjacent existing built environment, there is little contrast to the undeveloped desert landscape.

Viewer Response / Groups

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the viewer might react to visual changes brought about by a project.

Impacts to views are identified based on the potential for a project to be visible and noticeable to the casual observer. The “casual observer” is considered an observer who is not actively looking or searching for the project, but who is engaged in activities at locations with potential views of the project. If the project components are not noticeable to the casual observer, visual impacts can be considered minor to negligible (i.e., weak).

Viewer distance is a key factor in determining the level of visual effect, with perceived contrast generally diminishing as distance between the viewer and the affected area increases (BLM 1986). Distance zones—foreground, middleground, and background—provide a frame of reference for classifying the degree to which details of the proposed project would affect visual resources. The zones are defined as: foreground zone occurring from zero to 0.5 mile, middleground occurring from 0.5 to 5 miles, and background occurring from more than 5 miles.

In the relatively flat landscape setting for the project area, details of project elements would be visually clear in the foreground. In the middleground, viewers still have the potential to distinguish individual forms, and texture and color are still identifiable with the outer boundary of this distance zone defined as the point where the individual forms are no longer apparent (BLM 1986). In the background, texture has disappeared, and color has flattened, making objects appear “washed out.” If the shape and mass of the solar arrays are visible at a distance of greater than 5 miles (background distance zone), their visibility would be limited, and they would not appear as a prominent or identifiable feature in the landscape setting.

Residents and motorists are the two viewer groups that would have potential views of the proposed project. These viewer groups are discussed in greater detail below.

Residents

The closest residences are approximately 1 mile east of the proposed solar facility (middleground) and 0.3 mile south of the proposed gen-tie line (foreground). Residents in the area could be afforded partial to full views of the project site, depending on proximity, orientation, objects, or facilities between the residence and the project site. For example, roadways, overhead power lines, and existing built environment immediately adjacent to the project site tend to obstruct direct views of the site from more distant residences in the area. Residents in the project area with views of the existing desert landscape on the project site and the mountainous terrain in the background will be aware of and sensitive to changes occurring in the visual landscape due to their long view duration. However, sensitivity to changes may be reduced due to the distance and highly similar land uses adjacent to the project site.

Motorists on Local Roads and Highways

Area residents are expected to view the project from the adjacent public roadways. Regular motorists on local roadways and area highways are assumed to be familiar with the landscape and, because of that familiarity, they are expected to be sensitive to changes in the landscape.

Local roads adjacent to the project site, Harper Lake Road to the southeast, Lockhart Ranch Road to the east, and Hoffman Road to the west/north support low traffic volumes due to their rural nature (peak a.m./p.m. volumes of 2 to 171 vehicle trips; see **Appendix L**) and do not offer a substantial viewer population. Although these public roads are predominately used by local residents who may be more sensitive to a change in visual conditions on the project site, such viewers would be limited in number and views experienced would be brief and intermittent, due to the short distance of adjacent roadway viewing.

Due to distance and highly similar adjacent land uses, it is unlikely that travelers on SR-58 would be sensitive to visual changes to the project site. Based on the background distance and the likelihood of

intervening vegetation, structures, and/or terrain, views of the project site are not expected from SR-66, SR-40, SR-247, U.S. Route 395, or Interstate 15.

Nighttime Lighting

The project site and surrounding area are generally lacking in significant nighttime lighting sources. Existing permanent sources of nighttime light in the project area are limited to lighting associated with motorways, security lighting for the utility-scale solar facilities, and from interior lighting visible through windows at scattered residential locations.

3.1.2 Regulatory Framework

3.1.2.1 Federal

National Scenic Byways Program

The National Scenic Byways Program, a part of the Federal Highway Administration (FHWA), recognizes, preserves, and enhances selected roads throughout the United States as All-American Roads or National Scenic Byways based on one or more archaeological, cultural, historic, natural, recreational, and scenic qualities. SR-66 (or Route 66) is the nearest designated historic and scenic highway to the project site, located approximately 16 miles to the southeast near the City of Barstow. Route 66 is a designated National Historic Trail and is designated as Historic Highway Route 66. This makes the route eligible for designation as an All-American Road or National Scenic Byway by the FHWA.

3.1.2.2 State

California Department of Transportation Scenic Highway Program

State Scenic Highways are those that are either officially designated as such by the California Department of Transportation (Caltrans) or are eligible for such designation. The scenic designation is based on the amount of natural landscape visible by motorists, the scenic quality of the landscape, and the extent to which development intrudes on the motorist's enjoyment of the view.

SR-58 from Route 14 in unincorporated Mojave in Kern County to Route 15 in the City of Barstow is included in the State Scenic Highway System (Caltrans 2024). However, this segment of SR-58 has not been officially designated as a State Scenic Highway and is only eligible for such designation. The eligible segment of SR-58 is approximately 5 miles south of the project site. Other highways in the area with segments eligible but not officially designated as State Scenic Highways include Interstate 15 and SR-247, both approximately 20 miles southeast of the project site.

3.1.2.3 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Land Use Element

GOAL LU-2 **Land Use Mix and Compatibility.** An arrangement of land uses that balances the lifestyle of existing residents, the needs of future generations, opportunities for commercial and industrial development, and the value of the natural environment.

Policy LU-2.1 **Compatibility with existing uses.** We require that new development is located, scaled, buffered, and designed to minimize negative impacts on existing conforming uses and adjacent neighborhoods.

Policy LU-2.3 **Compatibility with natural environment.** We require that new development is located, scaled, buffered, and designed for compatibility with the surrounding natural environment and biodiversity.

Policy LU-2.4 **Land Use Map consistency.** We consider proposed development that is consistent with the Land Use Map (i.e., it does not require a change in Land Use Category), to be generally compatible and consistent with surrounding land uses and a community's identity. Additional site, building, and landscape design treatment, per other policies in the Policy Plan and development standards in the Development Code, may be required to maximize compatibility with surrounding land uses and community identity.

GOAL LU-4 **Community Design.** Preservation and enhancement of unique community identities and their relationship with the natural environment.

Policy LU-4.1 **Context-sensitive design in the Mountain/Desert regions.** We require new development to employ site and building design techniques and use building materials that reflect the natural mountain or desert environment and preserve scenic resources.

Policy LU-4.5 **Community identity.** We require that new development be consistent with and reinforce the physical and historical character and identity of our unincorporated communities.

Policy LU-4.7 **Dark skies.** We minimize light pollution and glare to preserve views of the night sky, particularly in the Mountain and Desert regions where dark skies are fundamentally connected to community identities and local economies.

Natural Resources Element

GOAL NR-3 **Open Space, Parks, and Recreation.** A system of well-planned and maintained parks, trails, and open space that provides recreation opportunities for residents, attracts visitors from across the region and around the country, and preserves the natural environment.

Policy NR-3.1 **Open space preservation.** We regulate land use and coordinate with public and nongovernmental agencies to preserve open space areas that protect natural

resources, function as a buffer against natural hazards or between land uses, serve as a recreation or tourist destination, or are central to the identity of an unincorporated community.

GOAL NR-4 **Scenic Resources.** Scenic resources that highlight the natural environment and reinforce the identity of local communities and the county.

Policy NR-4.1 **Preservation of scenic resources.** We consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs.

Policy NR-4.2 **Coordination with agencies.** We coordinate with adjacent federal, state, local, and tribal agencies to protect scenic resources that extend beyond the County's land use authority and are important to countywide residents, businesses, and tourists.

Policy NR 4.3 **Off-site signage.** We prohibit new off-site signage and encourage the removal of existing off-site signage along or within view of County Scenic Routes and State Scenic Highways.

Renewable Energy and Conservation Element

GOAL RE-4 **Environmental Compatibility.** The County will establish a new era of sustainable energy production and consumption in the context of sound resource conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels.

RE Policy 4.1 Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.

RE Policy 4.4 Encourage siting, construction and screening of RE generation facilities to avoid, minimize or mitigate significant changes to the visual environment including minimizing light and glare.

RE Policy 4.4.1 Reduce visual impacts through a combination of minimized reflective surfaces, context-sensitive color treatments, nature-oriented geometry, minimized vegetation clearing under and around arrays, conservation of pre-existing native plants, replanting of native plants as appropriate, maintenance of natural landscapes around the edges of facility complexes, and lighting design to minimize night-sky impacts, including attraction of and impact to nocturnal migratory birds.

GOAL RE-5 **Siting.** Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.

- RE Policy 5.1* Encourage the siting of RE generation facilities on disturbed or degraded sites in proximity to necessary transmission infrastructure.
- RE Policy 5.7* Support renewable energy projects that are compatible with protection of the scenic and recreational assets that define San Bernardino County for its residents and make it a destination for tourists.
- RE Policy 5.7.1* Site renewable energy generation facilities in a manner that will avoid, minimize or substantially mitigate adverse impacts to sensitive habitats, cultural resources, surrounding land uses, and scenic viewsheds.

San Bernardino County Development Code

Section 83.07.060, Glare and Outdoor Lighting – Mountain and Desert Regions

The San Bernardino County Light Trespass Ordinance is codified as Chapter 83.07 of the San Bernardino County Development Code. Section 83.07.060 establishes standards for outdoor lighting in the County's Mountain and Desert Regions (the project site is located in the Desert Region). This section requires new permitted lighting for construction and operational lighting to be fully shielded to preclude light pollution or light trespass on adjacent property, other property within the line of sight (direct or reflected) of the light source, or members of the public who may be traveling on adjacent roadways or rights-of-way.

Section 84.29.035, Required Findings for Approval of a Commercial Solar Energy Facility

Section 84.29.035 includes the following provisions:

- a) In order to approve a commercial solar energy generation facility, the Planning Commission shall, in addition to making the findings required under Section 85.06.040(a) of the San Bernardino County Development Code, determine that the location of the proposed commercial solar energy facility is appropriate in relation to the desirability and future development of communities, neighborhoods, and rural residential uses, and will not lead to loss of the scenic desert qualities that are key to maintaining a vibrant desert tourist economy by making each of the findings of fact in subdivision (C).
- b) In making these findings of fact, 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 of unincorporated territory, or on state or federal land.
- c) The finding of fact shall include the following:
 1. The proposed commercial solar energy generation facility is either:
 - A. Sufficiently separated from existing communities and existing/developing rural

- residential areas so as to avoid adverse effects, or
- B. Of a sufficiently small size, provided with adequate setbacks, designed to be lower profile than otherwise permitted, and sufficiently screened from public view so as to not adversely affect the desirability and future development of communities, neighborhoods, and rural residential use.
2. Proposed fencing, walls, landscaping, and other perimeter features of the proposed commercial solar energy generation facility will minimize the visual impact of the project so as to blend with and be subordinate to the environment and character of the area where the facility is to be located.
 3. The siting and design of the proposed commercial solar energy generation facility will be either:
 - A. Unobtrusive and not detract from the natural features, open space and visual qualities of the area as viewed from communities, rural residential uses, and major roadways and highways, or
 - B. Located in such proximity to already disturbed lands, such as electrical substations, surface mining operations, landfills, wastewater treatment facilities, etc., that it will not further detract from the natural features, open space and visual qualities of the area as viewed from communities, rural residential uses, and major roadways and highways.
 4. The siting and design of project site access and maintenance roads have been incorporated in the visual analysis for the project and shall minimize visibility from public view points while providing needed access to the development site.
 5. The proposed commercial solar energy generation facility will avoid modification of scenic natural formations.

Section 84.29.040, Solar Energy Development Standards

Section 84.29.040 includes the following standards applicable to the proposed project:

- a) Glare. Solar energy facilities shall be designed to preclude daytime glare on any abutting residential land use zoning district, residential parcel, or public right-of-way.
- b) Night Lighting. Outdoor lighting within a commercial solar energy generation facility shall comply with the provisions of Chapter 83.07 of the Development Code.

San Bernardino County Ordinance No. 3900

Because desert and mountain residents value the night sky conditions, the County adopted Ordinance No. 3900, also known as the Night Sky Ordinance. This ordinance outlines specific standards relating to glare and outdoor lighting. These standards are included in the sections of the Development Code described previously.

3.1.3 Thresholds for Determination of Significance

The following thresholds of significance are based on California Environmental Quality Act (CEQA) Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to aesthetics and visual resources if it would do any of the following:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.
- In nonurbanized area, substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.4 Project Impacts and Mitigation

Impact 3.1-1: The project would not have an adverse effect on a scenic vista. No impact would occur.

No designated scenic vistas are in the viewshed of the proposed project per the Countywide Plan/Policy Plan. The project site is not considered an undisturbed natural area and does not have unique or unusual features that dominate a portion of the viewshed. The surrounding landscape is characterized by roadways, solar energy-generating facilities, high-voltage transmission and electrical infrastructure, and residences. The proposed project would not impact any existing public views from scenic vistas. The project area is not a scenic vista or visible from any designated scenic vista. No impact on scenic vistas would occur.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.1-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Impacts would be less than significant.

The project site is generally flat and contains no significant geologic features or vegetation that is particularly unique for the area, nor does it contain vegetation that would be considered scenic. Development of the proposed project would not involve the removal of visually significant trees, rock outcroppings, and/or historic buildings, as these features do not occur on the project site.

SR-58 is eligible for listing as a State Scenic Highway. At the closest vantage point, views from SR-58 would be distanced approximately 5.6 miles to the southwest of the project site. Due to such viewing distances, project elements would be in the background and not be readily visible within the visual landscape and would not attract the attention of the casual observer. Where visible, the project would be consistent with and blend in with the existing solar facilities.

Additionally, as SR-58 traverses the valley floor in an east-west orientation in the vicinity of the project site, views would generally be oriented east-west, rather than north toward the project site (i.e., requiring the viewer to consciously turn their head northward to experience views to the project). As such, readily available views toward the project from SR-58 would not occur. Therefore, existing views from SR-58 to the project site would not be substantially changed with the development of the project, and impacts would be less than significant.

SR-66 (or Route 66) is an official National Scenic Byway. Views from SR-66 would be distanced approximately 16 miles to the southwest of the project site. Interstate 15 or SR-247 are both eligible for listing as a State Scenic Highway. Views from Interstate 15 or SR-247 would be distanced approximately 20 miles to the southeast of the project site. Due to such viewing distances, project elements would be in the background and are not expected to be visible within the visual landscape and would not attract the attention of the casual observer; therefore, no impacts are expected.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.1-3: The project would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be less than significant.

The existing visual quality of the project site and surrounding lands is reduced due to the presence of numerous anthropogenic elements in the landscape, including scattered rural residential properties, existing transportation infrastructure (i.e., SR-58, U.S. Route 395, railroads), existing solar energy facilities, and electrical infrastructure in the transmission corridor.

The proposed project would involve both temporary and permanent changes to the visual character of the project site. Temporary changes are associated with construction activities, including construction equipment, staging, construction fencing, and site construction. These visual impacts would be short term in nature and are therefore not considered to be significant.

Post-construction, foreground views of the project would be from the adjacent local roads, Harper Lake Road to the southeast, Lockhart Ranch Road to the east, and Hoffman Road to the west/north. The project would introduce neutral colors, geometric shapes, and horizontal lines into the landscape setting. The solar arrays, gen-tie line, and substation would be dark and light shades of gray colors. The colors of the control building and the BESS enclosure have not yet been determined but are likely to be neutral ones (gray, white, or tan). While these visual elements would result in a visual contrast to the irregular, organic forms and colors of the existing desert landform and vegetation, they would be consistent with the adjacent existing solar facilities and appear as extensions to these facilities (see **Appendix B**). The contrast would be moderate as the project would attract attention and co-dominate the characteristic landscape. However, viewers traveling on the local roads would be limited in number, and views experienced would be brief and intermittent due to the short distance of adjacent roadway viewing. Therefore, impacts are considered less than significant.

Views from the closest residential uses would be in the middleground. The project gen-tie poles are expected to be up to 95 feet in height. From a viewpoint near the closest residence, the vertical and horizontal lines of the project gen-tie line would be visible. While the height and form of the gen-tie line

would result in a visual contrast to the irregular, organic forms and colors of the existing desert landform and vegetation, it would be consistent with the other transmission lines in the area and the fencing and other structures associated with the existing adjacent solar facilities (see **Appendix B**). Contrast would be low to moderate, as the gen-tie line would begin to attract attention but would be an expected element. The project substation would be partially visible but would not attract attention due to the distance, the existing solar facilities that dominate the view, and the existing substations that are similar in the area. Views of the project solar arrays and BESS would be obscured by the existing adjacent solar facilities and have minimal visual impact due to their lower height when compared to the substation and gen-tie facilities. As the contrast is anticipated to be weak, the visual impacts are considered minor and less than significant.

Residences farther south along Harper Lake Road would have partial to full views of the project solar arrays, substation, and gen-tie line, depending on proximity, orientation, objects, and/or facilities between the residence and the project. Where visible, the project would introduce neutral colors, geometric shapes, and horizontal lines into the landscape setting. The solar arrays, gen-tie line, and substation would be dark and light shades of gray colors. The colors of the control building and the BESS enclosure have not yet been determined but are likely to be neutral (gray, white, or tan). While these visual elements would result in a visual contrast to the irregular, organic forms and colors of the existing desert landform and vegetation, they would be consistent with the adjacent existing solar facilities and appear as extensions to these facilities. In addition, the increased distance between the residence and the project site would mute the visibility of the individual forms. Contrast would be low to moderate, as the project would begin to attract attention due to its contrast with the existing desert landform and vegetation but would be an expected element and non-contrasting element to the adjacent existing solar facilities, and would not block views of the nearby mountains.

Due to the approximate distance of 5.8 miles, the project would be marginally visible in the background from SR-58. Views of the project from SR-58 would be indistinct and barely discernible in background views. The project would result in little to no contrast and would not block the views of the nearby mountains. Also, as noted previously, readily available views toward the project from SR 58 would not occur. Therefore, the impact on visual quality from background views of the project are considered less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.1-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be less than significant.

Nighttime Lighting

Construction

Construction of the proposed project is anticipated to occur during daytime hours as permitted by San Bernardino County between 7 a.m. and 7 p.m., except on Sundays or federal holidays, when construction is not allowed (San Bernardino County 2014). However, if necessary and approved by the

County, nighttime construction activities could occur, which may involve the use of temporary construction lighting equipment. The use of any bright construction lighting would only occur for a short duration if nighttime work was necessary and approved by the County. Any construction lighting would be directed away from residences and toward active construction areas. The impact would be less than significant.

Operation and Maintenance

Manual, timed, and motion sensor lights would be installed at equipment pads and the on-site substation for maintenance and security purposes. Such lighting would be shielded and aimed downward and would comply with the County's Dark Sky Ordinance. No other lighting is proposed. Project lighting would normally be off unless activated by project personnel.

Nighttime lighting associated with the proposed project would be subject to County approval and compliance with County requirements. As summarized in the Regulatory Framework subsection above, County Ordinance No. 3900 regulates glare, outdoor lighting, and night sky protection. County Development Code Section 83.07.060, *Glare and Outdoor Lighting*, 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. Proposed lighting would be shielded and directed downward, and motion-activated lighting would normally be turned off unless needed for nighttime emergency work, consistent with County requirements. Compliance with pertinent County Development Code regulations, including the San Bernardino County Light Trespass Ordinance (Development Code Chapter 83.07) and Countywide Plan/Policy Plan Renewable Energy and Conservation Element Policy RE-4.4 would ensure that impacts associated with new sources of nighttime lighting for the proposed project would be less than significant.

Glint and Glare

Solar PV Panels

Unlike solar thermal facilities, which rely on large fields of mirrors to reflect light, the potential reflection from solar photovoltaic (PV) modules is inherently low since they are designed to capture and not to reflect sunlight. PV panels have a lower index of refraction/reflectivity than common sources of glare in residential environments. The glare and reflectance levels from a given PV system are lower than the glare and reflectance levels of steel, snow, standard glass, plexiglass, and smooth water (Shields 2010). The glare and reflectance levels of modules are further reduced with the application of anti-reflective coatings. PV suppliers typically use stippled glass for panels as the "texturing" of the glass to allow more light energy to be channeled/transmitted through the glass while weakening the reflected light. With the application of anti-reflective coatings and use of modern glass technology, project PV panels would display overall low reflectivity. In addition, because tracker systems follow the sun, the underside of the PV panels and most of the structure supporting them are shadowed throughout the day.

Moreover, light reflected from the PV panels would travel above the line of sight of most, if not all, viewers. PV tracking systems position the array so that the sun's rays are always perpendicular to the

face of the panel. What light is reflected from the panels is reflected back towards the sun. During midday conditions, when the sun is high in the sky, the rays of the sun are reflected directly upwards. When the sun is low on the horizon (near dawn or dusk), the sun's angle in the sky is low; however, reflected rays would still be directed away from ground-level receptors because the maximum downward angle of the arrays would not be below 30 degrees. Similarly, and also due to their low reflectivity, the panels are not expected to cause visual impairment for motorists on local roadways near the project site.

The proposed project would also be designed to ensure consistency with County Code Section 84.29.040, which requires solar energy facilities to be designed to preclude daytime glare on any abutting residential land use zoning district, residential parcel, or public right-of-way. Therefore, project impacts would be less than significant.

Metallic Electrical Equipment, Power Poles, and Buildings

Proposed project facilities, including the gen-tie line, battery storage facilities, and on-site substation, would be constructed with metallic components, which could introduce new sources of glare compared to the undeveloped area. Any glare associated with the proposed facilities would be minor and highly scattered because the metallic components would be separated geographically and would not concentrate potential glare in any area. The new overhead conductor and steel support structures installed for the on-site substation and gen-tie line would reflect approximately the same level of light as the existing substations and transmission line facilities in the project area. The facilities would not involve concentrated light reflection that would become a nuisance or adversely affect daytime views. Therefore, project impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.3-5: The project would not result in cumulative aesthetic impacts. Impacts would be less than significant.

Geographic Scope

The geographic scope for the analysis of cumulative impacts on aesthetic resources includes both the local viewshed within a 1-mile radius of the project site and area (generally the Lockhart area). As shown in Section 3.0, Introduction to the Environmental Analysis, **Table 3-1, Cumulative Projects**, there are eight projects proposed or approved throughout the Desert Region of San Bernardino County. Of the eight total projects in San Bernardino County's Desert Region, five would be located within 2 miles of the project site, with three of those located within 1 mile of the project site. The three closest include Desert Breeze Solar, LLC; Lockhart Solar PV I; and Lockhart Solar PV II, as identified in **Table 3-1, Cumulative Projects**, of Section 3.0, Introduction to Environmental Analysis. The remaining three would be located 10 to 12 miles from the project site.

Local cumulative effects could occur in the immediate project viewshed if related projects, activities, and landscapes are visible in the same field of view as the proposed project and could generally be visible from the proposed project area.

While details of project elements would be visually clear in the foreground and viewers could potentially distinguish individual forms, texture, and color within 1 mile, the project elements would become muted and less detailed farther out and, in a flat landscape, may not be identifiable within 2 miles. In addition, beyond 1 mile, sight lines would likely become impaired or blocked by intervening terrain and vegetation. However, regional cumulative effects could still occur if viewers perceive that the general visual quality or landscape character of a regional area is diminished by the proliferation of visible similar structures or construction, even if the changes are not in the same field of view as existing or known future structures or facilities. The result is a perceived “industrialization” or “urbanization” of the existing landscape character. The extent of regional cumulative effects is limited to the valley within which the project is located.

Scenic Vistas

The proposed project and cumulative projects are not located within a scenic vista or visible from any designated scenic vistas. No cumulative impact on scenic vistas would occur.

Scenic Highways

The project and any potential cumulative projects may be visible as a distant background view to motorists traveling on segments of SR 58; however, they would not be readily visible within the visual landscape and would not attract the attention of the casual observer. Views of four of the cumulative projects (Lockhart Solar PV I, Lockhart Solar PV II, Desert Breeze Solar, and Harper Lake Solar) would likely be obscured by existing solar facilities. Views of one of the cumulative projects (Jazmin Solar) would potentially be obscured views of the existing solar facilities, the project, and other cumulative projects. Where visible, the project would be consistent with the existing solar facilities. Also, readily available views toward the project from SR-58 would not occur. Therefore, the project’s potential contribution to cumulative impacts associated with scenic highways would be less than significant.

SR-66 is an official National Scenic Byway. Views from SR-66 would be distanced approximately 16 miles to the southwest of the project site. Interstate 15 or SR-247 are both eligible for listing as a State Scenic Highway. Views from Interstate 15 or SR-247 would be distanced approximately 20 miles to the southeast of the project site. Due to such viewing distances, project elements would be in the background and are not expected to be visible within the visual landscape and would not attract the attention of the casual observer; therefore, the project would not contribute to cumulative scenic impacts to these highways.

Visual Quality

Construction and operation of any potential cumulative project and the project would modify the local and regional landscape in the project area. Depending on the potential cumulative projects in the area, there could be a moderate level of visual change to the landscape due to existing encroachments in the viewshed. The project, as well as the existing adjacent facilities, are located in an area of the County that has been previously approved for utility-scale solar projects. Implementation of the project and potential cumulative projects in an area would result in a visual contrast to the irregular, organic forms and colors of the existing desert landform and vegetation; however, they would be consistent with the adjacent existing solar facilities and appear as extensions to these facilities. Contrast would be low to

moderate, as these projects may begin to attract attention but would be expected elements, similar to existing solar facilities in the area, and would not block views of the nearby mountains. Therefore, impacts are considered less than significant.

Light and Glare

Dark skies are characteristic of the Desert Region of San Bernardino County. All the cumulative projects would be subject to the County's Outdoor Lighting Ordinance (Section 83.07.040 of the County Development Code), which would limit the amount of lighting that would be introduced in the area and restrict the type of lighting that could be used. The cumulative impact on the night sky would be less than significant due to conformance with the County's lighting ordinance.

The proposed project and cumulative projects would not introduce new sources of glare that would be directed cumulatively onto any one area. No cumulative glare impacts would occur.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.2 Air Quality

This section evaluates the potential air quality impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to air quality, and includes mitigation measures required to reduce or avoid these impacts, as applicable. The Air Quality and Greenhouse Gas Technical Report prepared by SWCA Environmental Consultants is provided in **Appendix C**. The project is located within the Mojave Desert Air Basin (MDAB), under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The evaluation of project impacts was conducted as recommended by the MDAQMD California Environmental Quality Act (CEQA) guidance dated February 2020 (MDAQMD 2020). San Bernardino County (County) received comments from the MDAQMD during the scoping period (the comment letter is included in **Appendix A**), and those comments have been incorporated into this section.

3.2.1 Environmental Setting

Air quality and dispersion of air pollution in an area are determined by natural factors such as topography, meteorology, and climate, coupled with atmospheric stability. The factors affecting the dispersion of air pollution with respect to the air basin are described below.

The project is located in the Mojave Desert, on private land in Lockhart, California, approximately 10 miles northwest of Hinkley, California, and 10 miles east of Kramer Junction, California. State Route (SR) 58 and Harper Lake Road Junction is approximately 6 miles north of the project. Several residences are located south and east of the project along Harper Lake Road, the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed generation interconnect (gen-tie) line. The project parcel is bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped Bureau of Land Management (BLM) lands and other vacant lands to the south and west. The Mojave Solar Facility to the east consists of the Alpha and Sandlot Substations, the gen-tie lines, hot water to electric generators, myriad arrays of solar thermal panels, heat recovery equipment, evaporation ponds, and hot water storage.

The project is located in unincorporated San Bernardino County within the MDAB, which encompasses a 21,000-square-mile area that includes the majority of San Bernardino County, the eastern portion of Kern County, the eastern portion of Riverside County, and the northeastern portion of Los Angeles County. The MDAB is composed of four California air districts: MDAQMD, the Antelope Valley Air Quality Management District, the Eastern Kern Air Pollution Control District, and the eastern portion of the South Coast Air Quality Management District (SCAQMD). MDAQMD has jurisdiction over stationary sources of air pollution within the High Desert Region of San Bernardino County portion of MDAB.

3.2.1.1 Topography

The project site is primarily flat and is located within the Desert Planning Region of San Bernardino County. The Desert Planning Region consists of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Harper Lake, a dry lakebed, is approximately 2 miles north and east of the project site, with a difference in elevation of approximately 70 feet below the project's lowest elevation. The southwest corner of Harper Lake includes a watchable wildlife area and has been designated by

the BLM as an area of critical environmental concern (ACEC). The elevation of the project site ranges from approximately 2,100 feet to 2,150 feet above mean sea level (amsl). Topography within the Desert Planning Region changes from near sea level to desert valleys between 1,000 and 4,000 feet amsl to mountain ridges greater than 8,000 feet amsl. The dominant habitat at the project site is saltbush scrub. Grass Valley Wilderness Area is approximately 20 miles northeast of the project. The Angeles and San Bernardino National Forests are each approximately 60 to 80 miles south of the project.

The Mojave Desert is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley).

The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Geronio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

3.2.1.2 Meteorology and Climate

The ambient concentrations of air pollutants are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the emissions released by existing air pollutant sources. Factors such as wind, sunlight, temperature, humidity, and rainfall, affect the accumulation and/or dispersion of air pollutants throughout the Basin. Local meteorological conditions are greatly affected by the topography of the region.

Weather patterns in the area are generally influenced by moderately intense, anticyclonic circulation (associated with high-pressure systems). During the summer, a large subtropical high-pressure system off the coast of California keeps the Mojave Desert area sunny and dry. However, the presence of a thermal low-pressure area above the Mojave Desert promotes atmospheric transport from the Los Angeles Basin. During the winter months, the strength of the Pacific high-pressure area wanes, and 20 to 30 frontal systems may pass through the area each year. Some of these frontal systems are sufficiently strong to produce rain in the area. The most significant large-scale phenomena affecting air quality in the project area are the transport winds from the south and the west. These winds are responsible for bringing ozone and other pollutants through the mountain passes from the Los Angeles Basin and the San Joaquin Valley.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse prior to reaching the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate (BWh), with portions classified as dry-very hot desert (BWbh), to indicate at least 3 months have maximum average temperatures over 100.4 degrees Fahrenheit (°F).

The local meteorology of the project area is represented by measurements recorded at the National Climatic Data Center (NCDC) Barstow Station meteorological station. The normal annual precipitation is approximately 4.96 inches. December temperatures range from a normal minimum of 34.9°F to a normal maximum of 57.4°F. July temperatures range from a normal minimum of 71.8°F to a normal maximum of 102.1°F (NCDC 2023). The prevailing wind direction is from the west-southwest (Western Regional Climate Center 2002).

3.2.1.3 Sensitive Receptors

Sensitive receptors are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and carbon monoxide are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, retirement homes, and residences. There are no non-residential sensitive receptors within the vicinity (5,000 feet) of the project. Barstow Community Hospital, which is the nearest hospital is over 15 miles away from the project site, and the nearest schools, Lenwood Elementary School and the Mojave River Academy, are over 20 miles away. Several scattered residences are located south and east of the project site along Harper Lake Road. The closest residences are located approximately 1 mile (5,280 feet) east of the proposed solar facility and 0.3 mile (1,585 feet) south of the proposed gen-tie line.

3.2.1.4 Air Pollutants of Concern

Pollutants of concern include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead. These pollutants are discussed below. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone

Ozone is a colorless gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases (ROGs), and NO_x react in the presence of ultraviolet sunlight. Ozone is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. Automobile exhaust and industrial sources are the primary sources of VOCs and nitrogen oxides (NO_x), the precursors of O_3 . Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide

Most NO_2 , like O_3 , is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_x and are major contributors to ozone formation. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some

indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million (ppm) by volume.

Carbon Monoxide

CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. Automobile exhaust accounts for a majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. Concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter

PM pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $\text{PM}_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $\text{PM}_{2.5}$, is roughly 1/28 the diameter of a human hair. $\text{PM}_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, $\text{PM}_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x , and VOC. Inhalable or coarse particulate matter, or PM_{10} , is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$\text{PM}_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $\text{PM}_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances

such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead

Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Volatile Organic Compounds

VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO , carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3 , which is a criteria pollutant. The terms VOC and ROG (see below) are often used interchangeably.

Reactive Organic Gases

Similar to VOCs, ROG are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_x react in the presence of sunlight. The terms ROG and VOC are often used interchangeably.

Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a

number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills.

Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC. The California Air Resources Board (CARB) has identified diesel engine exhaust particulate matter as the predominant TAC in California. Diesel particulate matter (DPM) is emitted into the air by diesel-powered mobile vehicles, including heavy-duty diesel trucks, construction equipment, and passenger vehicles. Certain reactive organic gases may also be designated as TACs.

3.2.1.5 Valley Fever

Coccidioidomycosis (CM), often referred to as San Joaquin Valley Fever or Valley Fever, commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top 2 to 12 inches of soil and the existence of the fungus in most areas is temporary. The CI fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus “blooms” and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever.

The fungus is known to live in the soil in the southwestern United States and parts of Mexico and Central and South America. People and animals can get sick when they breathe in dust that contains the CI spores. This fungus infects the lungs and can cause respiratory symptoms including cough, fever, chest pain, and tiredness. In California, the number of reported Valley Fever cases has greatly increased in recent years with the number of cases tripling from 2015 to 2019 (CDC 2022). The number of Valley Fever cases in the United States has also been steadily increasing over the past few years. In 2022, there were 290 cases of Valley Fever in San Bernardino County, an incidence rate of 10.5 cases per 100,000 people.

Currently, no vaccine is available to prevent this infection. Further, there is no effective way to detect and monitor CI growth patterns in the soil. Thus, controlling the growth of the fungus in the environment to reduce the risk to individuals is currently not a viable option. Even if the fungus is present in the soil, earth-moving activities may not result in an increased incidence of Valley Fever. Propagation of *Coccidioides* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells.

San Bernardino County is not considered a highly endemic region for Valley Fever. In 2022, the California Department of Public Health (CDPH) identified that only 290 of the 7,451 suspected, probable, and confirmed annual cases of coccidioidomycosis recorded for California in 2022 occurred in San Bernardino County (CDPH 2024).

3.2.1.6 Ambient Air Quality

Ambient air quality for the project site can be determined from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends in the region are documented by measurements made by the MDAQMD, the air pollution regulatory agency in the air basin that maintains air quality monitoring stations and processes ambient air quality measurements.

The closest ambient air quality monitoring station to the project site that monitors O₃, NO₂, and PM₁₀ is the Barstow monitoring station at 225 East Mountain View Street in Barstow. For PM_{2.5}, the closest monitor is the Victorville-Park Avenue monitoring station located south of the project area. Finally, for CO, the monitor located at 24302 4th Street, San Bernardino is closest to the project. **Table 3.2-1, Ambient Air Quality Monitoring Data**, summarizes the data from 2020 to 2022 and the number of days exceeding the ambient air quality standards.

Table 3.2-1. Ambient Air Quality Monitoring Data

Pollutant and Averaging Period	Maximum Concentration		
	2020	2021	2022
Ozone (O₃) - Barstow; AQ Site ID 060710001			
Maximum 1-Hour Concentration (ppm)	0.117	0.099	0.095
Number of Days > 0.09 ppm (State 1-Hour Standard)	3	2	1
Maximum 8-Hour Concentration (ppm)	0.098	0.087	0.084
Number of Days > 0.070 ppm (State 8-Hour Standard)	25	20	13
Number of Days > 0.070 ppm (Federal 8-Hour Standard)	25	20	13
Nitrogen Dioxide (NO₂) - Barstow; AQ Site ID 060710001			
Maximum 1-Hour Concentration (µg/m ³)	62.8	62.4	59.8
Number of Days > 0.18 ppm (State 1-Hour Standard)	0	0	0
Number of Days > 0.10 ppm (Federal 1-Hour Standard)	0	0	0
Coarse Particulate Matter (PM₁₀) - Barstow; AQ Site ID 060710001			
Maximum 24-Hour Concentration (µg/m ³)	213.5	372.7	225.1
Number of Days > 50 µg/m ³ (State 24-Hour Standard)	*	*	*
Number of Days > 150 µg/m ³ (Federal 24-Hour Standard)	1	1	6
Fine Particulate Matter (PM_{2.5}) - Victorville, Park Avenue; AQ Site ID 060710306			
Maximum 24-Hour Concentration (µg/m ³)	48.4	87.1	24.6
Number of Days > 35 µg/m ³ (Federal 24-Hour Standard)	4	1	0
Carbon Monoxide (CO) - 24302 4th Street, San Bernardino; AQ Site ID 060719004			
Maximum 1-Hour Concentration (ppm)	1.9	2	1.7
Number of Days > 20 ppm (State 1-Hour Standard)	0	0	0
Number of Days > 35 ppm (Federal 1-Hour Standard)	0	0	0
Maximum 8-Hour Concentration (ppm)	1.4	1.6	1.4
Number of Days > 9 ppm (State 8-Hour Standard)	0	0	0
Number of Days > 9 ppm (Federal 8-Hour Standard)	0	0	0

Source: CARB 2024a; USEPA 2024

Notes: * – not available; µg/m³ – micrograms per cubic meter; ppm – parts per million; ppb – parts per billion

Table 3.2-2, Federal and State Ambient Air Quality Attainment Status, lists the attainment status for various pollutants in the MDAB. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. Areas for which there are insufficient data available are designated unclassified. As shown in **Table 3.2-2**, the project site is a federal nonattainment area for O₃ and PM₁₀ and a State nonattainment area for O₃ and PM₁₀. The southwest portion of San Bernardino County (adjacent to Los Angeles County) is designated as nonattainment for the federal and State PM_{2.5} standards. The project is located in the northwestern portion of San Bernardino County, which is outside of the nonattainment area. Therefore, the project area is designated as attainment. For PM₁₀, the northwestern portion of San Bernardino County is nonattainment for federal PM₁₀ and the entire County is nonattainment for State PM₁₀.

Table 3.2-2. Federal and State Ambient Air Quality Attainment Status

Pollutant	Federal	State
Ozone (O ₃)	Nonattainment	Nonattainment
Nitrogen Dioxide (NO ₂)	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Unclassified/Attainment	Attainment
Coarse Particulate Matter (PM ₁₀)	Nonattainment	Nonattainment
Fine Particulate Matter (PM _{2.5}) ^{1/}	Unclassified/Attainment	Nonattainment

^{1/} Southwest corner of desert portion of San Bernardino County adjacent to Los Angeles only.
Source: CARB 2024b

3.2.2 Regulatory Framework

3.2.1.7 Federal

Clean Air Act

The federal Clean Air Act (CAA), which was initially established by the U.S. Congress in 1970 and substantially revised in 1977 and 1990, can be found in Title 42, Chapter 85 of the United States Code. An important aspect of the CAA is its requirement for the U.S. Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS). There are NAAQS in place for seven “criteria” pollutants: CO, lead, NO₂, particle pollution (PM₁₀ and PM_{2.5}) and SO₂. Standards are classified as primary and secondary. Primary standards are designed to protect public health, including sensitive individuals, such as children and the elderly, whereas secondary standards are designed to protect public welfare, such as visibility and crop or material damage. The USEPA sets the NAAQS based on a process that involves science policy workshops, a risk/exposure assessment that draws on the information and conclusions of the science policy workshops to development quantitative characterizations of exposures and associated risks to human health or the environment, and a policy assessment by USEPA staff that bridges the gap between agency scientific assessments and the judgments required of the USEPA administrator, who then takes the proposed standards through the federal rulemaking process (USEPA 2023). The NAAQS are set to be protective of human health.

The Clean Air Act requires the USEPA to routinely review and update the NAAQS in accordance with the latest available scientific evidence. For example, the USEPA revoked the annual PM₁₀ standard in 2006 due to a lack of evidence linking health problems to long-term exposure to PM₁₀ emissions. The 1-hour

standard for O₃ was revoked in 2005 in favor of a new 8-hour standard that is intended to better protect public health.

CAA Section 182(e)(5) allows the USEPA administrator to approve provisions of an attainment strategy in an extreme area that anticipates development of new control techniques or improvement of existing control technologies if the state has submitted enforceable commitments to develop and adopt contingency measures to be implemented if the anticipated technologies do not achieve planned reductions.

Nonattainment areas that are classified as “serious” or “worse” are required to revise their air quality management plans to include specific emission reduction strategies to meet interim milestones in implementing emission controls and improving air quality. The USEPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the act. If a state fails to correct these planning deficiencies within 2 years of federal notification, the USEPA is required to develop a Federal Implementation Plan for the identified nonattainment area or areas.

3.2.1.8 State

California Clean Air Act

The California Clean Air Act requires all air pollution control districts in the State to aim to achieve and maintain State ambient air quality standards for O₃, CO, and NO₂ by the earliest practical date and to develop plans and regulations specifying how the districts will meet this goal. There are no planning requirements for the State PM₁₀ standard. After further review of the relationship between fine PM and human health effects, the CARB adopted new State standards on June 20, 2002, for PM_{2.5} that are more stringent than the federal standards. No specific control programs are in place to achieve this much more stringent standard. However, it does represent an air quality goal to dramatically reduce the adverse health effects from small-particle air pollution.

CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting State requirements of the federal CAA, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act, amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants, but there is no penalty for nonattainment. Similar to the federal process, the standards for the CAAQS are adopted after review by CARB staff of the scientific literature produced by agencies such as the Office of Environmental Health Hazard Assessment (OEHHA), the Air Quality Advisory Committee, which comprises experts in health sciences, exposure assessment, monitoring methods, and atmospheric sciences appointed by the Office of the President of the University of California, and public review and comment. The CAAQS are also set at levels determined to be protective of human health.

Air Toxics Program

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California Toxic Air Contaminants (TAC) list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established as a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the State list includes the (federal)

hazardous air pollutants. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, facilities are required to communicate the results to the public in the form of notices and public meetings.

The mixture of solid particles from equipment with diesel engines are collectively known as DPM. These include many known or suspected cancer-causing substances, such as benzene, arsenic, and formaldehyde. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by the OEHHA. The CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles. It also contains other harmful pollutants, including NO_x. Diesel exhaust particles and gases are suspended in the air, so exposure to this pollutant occurs whenever a person breathes air that contains these substances. Exposure to this pollutant is highest near roads and freeways, truck loading and unloading operations, and diesel-powered machinery operations. Exposure to diesel exhaust can have immediate health effects such as irritation to the eyes, nose, throat, and lungs. It can also cause coughs, headaches, light-headedness, and nausea (OEHHA 2023).

In 2000, the CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80 percent decrease in Statewide diesel health risk in 2020 compared with the diesel risk in 2000. In 2020, the CARB adopted the Advanced Clean Truck Regulations, which require truck manufacturers to transition from diesel trucks and vans to electric zero-emission vehicles beginning in 2024. By 2045, every new truck and van sold in California will be zero emission.

Additional regulations apply to new trucks and diesel fuel, including the On-road Heavy Duty Diesel Vehicle (In-use) Regulation, On-road Heavy Duty (New) Vehicle Program, In-use Off-road Diesel Vehicle Regulation, and New Off-road Compression-ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Several Airborne Toxic Control Measures reduce diesel emissions, including In-use Off-road Diesel-fueled Fleets (13 California Code of Regulations [CCR] 2449 et seq.) and In-use On-road Diesel-fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause or have a natural tendency to cause injury or damage to business or property. This section also applies to sources of objectionable odors.

State Implementation Plans

An important component of the MDAQMD’s air quality planning strategy is contained in the State Implementation Plan (SIP) for the State of California. The federal CAA requires all states to submit a SIP to USEPA.

The CAA also requires submissions of attainment plans for areas that are out of compliance with the NAAQS. These area attainment plans are comprehensive plans that describe how an out-of-compliance area will attain and maintain the particular NAAQS standard(s) it does not conform to. Once an out-of-compliance area has attained the standard in question, a maintenance SIP is required for a period of time to ensure the area will continue to meet the standard.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. Many of California's SIPs and attainment plans rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to SIPs and attainment plans. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards those revisions to USEPA for approval and publication in the Federal Register.

3.2.1.9 Local

Mojave Desert Air Quality Management District

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. With respect to the NAAQS, the project region within the MDAB is in nonattainment for O₃ (8-hour) and PM₁₀. In response, MDAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the State and federal ambient air quality standards. AQMPs are updated regularly to more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy.

The MDAQMD has primary responsibility for controlling emissions from stationary sources of air pollution within its jurisdiction. The MDAQMD is responsible for monitoring air quality and for planning, implementing, and enforcing programs designed to attain and maintain federal and State ambient air quality standards. In June 2008, MDAQMD prepared its Ozone Attainment Plan. In February 2017, the Plan was updated to: (1) demonstrate that the MDAQMD will meet the primary required federal O₃ planning milestones, attainment of the 70 part per billion (ppb) 8-hour ozone NAAQS by 2033 (Plan revised January 2023); (2) present the progress the MDAQMD will make towards meeting all required O₃ planning milestones; and (3) discuss the newest 0.070 ppm 8-hour O₃ NAAQS, in response to an expected non-attainment designation for the new 2015 O₃ NAAQS. (MDAQMD 2023a).

The USEPA has also designated a large portion of the Mojave Desert as a nonattainment area with respect to the PM₁₀ NAAQS. The Final Mojave Desert Planning Area (MDPA) Federal PM₁₀ Attainment Plan, updated in July 1995, serves as a planning tool for reducing PM₁₀ pollution in the MDPA and sets forth an air quality improvement program for the region that will be implemented by both the public and private sector of the community (MDAQMD 1995).

The MDAQMD has adopted rules to limit air emissions (MDAQMD 2023b). Many of these rules were put in place as required by measures specified in various SIPs and air quality management plans. The MDAQMD rules that are or may be applicable to the project are:

- **Rule 201– Permit to Construct.** This rule prohibits installation, replacement, or modification of any equipment, the use of which may cause the discharge of air contaminants or the use of

which may affect the discharge of air contaminants without first obtaining written authorization for such construction from the Air Pollution Control Officer.

- **Rule 203– Permit to Operate.** This rule prohibits the use or operation of any equipment which may cause discharge of air contaminants or the use of which may affect the discharge of air contaminants, without first obtaining a written permit from the Air Pollution Control Officer.
- **Rule 401 – Visible Emissions.** This rule prohibits discharges of air contaminants or other material that are as dark or darker in shade as those designated No. 1 on the Ringelmann Chart.
- **Rule 402 – Nuisance.** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.
- **Rule 403 – Fugitive Dust.** The purpose of this rule is to control the amount of PM entrained in the atmosphere from manmade sources of fugitive dust. The rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area to be visible beyond the emission source’s property line. Measures to reduce emissions may include, adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities (such as during periods of high winds). In addition, a Dust Control Plan would need to be submitted to MDAQMD describing the dust control measures that will be implemented.

San Bernardino Countywide Plan / Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County’s General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Natural Resources Element

GOAL NR-1	Air Quality. Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.
<i>Policy NR-1.3</i>	We collaborate with air quality management districts and other local agencies to monitor and reduce major pollutants affecting the county at the emission source.
<i>Policy NR-1.5</i>	We consider recommendations from the California Air Resources Board on the siting of new sensitive land uses and exposure to specific source categories.
<i>Policy NR-1.6</i>	We coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions.
<i>Policy NR-1.8</i>	We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and

developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

Hazards Element

Policy HZ-3.3 The County will assist the air quality management districts in establishing community emissions reduction plans for unincorporated environmental justice focus areas and implement, as feasible, those parts of the plans, that are within the jurisdiction and authority of the County, with particular emphasis in addressing the types of pollution identified in the Hazard Element tables.

San Bernardino County Development Code

Development Code Section 83.01.040 (pertaining to construction air quality) will apply to the construction phase of the project. Relevant provisions of the section are listed below.

(c) Diesel Exhaust Emissions Control Measures. The following emissions control measures shall apply to all discretionary land use projects approved by the County on or after January 15, 2009:

(1) On-Road Diesel Vehicles. On-road diesel vehicles are regulated by the State of California Air Resources Board.

(2) Off-Road Diesel Vehicle/Equipment Operations. All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the following measures during their operations in order to reduce diesel particulate matter emissions from diesel-fueled engines:

(A) Off-road vehicles/equipment shall not be left idling on site for periods in excess of five minutes. The idling limit does not apply to:

(I) Idling when queuing;

(II) Idling to verify that the vehicle is in safe operating condition;

(III) Idling for testing, servicing, repairing or diagnostic purposes;

(IV) Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane);

(V) Idling required to bring the machine system to operating temperature; and

(VI) Idling necessary to ensure safe operation of the vehicle.

(B) Use reformulated ultra-low-sulfur diesel fuel in equipment and use equipment certified by the U.S. Environmental Protection Agency (EPA) or that pre-dates EPA regulations.

(C) Maintain engines in good working order to reduce emissions.

(D) Signs shall be posted requiring vehicle drivers to turn off engines when parked.

(E) Any requirements or standards subsequently adopted by the South Coast Air Quality Management District, the Mojave Desert Air Quality Management District or the California Air Resources Board.

- (F) *Provide temporary traffic control during all phases of construction.*
- (G) *On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.*
- (H) *Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.*
- (I) *Contractors shall use ultra-low sulfur diesel fuel for stationary construction equipment as required by Air Quality Management District (AQMD) Rules 431.1 and 431.2 to reduce the release of undesirable emissions.*
- (J) *Substitute electric and gasoline-powered equipment for diesel-powered equipment, where feasible.*

Development Code Section 84.29.035 (Required Findings for Approval of a Commercial Solar Energy Facility) includes the following requirements relevant to fugitive dust emissions:

(c) *The finding of fact shall include the following:*

- (20) *The proposed commercial solar energy generation facility will be designed, constructed, and operated so as to minimize dust generation, including provision of sufficient watering of excavated or graded soil during construction to prevent excessive dust. Watering will occur at a minimum of three (3) times daily on disturbed soil areas with active operations, unless dust is otherwise controlled by rainfall or use of a dust palliative, or other approved dust control measure.*
- (21) *All clearing, grading, earth moving, and excavation activities will cease during period of winds greater than 20 miles per hour (mph), averaged over one hour, or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property, and in conformance with AQMD regulations.*
- (22) *For sites where the boundary of a new commercial solar energy generation facility will be located within one-quarter mile of a primary residential structure, an adequate wind barrier will be provided to reduce potentially blowing dust in the direction of the residence during construction and ongoing operation of the commercial solar energy generation facility.*
- (23) *Any unpaved roads and access ways will be treated and maintained with a dust palliative or graveled or treated by another approved dust control Chapter 83.09 of the Development Code.*
- (24) *On-site vehicle speed will be limited to 15 mph.*

3.2.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to air quality if it would do any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under applicable federal or state ambient air quality standards.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

MDAQMD guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. MDAQMD's air quality thresholds of significance are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. MDAQMD's CEQA and Federal Conformity Guidelines (February 2020) indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds in **Table 3.2-3, MDAQMD Air Quality Thresholds of Significance**, below should be considered as having individually and cumulatively significant air quality impacts.

Under MDAQMD guidelines, a project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in **Table 3.2-3**;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s); or
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

Table 3.2-3. MDAQMD Air Quality Thresholds of Significance

Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NOx)	25	137
Oxides of Sulfur (SOx)	25	137
Particulate Matter (PM ₁₀)	15	82
Particulate Matter (PM _{2.5})	12	65
Reactive Organic Gases/Volatile Organic Compounds (ROG / VOC)	25	137

Source: MDAQMD 2020

Residences, schools, daycare centers, playgrounds, and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion):

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet; or
- A gasoline dispensing facility within 300 feet.

3.2.4 Project Impacts and Mitigation

Impact 3.2-1: The project will conflict with or obstruct implementation of the applicable air quality plan. Impacts would be less than significant.

A project is nonconforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable MDAQMD rules and regulations, complies with all proposed control measures, and is consistent with the growth forecasts in the applicable plan. Zoning changes, specific plans, general plan amendments, and similar land use plan changes that do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to comply with the applicable air quality plan.

The proposed project is consistent with the applicable air quality plans and MDAQMD rules and regulations identified in Section 3.2.2, Regulatory Setting. In addition, as discussed in Section 3.10, Land Use and Planning, of this EIR, the project would not conflict with existing land uses or result in population growth, long-term increase in the number of trips or increase the overall vehicle miles traveled in the area. Worker vehicle trips, vendor trucks, and haul trucks would be generated during the proposed construction activities but would cease after construction is completed. Criteria pollutant emissions during construction (**Table 3.2-4, Unmitigated Daily Construction Emissions [Pounds per Day]**, and **Table 3.2-5, Unmitigated Annual Construction Emissions [Short Tons per Year]**) and operation (**Table 3.2-6, Mitigated Daily Construction Emissions [Pounds per Day]**) would be below the MDAQMD daily and annual significance threshold for construction equipment and fugitive PM_{2.5}.

Additionally, Overnight Solar, LLC (applicant) would also submit an Air Quality Construction Management Plan to the County for review and approval prior to the issuance of grading permits, in compliance with the MDAQMD's Fugitive Dust Control Rules (Rules 403 and 403.2). The plan would consist of fugitive dust control measures that would be implemented and monitored at all proposed project construction locations. All contracts and contract specifications for construction work would incorporate and comply with the plan. The plan would describe the steps to be taken to minimize fugitive dust generated by construction activities through the following acts:

- Maintaining a Dust Control Plan approved by MDAQMD.

- Describing the control measures to be applied to each of the sources identified. The descriptions would be sufficiently detailed to demonstrate that the best available control measures required by air districts for solar projects would be used.
- Providing the following control measures, in addition to or as listed in the applicable rules, but not limited to:
 - Manage and limit disturbance of ground surfaces from vehicle traffic, excavation, grading, vegetation removal, or other activities to lower the potential for soil detachment and reduce dust transport. Only trim vegetation (mow and roll) in areas where solar panels will be installed, rather than remove vegetation entirely (clear and grub) to maintain the natural topography. This process lessens the level of ground disturbance and leaves the root system in place for quicker regeneration of vegetative cover.
 - Take actions to prevent project-related track-out, including cleaning up project-related trackout or spills on publicly maintained paved surfaces within 24 hours.
 - A water truck would be used to maintain most disturbed surfaces and to actively spread water during visible dusting episodes to minimize visible fugitive dust and limit emissions to 20 percent opacity in areas where grading would occur, within the staging areas, and on any unpaved roads.
 - Minimize the idling time of diesel-powered construction equipment to five minutes in accordance with County Development Code Section 83.01.040.
 - Cover loaded haul vehicles while operating on publicly maintained paved surfaces.
 - On-site vehicle speed would be limited to 15 miles per hour.

As a renewable energy project, the project would also comply with the Countywide Plan/Policy Plan, which includes renewable energy and conservation policy goals to achieve a clean energy future that minimizes negative effects consistent with local values. The Countywide Plan/Policy Plan strives for the County to be home to diverse and innovative renewable energy systems that provide reliable and affordable energy to the valley, mountain, and desert regions and the project supports this, helping California meet its Renewable Portfolio Standards, and decrease the need for energy from fossil fuel-based power plants in the State.

Therefore, the project would have less than significant impacts.

Mitigation Measures: None required.

Level of Significance: Less than Significant.

Impact 3.2-2: The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under applicable federal or state ambient air quality standards. Impacts would be less than significant.

The project involves the construction and operation of a utility-scale, solar photovoltaic electricity generation and energy storage facility. Construction of the project would result in the temporary addition of pollutants to the local air basin caused by on- and off-site sources. Operation of the project would generate emissions from mobile sources, including vehicle trips from employees commuting to

work and maintenance vehicles. Regardless of the size of the project, the standard protocols for construction equipment and fugitive PM₁₀ would be implemented at all construction sites. Additional protocols are required by MDAQMD Rule 403 for sites with 10 or more acres disturbed, and solar projects in particular. The Air Quality Construction Management Plan would be implemented for the project (derived from MDAQMD Rule 403) to minimize emissions as described in Impact 3.2-1.

Construction

The proposed project is expected to be constructed in four stages: 1) site preparation and grading (including mobilization, site preparation, fencing, preparation of laydown areas, and trenching); 2) solar array installation and gen-tie (e.g., solar array structural components including cables, piles, racking systems, inverters, modules, and panels); 3) battery energy storage system (BESS) construction and gen-tie (including BESS, commissioning, and testing); and 4) paving of 1 mile of road. The construction emissions of each stage were calculated using the equipment list and construction schedule contained in **Appendix C**. The peak daily emissions shown in **Table 3.2-4** were calculated using the assumption that construction duration would be approximately 26 months. Typical construction equipment such as bulldozers, backhoes, graders, and water trucks would be used during all stages of project construction and would be stored within the staging area. The equipment is conservatively assumed to operate for 12 hours per day, 5 days per week for the duration of the construction phase. Off-site emissions were calculated by incorporating the project's anticipated work and haul truck trips necessary during construction, with construction equipment, materials, and water deliveries included in the haul truck trips. Construction vehicles would access the project site on Harper Lake Road via SR-58. Most workers would commute to the project site from nearby communities such as Boron and Barstow. Additional workers may travel to the project site from the cities of Victorville, Hesperia, and San Bernardino. The worker and haul truck on-road trip lengths have been modified to 50 miles to account for the various potential traveling distances. The 1 mile of proposed paving would occur at the end of construction and was assumed to be approximately 3.63 acres of asphalt (30-foot width for 1 mile). Grading would be minor for the solar field construction and the road. However, grading would be necessary for construction of the racking system, inverter pads, switching station, substation, and energy storage system. Though grading is expected to occur throughout the project site, the project site's cut and fill would balance, and no importing or exporting of materials would be necessary. Actual quantities of earth to be moved is unknown at this time but would be determined once the engineering is completed. Anticipated depths for ground disturbance are up to 1 foot for concrete pads and grading. As a conservative estimate, a graded area of 1,890 acres was assumed in this analysis based on the parcel and gen-tie acreage. Pylons would be driven to a depth of 7 feet, but no drilling or excavation would be required. Approximately 200 acre-feet of water would be used during construction activities primarily for dust control. The project would purchase water supplied by existing on-site wells at the adjacent Mojave Solar Facility.

The following measures were incorporated in the California Emissions Estimator Model (CalEEMod) to reflect standard measures for fugitive dust control: reduce speed on unpaved roads to 15 miles per hour, water exposed areas two times per day, and water the unpaved roads traveled to the project a minimum of two times per day. These measures were included to comply with MDAQMD Rule 403 requirements. **Table 3.2-4, Unmitigated Daily Construction Emissions (Pounds per Day)**, and **Table**

3.2-5, Unmitigated Annual Construction Emissions (Short Tons per Year), show the estimated maximum daily and annual unmitigated construction emissions.

Table 3.2-4. Unmitigated Daily Construction Emissions (Pounds per Day)

Construction Year	VOC	NO _x	CO	PM ₁₀	PM _{2.5}	SO _x
2024 peak daily emission	17.1	126.7	198.1	81.9	16.8	0.26
2025 peak daily emission	16.5	116.9	234.2	81.3	16.3	0.26
2026 peak daily emission	11.1	73.8	179.8	74.1	12.5	0.19
MDAQMD Threshold	137	137	548	82	65	137
Exceedance?	No	No	No	No	No	No

Source: Appendix C, Air Quality and Greenhouse Gas Technical Report

Table 3.2-5. Unmitigated Annual Construction Emissions (Short Tons per Year)

Construction Year	VOC	NO _x	CO	PM ₁₀	PM _{2.5}	SO _x
2024 annual emission	0.66	4.82	8.36	3.46	0.70	0.01
2025 annual emission	1.90	14.4	24.9	10.2	2.02	0.03
2026 annual emission	1.06	7.67	15.9	7.84	1.32	0.02
MDAQMD Threshold	25	25	100	15	12	25
Exceedance?	No	No	No	No	No	No

Source: Appendix C, Air Quality and Greenhouse Gas Technical Report

As shown in **Table 3.2-4** and **Table 3.2-5**, both peak daily construction and annual emissions would not exceed the MDAQMD's significance thresholds. Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard. Since MDAQMD rules require the use of standard best management practices for construction equipment and fugitive PM₁₀, the project would include the implementation of an Air Quality Construction Management Plan that would be approved by the County prior to the issuance of grading permits. The plan would consist of fugitive dust control measures which would describe the steps to achieve minimal fugitive dust generated by construction activities. The project's impacts on cumulative construction emissions would be less than significant and would be further reduced with the implementation of the plan.

Operation

The project will include a 15-foot by 15-foot one-story, rectangular control building, housing the communication and SCADA equipment. Since the project would be monitored remotely via the SCADA system, it would not require the presence of full-time employees; operational emissions would be limited to maintenance activities (panel washing) and emissions associated with building electricity, with no natural gas included. Emissions from waste have also been calculated for the building. Emissions from water are calculated for both the outdoor water use and the water use associated with the building. Outdoor water use during operations is conservatively estimated at a total of up to 11 acre-feet per year. The project would have no stationary emissions sources, and panel washing is expected to occur up to four times per year. Panel washing may require up to 24 worker trips per day (weekdays) during peak operational maintenance event and would take approximately 20 days to complete.

Criteria pollutant emissions from mobile sources (vehicular traffic) would result from these activities. A trip length of 60 miles was assumed for workers' commutes. Medium heavy-duty trucks and heavy-duty trucks were chosen to represent the worker vehicles and water trucks. Two CalEEMod analyses were done to account for daily and annual operational emissions. **Table 3.2-6, Daily Operational Emissions (Pounds per Day)**, and **Table 3.2-7, Annual Operational Emissions (Tons per Year)**, list the average daily and annual maintenance equipment and employee commutes.

Table 3.2-6. Daily Operational Emissions (Pounds per Day)

Emission Source	VOC	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
Mobile	0.07	2.24	0.98	1.21	0.34	0.04
Area	<0.005	<0.005	0.01	<0.005	<0.005	<0.005
Energy	0	0	0	0	0	0
Stationary	0	0	0	0	0	0
Total	0.07	2.24	0.99	1.21	0.34	0.04
MDAQMD Threshold	137	137	448	82	64	137
Exceedance	No	No	No	No	No	No

Source: Appendix C, Air Quality and Greenhouse Gas Technical Report

Table 3.2-7. Annual Operational Emissions (Tons per Year)

Emission Source	VOC	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
Mobile	0.005	0.13	0.06	0.07	0.02	<0.005
Area	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Energy	0	0	0	0	0	0
Stationary	0	0	0	0	0	0
Total	0.01	0.13	0.06	0.07	0.02	<0.005
MDAQMD Threshold	25	25	100	15	12	25
Exceedance	No	No	No	No	No	No

Source: Appendix C, Air Quality and Greenhouse Gas Technical Report

As shown in **Table 3.2-6** and **Table 3.2-7**, unmitigated operational emissions would not exceed the MDAQMD significance thresholds. Therefore, impacts from operations would be less than significant and no mitigation measures are required. In addition, both construction and operational emissions would also be below MDAQMD significance thresholds and would have a less than significant contribution to cumulative impacts. However, per MDAQMD requirements, an Air Quality Construction Management Plan would be implemented as described in Impact 3.2-1.

Mitigation Measures: None required.

Level of Significance: Less than Significant.

Impact 3.2-3: The project could expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.**Construction*****Toxic Air Contaminants***

CARB characterizes DPM as a TAC. The OEHHA has identified carcinogenic and chronic noncarcinogenic effects from long-term (chronic) exposure. Cancer health risks associated with exposure to diesel exhaust typically are associated with chronic exposure, in which a 30-year exposure period often is assumed. For construction activities, the primary hazard is DPM emissions from construction equipment (e.g., excavators, bulldozers, backhoes, graders, etc.) and vehicles associated with construction of the project. DPM is a complex mixture of chemicals and particulate matter with potential cancer and chronic non-cancer effects. No other toxins are expected from the project. More than 90 percent of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and is a subset of PM_{2.5} (CARB 2024c). As a conservative estimate, since PM_{2.5} is a subset of PM₁₀, exhaust emissions from PM₁₀ were used as a surrogate for DPM.

Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, retirement homes, and residences. There are no non-residential sensitive receptors within the vicinity of the project. Barstow Community Hospital, which is the nearest hospital is over 15 miles away from the project site, and the nearest schools, Lenwood Elementary School and the Mojave River Academy, are over 20 miles away. As previously noted, several scattered residences are located south and east of the project along Harper Lake Road. There are no sensitive receptors within 1,500 feet of the project site. The closest sensitive receptors are located approximately 1 mile (5,280 feet) from the project site and 0.3 mile (1,585 feet) from the proposed gen-tie line. Project construction would result in emissions of DPM from heavy-duty construction equipment and trucks (e.g., water trucks and haul trucks) operating in the project area. Construction activities could result in temporary increases in pollutant concentrations. These are relatively small levels of DPM emissions that would decline to negligible levels with distance from the sources. Based on the construction-related emissions modeling conducted for the project, maximum daily emissions of exhaust PM₁₀ would be 4.83 pounds during peak construction. Construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0 because the low exposure level reflects the 1) relatively low mass of DPM emissions that would be generated by construction activity on the project (i.e., less than MDAQMD significance thresholds, 2) the relatively short duration of DPM-emitting construction activity at the project site and gen-tie line (i.e., well below the 30-year exposure period used in health risk assessments), and 3) the highly dispersive properties of DPM.

Therefore, the health impacts associated with exposure to DPM from project construction are not expected to be significant.

Fugitive Dust

During construction activities, the project would implement dust control measures to ensure receptors in the project vicinity would not be impacted by the project's dust emissions. As described in Impact 3.2-1, the project would implement fugitive dust control standards described in the Air Quality

Construction Management Plan to comply with the requirements of MDAQMD's Rule 403 and SIPs for PM₁₀ and PM_{2.5}. The plan would address impacts during project construction and the required protocols such as surface treatment on disturbed areas, roads, and parking areas, as well as vehicle speed limits. Impacts from fugitive dust would be less than significant and implementation of these measures would further reduce impacts related to wind-transported materials.

Valley Fever

Coccidioidomycosis, more commonly known as Valley Fever, is primarily a disease of the lungs caused by the spores of the CI fungus. The spores can occur naturally in some soils and there is the potential that spores could be stirred up during excavation, grading, and earth-moving activities and inhaled into the lungs.

The primary way to avoid Valley Fever is to limit exposure to the spores. During construction, the implementation of the Air Quality Construction Management Plan would provide control measures for fugitive dust emissions and limit the potential for exposure. Therefore, exposure to Valley Fever would be less than significant.

Operational Impacts

Toxic Air Contaminants

Operation-related TAC emissions would be negligible, and the project would be controlled remotely, with visits up to four times per year for maintenance. As stated previously, workers visiting the substation for maintenance activities are estimated to require up to 24 worker trips per day (weekdays). However, worker vehicles and water trucks traveling to and from the project for maintenance activities are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive DPM emissions. No other TAC emission sources would occur during operations. Therefore, TAC emissions generated during operations- would be less than significant. Emissions generated by daily maintenance activities would be below the MDAQMD thresholds, which are presented in **Table 3.2-3**. Therefore, project operations would not expose sensitive receptors to substantial pollutant concentrations.

Fugitive Dust

During operation, the project would implement an operational dust control plan to ensure receptors in the project vicinity would not be impacted by the project's long-term dust emissions during operations.

Valley Fever

During operations, an operational dust control plan would be implemented. This would provide control measures for fugitive dust emissions and limit the potential for exposure. Therefore, exposure to Valley Fever would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than Significant.

Impact 3.2-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant.

Individual responses to odors are highly variable and can result in various effects, including psychological (i.e., irritation, anger, or anxiety) and physiological (i.e., circulatory and respiratory effects, nausea, vomiting, and headache). Generally, the impact of an odor results from a variety of interacting factors such as frequency, duration, offensiveness, location, and sensory perception.

The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity they are engaged in; and the sensitivity of the impacted receptor.

CARB's (2005) Air Quality and Land Use Handbook identifies the sources of the most common odor complaints received by local air districts. Typical sources include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The project does not contain any of the land uses identified as typically associated with emissions of objectionable odors.

Construction of the project could result in the emission of odors from construction equipment and vehicles (e.g., diesel exhaust). It is anticipated that these odors would be short term, limited in extent at any given time, and distributed throughout the project area during the duration of construction.

The project does not include any uses identified as being associated with odors. Beyond the scattered residences nearest to the project site (the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed gen-tie line), there are not substantial numbers of people within the vicinity of the project. Therefore, construction and operation of the project would not create other emissions or odors adversely affecting a substantial number of people; impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than Significant.

Impact 3.2-5: The project would not result in cumulative impacts to air quality. Impacts would be less than significant.

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. Section 3.0, Introduction to the Environmental Analysis, of this draft EIR identifies a list of projects that would have the potential to be considered cumulative in context with the project's contribution. These projects are summarized in **Table 3-1, Cumulative Projects**, and shown in **Figure 3-1, Cumulative Projects Map**.

The MDAQMD relies on SCAQMD guidance for determining cumulative impacts. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively

considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003). The MDAQMD significance thresholds take into account the cumulative impact of a project that adds emissions to the air basin. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether the project's individual emissions would have a cumulatively significant impact on air quality.

The MDAB is a nonattainment area for ozone, $PM_{2.5}$, and PM_{10} under the NAAQS and CAAQS. The poor air quality in the basin is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emissions sources. Projects that emit these pollutants or their precursors (i.e., VOC and NO_x for ozone) potentially contribute to poor air quality. The MDAQMD significance thresholds take into account the cumulative impact of a project that adds emissions to the entire air basin, in this case a basin already in nonattainment for some criteria pollutants. As indicated in **Table 3.2-4** and **Table 3.2-6**, daily project construction and operational emissions would be below the MDAQMD significance thresholds. Each cumulative project would be required to complete an individual impact analysis to determine significance with respect to the MDAQMD thresholds and implement mitigation measures if necessary. Since the project would not result in significant impacts, it would not result in a cumulatively considerable increase in emissions of nonattainment pollutants.

Additionally, as noted previously, the proposed project is consistent with the applicable air quality plans and MDAQMD rules and regulations. The project would not conflict with existing land uses or result in population growth, long-term increase in the number of trips or increase the overall vehicle miles traveled in the area. Each cumulative project would need to conform to all applicable MDAQMD plans, rules and regulations, and land uses set forth in the air quality plan. This determination is made on a project-by-project basis and a combination of impacts with other cumulative projects that could potentially lead to cumulative impacts is not expected. Therefore, the project's contribution to cumulative impacts associated with consistency with local air quality plans would be less than cumulatively considerable.

As discussed previously, the closest sensitive receptors are located approximately 1 mile (5,280 feet) from the project site and 0.3 mile (1,585 feet) from the proposed gen-tie line. Although construction of the project would result in a short-term increase of DPM, emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0. DPM emissions from project operation would primarily result from workers traveling to the site for maintenance activities. However, these impacts would be negligible since the project would be controlled remotely and such visits would be infrequent. Moreover, the project would implement an operational Dust Control Plan and an Air Quality Construction Management Plan to ensure receptors in the project vicinity would not be impacted by the project's long-term dust emissions during operations and limit exposure to CI fungus that cause Valley Fever. Each cumulative project would be required to complete an individual impact analysis to determine significance with respect to the MDQAMD thresholds and implement mitigation measures if necessary. In order for an individual project to greatly impact the regional concentrations of pollutants, the project would likely need to exceed MDAQMD significance thresholds by a significant margin, which is unlikely with each individual project's implementation of mitigation measures, as applicable. As discussed previously, project emissions are

below the established MDAQMD threshold. Therefore, it is not anticipated that cumulative impacts would be significant. The project's contribution to cumulative impacts associated with impacts to sensitive receptors would be less than cumulatively considerable.

The project would not result in a significant impact due to odors as it does not include any uses identified as being associated with odors in CARB's (2005) Air Quality and Land Use Handbook. Additionally, the project is not located near any uses that are sensitive to odors and no other high-odor producing use is near enough to the project to create cumulative odor impacts. Therefore, the project's odors, when considered with past, present, and reasonably foreseeable future projects, would not create a significant cumulative impact related to odor.

Mitigation Measures: None required.

Level of Significance: Less than Significant.

3.3 Biological Resources

This section evaluates the potential biological resource impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to biological resources, and includes mitigation measures required to reduce or avoid these impacts, as applicable. Note that project components located within previously developed areas associated with the Mojave Solar Facility, such as the proposed generation interconnect (gen-tie), are not considered to have the potential to impact biological resources due to the developed and fenced nature of this area, and the fact that this area has previously been permitted and their biological impacts evaluated. The analysis herein is therefore focused on the current project footprint (project site), comprising approximately 596 acres.

The *Biological Resources Technical Report* (BRTR) prepared by Corvus Ecological Consulting is provided in **Appendix D**. This report details the results of preliminary biological resource surveys performed in April and May of 2023 and April, May, June, and July of 2024. These include:

- Focused Mohave ground squirrel (MGS; *Xerospermophilus mohavensis*) surveys, focused Mojave desert tortoise (*Gopherus agassizii*) surveys, and general species surveys performed in April of 2023;
- Focused western burrowing owl (*Athene cunicularia*) surveys and special-status wildlife species surveys performed in April and May of 2023 and April, May, June, and July of 2024;
- Special-status plant surveys performed in April and May of 2023 and 2024; and
- Jurisdictional delineation surveys performed in May of 2023.

San Bernardino County (County) received comments from the Lahontan Regional Water Quality Control Board (RWQCB), the Defenders of Wildlife, the Mohave Ground Squirrel Conservation Council, and the Desert Tortoise Council during the scoping period (the comment letter is included in **Appendix A**), and those comments have been incorporated into this section.

3.3.1 Environmental Setting

The County is divided into three subregions for planning purposes: Valley, Mountain, and Desert. These regions have distinctive climates and geography, which in turn produce differing biological environments. The project site is in the Desert Planning Region of the County. The Desert Planning Region consists of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Harper Lake, a dry lakebed, is approximately 2 miles north and east of the project site. The elevation of the project site ranges from approximately 2,100 to 2,150 feet above mean sea level. The dominant vegetation community of the Desert Planning Region is desert scrub, with vegetation communities predominately consisting of low-profile shrubby perennials and diminutive desert annuals. The Bureau of Land Management (BLM) Grass Valley Wilderness Area is located approximately 20 miles northeast of the project site. The Black Mountain Wilderness is a protected wilderness area located approximately 10 miles northeast from the project site. It is about 36,000 acres in size and features a variety of landscapes, including mountains, canyons, and grasslands and is home to a diverse array of plants and wildlife. The project site is located immediately west of the existing Mojave Solar Facility and

immediately south of the existing Lockhart PV Solar Facility. Perimeter fencing exists around the borders of each of these existing solar facilities.

During spring 2023, Corvus biologists conducted a full-coverage biological habitat assessment of the 672-acre original survey area. During spring 2024, Corvus biologists resurveyed the current 596-acre project site plus a 150-meter buffer, where publicly accessible or not previously permitted. Potential mitigation and translocation areas were also surveyed to the west and north of the project site. Surveys encompassing the property boundary, 150-meter buffer, and project access along Lockhart Ranch Road totaled 945 acres. Biologists recorded all vascular plants, vertebrate wildlife species, and drainages and episodic streams encountered along parallel transects spaced 10 meters apart and assessed habitat suitability for special-status plant and wildlife species with the potential to occur locally. Results of the biological surveys are discussed in Sections 3.3.1.1 and 3.3.1.2 below.

3.3.1.1 Existing Conditions

Vegetation Communities

The entire project site consists of a singular plant community: alkali desert scrub, dominated by cattle saltbush (*Atriplex polycarpa*). Cattle saltbush is native to the southwestern United States and northern Mexico. The plant typically grows to about 4 to 7 feet tall and blooms in the summer. This vegetation community is commonly found adjacent to dry lake playa in low-lying areas and is not considered to be a sensitive vegetation community. It is not considered high priority by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS), nor is it identified in local or regional plans, policies, or regulations.

The project site is sparsely vegetated, with a higher density of plants occurring near the two aquatic features. No trees and few individual cacti were recorded. These results are typical for the region in areas, such as the project site, that have experienced historical grazing and agricultural impacts.

Aquatic Resources

Aquatic resources serve a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, and migration and movement corridors for both special-status and common species.

Prior to conducting jurisdictional delineation surveys, various literature and databases were reviewed to identify potential aquatic features. These sources included:

- United States Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2023)
- U.S. Geological Survey Hydrologic Unit Code Watershed Boundary Dataset
- USFWS National Wetlands Inventory

Regionally, the project site is located in the western end of the Mojave Desert, in the Schwieter Well – Harper Lake watershed, a closed basin that generally drains to Harper Lake (**Figure 3.3-1, Regional Hydrology**). Harper Lake is an endorheic (self-contained, with no evident outlet) basin that once contained water and a natural marsh into the early 20th century but began to disappear once agricultural development began to deplete the groundwater that sustained its level. The lake

eventually became dry in the late 1990s. The project site includes a significant anthropogenic impediment to water flow in the form of a berm running north-to-south along much of the western edge (**Figure 3.3-2, Jurisdictional Waters Delineations from Field Efforts**).

Two distinct aquatic features were identified on the project site during the jurisdictional resource survey: one that crosses the northwest portion of the project site (herein referred to as the northern watercourse), and one that crosses the southeast portion of the project site (herein referred to as the southern watercourse). These aquatic features are represented in **Figure 3.3-2**.

The northern watercourse consists of approximately 24.3 acres of fluvially inactive floodplain and abandoned channels within the project site. This complex wash was modified and became fluvially inactive in approximately 1989-1990 when a still-existing berm was constructed upstream to divert drainage and floodwaters away from newly built solar facilities.

The southern watercourse encompasses approximately 5.6 acres within the project parcel, but will be excluded from the project site. This watercourse comprises a single thread channel.

Both aquatic features originate in foothills to the southwest of the proposed project site, where surface runoff from rainfall accumulates into natural drainages and flows down a long broad alluvial fan. Historically, these features would have terminated at Harper Lake, but existing anthropogenic modifications to the landscape alter the flow. The northern watercourse terminates at a levee that diverts flow northerly into a large human-made channel which is located outside of the project site. This human-made channel serves as a retention basin. The southern watercourse terminates at a constructed drainage channel downstream from the project site that protects an existing solar facility from floodwaters and diverts flow into Harper Lake.

3.3.1.2 Special-Status Species

Refer to **Appendix D** for special-status definitions for federally and State listed endangered and threatened (FE, SE, FT, ST) species, species protected by the California Desert Native Plants Act (CDNPA), California Special Species of Concern (SSC), Fully Protected (FP) species, Watch List (WL), and California Rare Plant Rankings by the California Native Plant Society (CNPS). The presence and absence of special-status plant and wildlife species on the project site is described below.

Plants

Prior to conducting biological field surveys, various literature and databases were reviewed to identify special-status plants with potential to occur on the project site. These sources included:

- USFWS Information for Planning and Consultation System (IPaC; USFWS 2023)
- California Natural Diversity Database (CNDDDB) RareFind 5 (CDFW 2023)
- CNPS Rare Plant Inventory database (CNPS 2023)
- Calflora database (Calflora 2023)
- NRCS Web Soil Survey (NRCS 2023)
- USFWS Designated Critical Habitat Maps
- San Bernardino Countywide Plan (San Bernardino County 2022), All Biological Resources

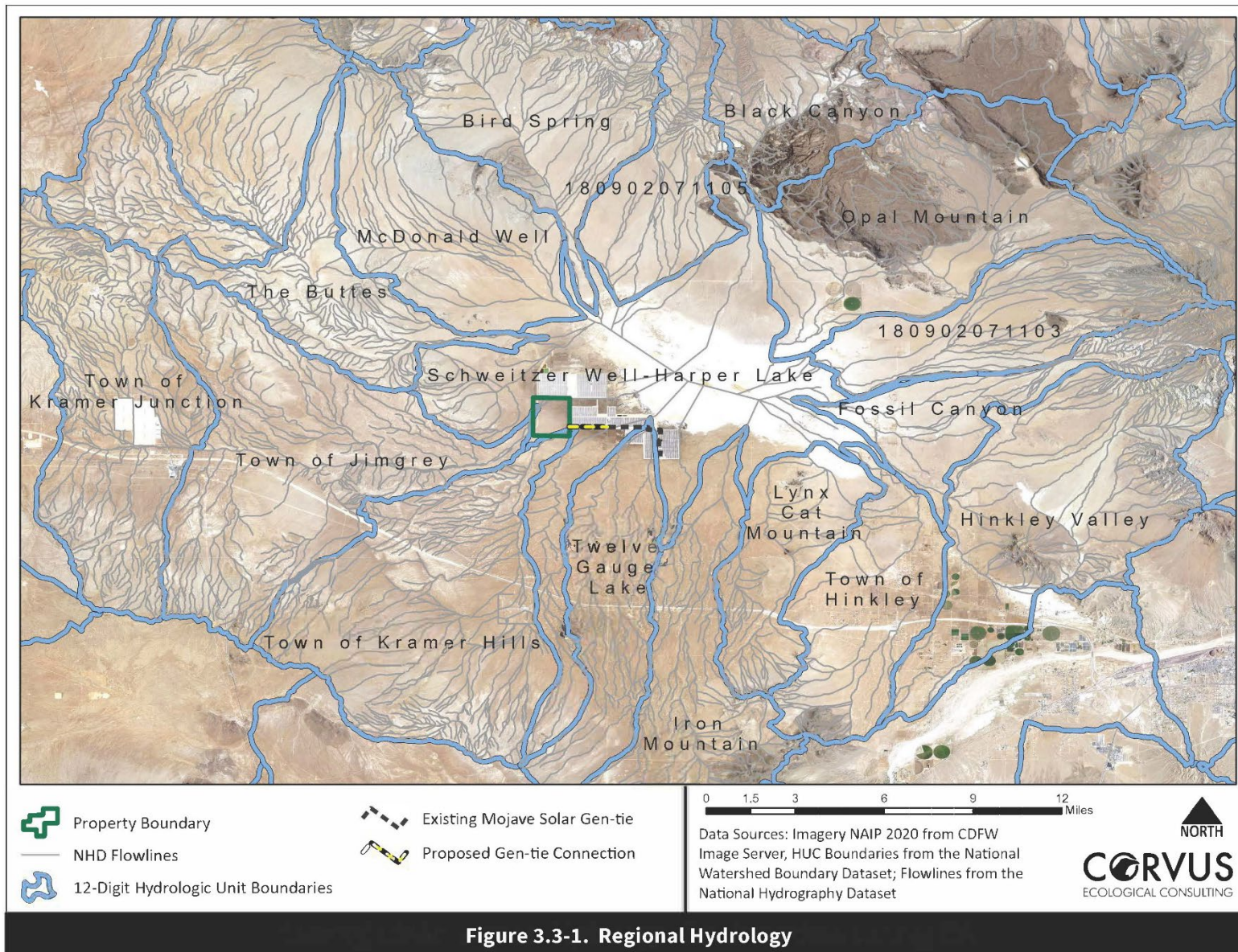


Figure 3.3-1. Regional Hydrology

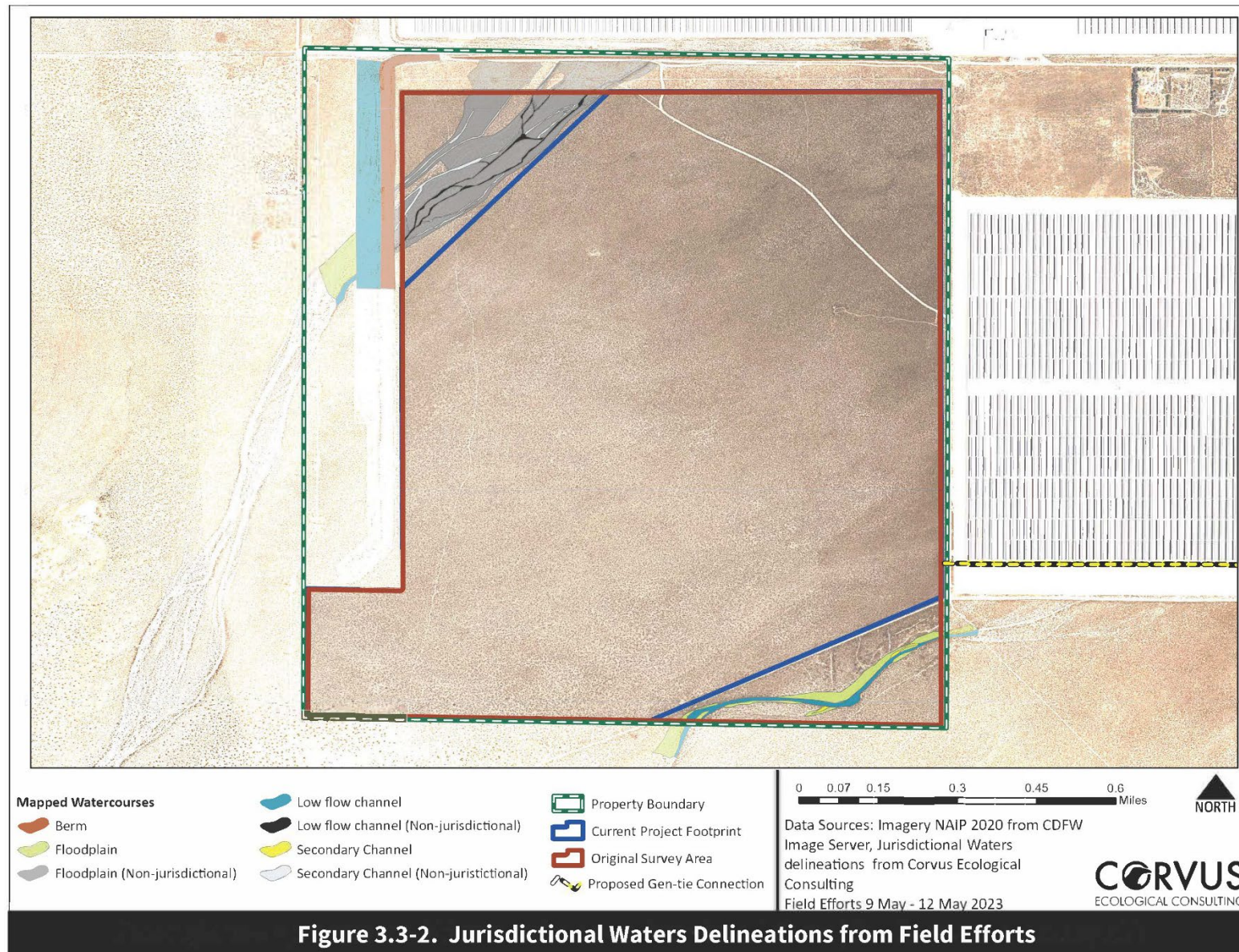


Figure 3.3-2. Jurisdictional Waters Delineations from Field Efforts

Special-status plants identified in database searches as having potential to occur on the project site included Barstow woolly sunflower (*Eriophyllum mohavense*), beaver dam breadroot (*Pedimelum castoreum*), creamy blazing star (*Mentzelia tridentata*), and desert cymopterus (*Cymopterus deserticola*). However, no special-status plants species were detected during preliminary surveys of the project site.

Although not registered as federally or State sensitive, silver cholla (*Cylindropuntia echinocarpa*), a cactus protected by the CDNPA and the San Bernardino County Development Code, was observed during surveys and is considered present within the project site. An inventory of all plant species recorded by biologists during the surveys is included in Table 3 of **Appendix D**.

Wildlife

Prior to conducting biological field surveys, various literature and databases were reviewed to identify special-status wildlife with potential to occur on the project site. These sources included:

- USFWS IPaC (USFWS 2023)
- CNDDDB RareFind 5 (CDFW 2023)
- USFWS Designated Critical Habitat Maps
- San Bernardino Countywide Plan (San Bernardino County 2022), All Biological Resources

Special-status wildlife species identified in database searches as having moderate or high potential to occur on the project site included American badger (*Taxidea taxus*), Bell's sparrow (*Artemesiospiza belli belli*), desert kit fox (*Vulpes macrotis mutica*), golden eagle (*Aquila chrysaetos*), Le Conte's thrasher (*Toxostoma lecontei*), loggerhead shrike (*Lanius ludovicianus*), MGS, Mohave River vole (*Microtus californicus mohavensis*), Mojave desert tortoise, Mojave fringe-toed lizard (*Uma scoparia*), mountain plover (*Charadrius montanus*), prairie falcon (*Falco mexicanus*), western burrowing owl (*Athene cunicularia*), and western snowy plover (*Charadrius nivosus nivosus*).

Of these, Mohave River vole, Mojave fringe-toed lizard, mountain plover, and western snowy plover were determined to be absent due to lack of suitable habitat present within the project site (**Appendix D**). The remaining species confirmed or expected to occur within the project site are outlined below. An inventory of vertebrate wildlife species observed during the surveys is included in Section 4.2 of **Appendix D**. Field data resulting from surveys is included in **Figure 3.3-3, Sensitive Species Data from Field Efforts**.

American badger (SSC). American badgers are associated with grasslands and desert scrublands throughout the southwestern United States (National Parks Service 2022). The project site supports suitable habitat for this species in the form of desert scrub. While targeted surveys were not performed for American badger, survey protocol for documenting American badger is consistent with that for Mojave desert tortoise, which was surveyed for, so preliminary surveys occurred simultaneously. Although no sign of American badger was detected during survey efforts, suitable habitat for American badger is available within the project site. For these reasons, American badger is assumed to be present within the project site.

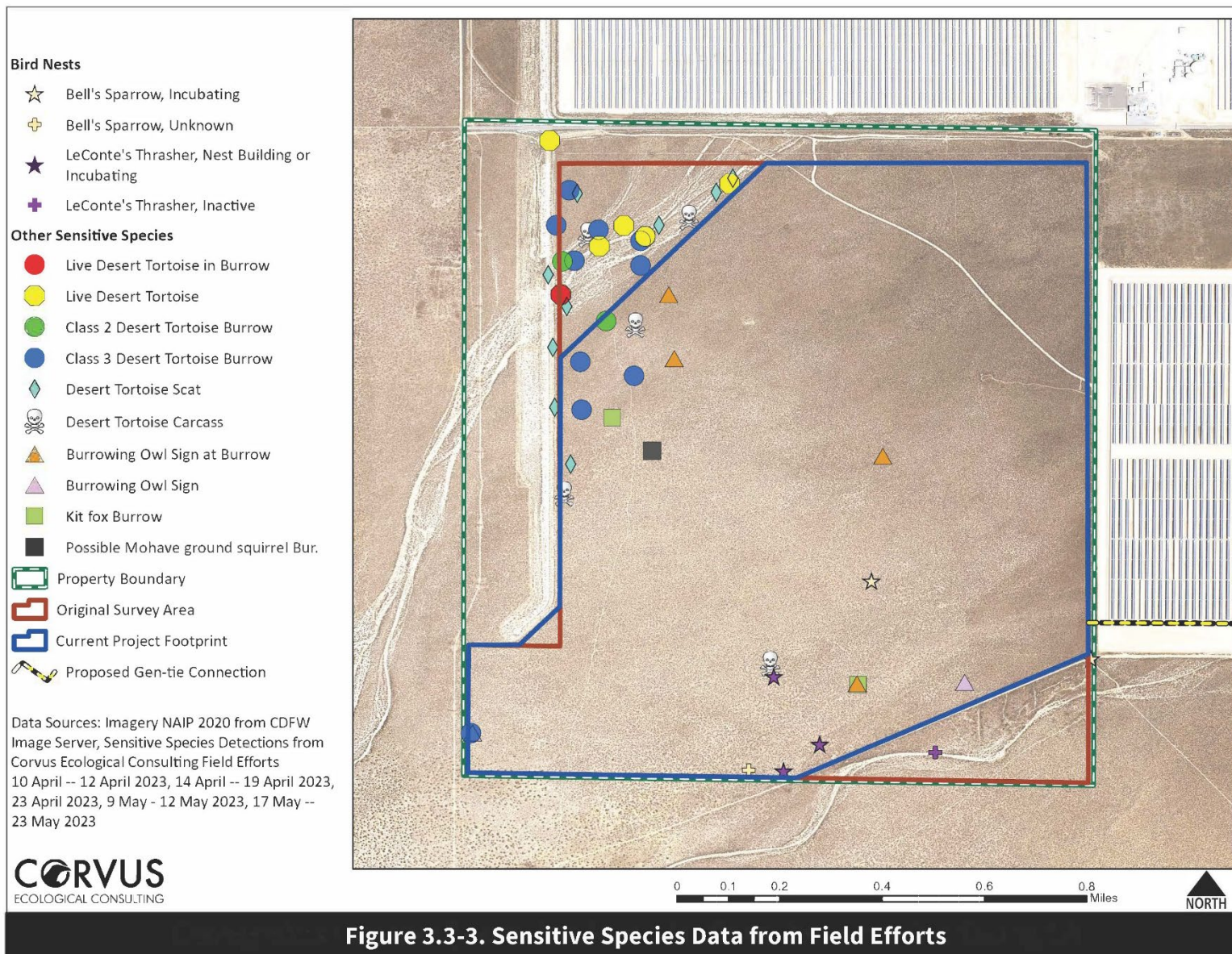


Figure 3.3-3. Sensitive Species Data from Field Efforts

Bell's sparrow (WL). This species seeks cover in dense stands of creosote scrub and forages on insects, spiders, and seeds on the ground below. Nests tend to be located in or beneath shrubs. Breeding pairs and singing male Bell's sparrows were observed throughout the project site and multiple active nests were recorded. Nest locations belonging to this species are depicted in **Figure 3.3-3**.

Desert kit fox (CDFW Fur-Bearing Mammal). Desert kit foxes inhabit arid climates like chaparral, grasslands, and desert scrub, such as that found within the project site (Patton 2008). This species is mostly nocturnal, hunting shortly after sunset for small animals such as kangaroo rats (*Dipodomys spp.*), meadow voles (*Microtus pennsylvanicus*), prairie dogs (*Cynomys spp.*), rabbits, insects, lizards, snakes, and ground-dwelling birds. Although desert kit fox is not listed by the USFWS or CDFW under any formal special-status designation, it is considered a regionally important species. Further, this species is considered a "fur-bearing mammal" and is therefore protected from take under the CDFW 2017–2018 Mammal Hunting Regulations (Subdivision 2, Chapter 5). As noted in **Figure 3.3-3**, a potential desert kit fox burrow was observed during surveys; therefore, this species is assumed present within the project site.

Golden Eagle (FP, WL). Golden eagles forage and hunt for food in open and semi-open grasslands and native vegetation. Their typical prey includes small to medium-sized mammals but can also include larger mammals. Nests are typically constructed on cliffs in close proximity to hunting grounds (Cornell 2019a). The desert scrub habitat found within the project site presents suitable foraging habitat for this species. Although the golden eagle was not observed during field surveys, this species is considered potentially present due to the presence of suitable habitat within the project site, and nests historically observed in the nearby Black Mountain Wilderness, with the nearest recorded nest occurrences approximately 2 miles to the east of the project site (Conservation Biology Institute 2023).

Le Conte's thrasher (SSC). This species inhabits sparsely vegetated desert flats, sand dunes, alluvial fans, washes, and gently rolling hills with a high proportion of saltbush or cholla for nesting. It is an uncommon and local resident in low desert scrub throughout most of the Mojave Desert. Its breeding range in California extends from these areas into the eastern Mojave, north into the Owens Valley, and south into the lower Colorado Desert and eastern Mojave. The native desert scrub communities found within the project site provide suitable foraging and nesting habitat. Further, several breeding pairs were observed in various stages of nest building and incubation. These recorded nest locations are depicted in **Figure 3.3-3**.

Loggerhead shrike (SSC). This species occurs in open habitats (e.g., cropland, pastures, old orchards, cemeteries, golf courses), desert scrublands, riparian areas, and open woodlands with scattered small trees, fences, utility lines, or other perches. It tends to nest in trees, and specifically within thorny vegetation (Cornell 2019b). Although loggerhead shrike was not observed during field surveys, suitable feeding and foraging habitat occurs throughout the project site in the form of desert scrub. Therefore, this species is assumed present within the project site.

Mohave ground squirrel (ST). MGS is a medium-sized diurnal ground squirrel, endemic to a limited habitat in the western Mojave Desert and listed as Threatened under the California Endangered Species Act (CESA). MGS has one of the smallest geographic ranges of any ground squirrel in North America, and thus conservation of the species is inextricably linked with conservation of the habitat. MGS diet is

influenced by rainfall; they feed on a wide variety of leaves and seeds of native shrubs, annual plants, and fruits (CDFW 2024). MGS were not observed during the 9-day visual survey period nor were any other sensitive mammal species. CDFW considers a site to be occupied by MGS if an individual of this species is observed, or is captured on any sampling grid, on the site. Ten motion-activated game cameras and associated bait stations were placed within the project site and remained operational between April 17 and May 21, 2023 (**Figure 3.3-4, Mohave Ground Squirrel Camera Trap Locations**). During this period, 102,000 photos were captured and reviewed but no images of MGS were recorded. This finding (or lack thereof) does not constitute absence of MGS, particularly since the project site is within a Core Population Area (CPA) for MGS. Additionally, one small mammal burrow was observed that fit the criteria of a potential MGS burrow. Additional surveys following the live trap sampling grid protocol designated by CDFW (2010) would need to be performed to arrive at a presence/absence determination for MGS. Due to the project's location, historical database records, and presence of suitable habitat, MGS are assumed to be present within the project site, unless determined absent in subsequent survey efforts.

Mojave Desert tortoise (FT, ST). Mojave desert tortoise (herein referred to as “desert tortoise”) inhabits a variety of desert habitats, including desert scrub, sandy flats, and rocky foothills (USFWS 2024). USFWS protocol surveys were conducted in accordance with the protocols described in the USFWS's 2019 updated guidance, *Preparing for Any Action That May Occur Within the Range of the Mojave Desert Tortoise (Gopherus agassizii)* (USFWS 2019). Per USFWS survey protocols, a survey with 100 percent visual coverage over the anticipated action area was performed by two surveyors walking 10-meter parallel transects, providing sufficient coverage to locate signs of desert tortoise use (e.g., scat, burrows, tracks, carcasses, courtship rings, drinking depressions, live tortoises). Guidance provided in the USFWS (2009) field manual was followed to assess the quality and condition of sign. Predetermined transect routes were downloaded to handheld global positioning system units used to navigate the transects and record data occurrences (approximately 3-meter accuracy). Paper data sheets and digital data collection were completed by experienced desert tortoise surveyors. Photographs were collected of all desert tortoise and associated sign.

This species was observed within the project site. Biologists detected seven live desert tortoises on the project site between April and May 2023, one of which was a juvenile (**Figure 3.3-3**). Three detections were made during focused 10-meter protocol level baseline surveys, and four additional detections were made by biologists working on other tasks. Based on size differences and other distinguishing characteristics, it is believed that five distinct individuals were encountered during spring 2023.

Three desert tortoise detections made during focused 10-meter transect surveys can be used to estimate desert tortoise densities using USFWS guidance (USFWS 2019). Following the referenced protocol, there are an estimated 5.6 adult individuals within the project site. This translates to 2.0 individuals per square kilometer in the project site, which is lower than the estimated average density of 2.8 per square kilometers within the West Mojave Recovery Unit, where the project site is located. Densities can vary significantly depending on habitat quality, environmental conditions, and other factors.

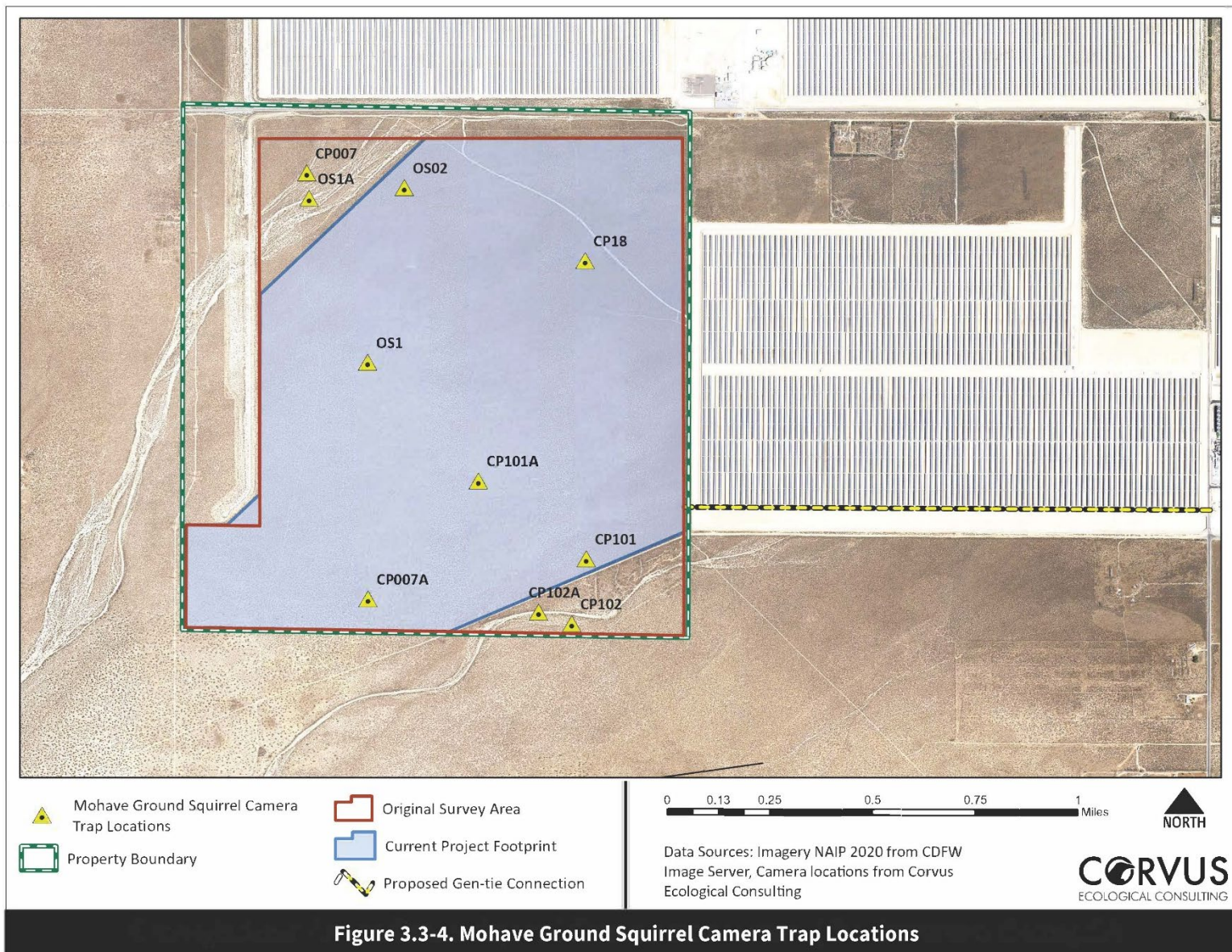


Figure 3.3-4. Mohave Ground Squirrel Camera Trap Locations

All tortoise sightings were near the northwest corner of the project site, in proximity to a large abandoned dry wash (**Figure 3.3-3**). Other desert tortoise sign recorded during surveys included suitable burrows, recent scat, and four carcasses estimated to be more than 4 years old.

Prairie Falcon (WL). This species occurs in open habitats, including sagebrush, desert, prairie, agricultural fields, and alpine meadows. Their nests are typically found on ledges on sheer rocky cliffs (Cornell 2019c). Although not observed during field surveys, suitable habitat occurs throughout the project site in the form of desert scrub. Therefore, this species is assumed present.

Western burrowing owl (SSC). Western burrowing owls are primarily found in open areas with short vegetation and bare ground in deserts, grasslands, and shrub-steppe environments. Breeding commonly occurs in native prairies, pastures, fallow fields, road and railway rights-of-way, canal embankments, and urban habitats. Burrowing owls are dependent on the presence of pre-existing mammal burrows that are used for nesting and roosting. Burrowing owl habitat is present on the project site in the form of open desert scrub.

Initial burrowing owl surveys were conducted during peak breeding season in 2023 (April 15 to July 15), with two biologists walking 10-meter belt transects across the original survey area. Biologists examined natural and artificial substrates for occupation by western burrowing owl, and recorded evidence of use (i.e., feathers, pellets, burrows, whitewash, egg fragments, live animals/breeding pairs, and live birds). Biologists marked all occupied and suitable burrowing owl burrows during this effort. During May 2023 and April 2024, all suitable western burrowing owl burrows were revisited in an effort to determine occupancy and site use. Additional western burrowing owl focused surveys were performed in May, June, and July 2024, within the current project site and a 150-meter buffer. No live burrowing owls were observed; however, evidence of their presence was recorded in the form of active soil burrows, scat, and pellets (**Figure 3.3-3**). For these reasons, western burrowing owl is assumed to be present within the project site.

3.3.1.3 Wildlife Corridors and Habitat Linkages

Wildlife corridors are landscape elements that provide for species movement and dispersal between two or more open spaces or large core habitat areas, allowing gene flow through diffusion of populations over a period of generations, as well as allowing “jump-dispersal” for some species between neighboring habitats. Habitat linkages are typically large open space areas (on a landscape scale) containing natural habitats that provide such connections. Linkages can form large tracts of natural open space and serve as “live-in” or “resident” habitats. There are no wildlife corridors traversing the project site as designated by the San Bernardino Countywide Plan/Policy Plan (San Bernardino County 2022) or Desert Renewable Energy Conservation Plan (DRECP).

3.3.2 Regulatory Framework

3.3.2.1 Federal

Endangered Species Act

The federal Endangered Species Act (ESA) establishes the legal framework for the listing and protection of species (and their habitats) identified as being endangered, threatened with extinction, or candidates for both. Actions that jeopardize federally listed species and the habitats upon which they

rely are considered a “take” under the federal ESA and are prohibited without a special permit. The federal ESA allows for take of a threatened or endangered species incidental to proposed actions pursuant to Incidental Take Permit (ITP) regulations. Section 7 of the federal ESA also allows for such takes when a federal permit is required (e.g., Clean Water Act [CWA] Section 404 permit) after formal consultations have deemed that proposed disturbance activities will not jeopardize the continued existence of the species.

Clean Water Act

CWA Section 401 requires any applicant for a federal license or permit that is conducting any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the appropriate RWQCB that the discharge will comply with applicable effluent limitations and water quality standards. CWA Section 404 prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (USACE).

In addition to streams with a defined bed and bank, the definition of waters of the United States includes wetland areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 Code of Federal Regulations [CFR] 328.3 7b). The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM; 33 CFR Section 328.4[c][1]). For adjacent wetlands, the limits of jurisdiction extend beyond the OHWM to the outer edge of the wetlands. The presence and extent of jurisdictional wetlands are determined through the examination of vegetation, soils, and hydrology, and exhibit hydrophytic vegetation, wetland hydrology, and hydric soils.

Impacts to jurisdictional resources require either a nationwide permit or an individual permit, depending on the extent of the impact. Mitigation of such impacts is required as a condition of the Section 404 permit and may include on-site and/or off-site wetland preservation, creation, restoration, and/or enhancement. To achieve no net loss of wetlands, the characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 United States Code [U.S.C.] Section 703 et seq.) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California incorporates the protection of birds of prey in California Fish and Game Code (CFGC) Sections 3800, 3513, and 3503.5. All raptors and their nests are protected from take or disturbance under the MBTA and CFGC Section 3503.5.

Bald and Golden Eagle Protection Act

In addition to MBTA protections, the golden eagle and bald eagle are afforded additional protection under the Bald and Golden Eagle Protection Act, amended in 1973 (16 U.S.C. Section 668 et seq.). The Bald and Golden Eagle Protection Act protects bald eagles and golden eagles by prohibiting the taking, possession, and commerce of these species, and establishes civil penalties for violation of this act. Take

of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” To disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior (72 *Federal Register* 31132; 50 CFR 22.3).

Desert Renewable Energy Conservation Plan

In response to Executive Order S-14-08, which established a target of obtaining 33 percent of the State’s electricity from renewable resources by 2020, the California Energy Commission (CEC), CDFW, BLM, and USFWS have developed the DRECP. The plan area encompasses the Mojave and Colorado Desert regions in California, including all or a portion of the following counties: Kern, Los Angeles, San Bernardino, Inyo, Riverside, Imperial, and San Diego.

The DRECP is a joint State and federal natural communities conservation plan (NCCP) and part of one or more habitat conservation plans (HCP) that is intended to provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The plan is anticipated to provide long-term endangered species permit assurances to renewable energy developers and provide a process for conservation funding to implement the DRECP. It would also serve as the basis for one or more habitat conservation plans under the federal ESA.

In 2016, the BLM issued a Record of Decision, approving a Land Use Plan Amendment that represents the conclusion of Phase I of the DRECP, which identifies priority areas for renewable energy development while setting aside millions of acres for conservation and outdoor recreation. The BLM plan complements the non-federal land component of the DRECP (Phase II), which is ongoing, led by the CEC.

3.3.2.2 State

California Endangered Species Act

The CESA establishes the State’s policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The act mandates that State agencies do not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no State agency consultation procedures under the CESA. For projects that affect both a federally and State listed species, compliance with the federal ESA will satisfy the CESA if CDFW determines that the federal incidental take authorization is “consistent” with the CESA under CFGC Section 2080.1. For projects that result in take of a State-only listed species, the project proponent must apply for an ITP under CFGC Section 2081(b).

California Fish and Game Code

Native Plant Protection Act

The Native Plant Protection Act (CFGF Sections 1900–1913) prohibits the take, possession, or sale in California of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). Under specified circumstances, landowners can take listed plants, provided they first notify the

CDFW and give the agency at least 10 days to retrieve the plants before they are impacted (CFGF Section 1913).

Birds of Prey

Under CFGF Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the CFGF or any regulation adopted pursuant thereto.

“Fully Protected” Species

California statutes also afford “fully protected” status to certain species that cannot be taken, even with an ITP. Relative to the species that could occur on the project site, CFGF Section 3505 makes it unlawful to take “any bird of prey, or any part of such birds”; CFGF Section 3511 protects from take the American peregrine falcon (*Falco peregrinus*), golden eagle, southern bald eagle (*Haliaeetus leucocephalus*), and white-tailed kite (*Elanus leucurus*).

Species of Special Concern

Species of special concern are broadly defined as animals not listed under the CESA, but nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. This designation focuses research and management attention on these species to avert their need for listing by stimulating collection of additional information on the biology, distribution, and status of poorly known at-risk species and by identifying recovery efforts that might ultimately be required. Species of special concern are included in the Special Animals List tracked in the CDFW California Natural Diversity Database.

Nongame Mammals

The regulations pertaining to the protection of nongame mammals are outlined in Section 4150 of the CFGF. A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A nongame mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission.

Porter-Cologne Water Quality Control Act

This act defines waters of the State as any surface water or groundwater, including saline waters, in California. The RWQCBs protect all waters in their regulatory scope but have special responsibility for isolated wetlands and headwaters that have high resource value, are vulnerable to filling, and may not be regulated by other programs (e.g., CWA Section 404). In addition to the Porter-Cologne Water Quality Control Act, the RWQCBs regulate waters of the State under CWA Section 401 (i.e., the Water Quality Certification Program) in connection with a CWA Section 404 permit, as previously discussed. If a project does not require a federal license or permit but may result in a discharge of harmful substances to waters of the State, the applicable RWQCB has the option to regulate such activities under its State authority in the form of waste discharge requirements or certification of waste discharge requirements.

For waters of the State that are federally regulated under the CWA, the State Water Resources Control Board (SWRCB) (through its RWQCBs) must provide State water quality certification pursuant to CWA Section 401 for activities requiring a federal permit or license that may result in discharge of pollutants into waters of the United States. Where no federal jurisdiction exists over waters of the United States, the SWRCB (through its RWQCBs) retains regulatory authority to protect water quality through provisions of California's Porter-Cologne Water Quality Control Act via application for or waiver of waste discharge requirements.

Lake and Streambed Alteration Program

CFGF Section 1602 requires a Lake or Streambed Alteration Agreement notification to the CDFW prior to initiating any activity that would (1) divert or obstruct the natural flow of or substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or (2) result in the disposal or deposition of debris, waste, or other material into any river, stream, or lake. The State definition of "lakes, rivers, and streams" includes those that flow at least periodically or permanently through a well-defined bed or channel (with banks) and support fish or other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning Act is aimed at conserving natural communities at the ecosystem scale for comprehensive regional protection of natural wildlife diversity and management of species, while allowing appropriate and compatible land development. The CDFW is primarily responsible for implementing this act.

California Desert Native Plants Act

Division 23 of the California Food and Agricultural Code protects California desert native plants from unlawful harvesting on both public and private lands, and it contains provisions to legally harvest native plants so as to ultimately transplant them with the greatest possible chance of survival. This act is applicable only in Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties.

CNPS Rare or Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS that are evaluated under the California Environmental Quality Act (CEQA) are:

- List 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
- List 1B: Plants rare, threatened, or endangered in California and elsewhere
- List 2A: Plants presumed extirpated in California but common elsewhere
- List 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere

California Desert Conservation Area Plan

The California Desert Conservation Area Plan is a comprehensive framework developed by the BLM to manage and conserve the extensive public lands within the California Desert Conservation Area, encompassing 25 million acres across southern California. Established under the Federal Land Policy

and Management Act of 1976, the California Desert Conservation Area Plan aims to balance the protection of the region's unique and diverse ecosystems with sustainable land uses such as recreation, mining, and renewable energy development. The regulatory framework involves zoning specific areas for different uses and activities, implementing stringent environmental protections, and coordinating with various stakeholders, including federal and state agencies, local governments, Native American Tribes, and the public. This ensures that land management decisions align with conservation objectives while addressing economic and social needs.

3.3.2.3 Local

San Bernardino County Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Natural Resources Element

GOAL NR-5	Biological Resources: An interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors.
<i>Policy NR-5.1</i>	The San Bernardino Countywide Plan includes policy NR-5.1, which encourages landscape-scale habitat conservation planning and coordination with existing or proposed habitat conservation and natural resource management plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions; and for land development and infrastructure permitting.
<i>Policy NR-5.2</i>	The San Bernardino Countywide Plan includes policy NR-5.2, which encourages coordination with public and nongovernmental agencies to seek funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species.
<i>Policy NR-5.3</i>	The San Bernardino Countywide Plan includes policy NR-5.3, which prioritizes conservation actions that demonstrate multiple resource preservation benefits, such as biology, climate change adaptation and resiliency, hydrology, cultural, scenic, and community character.
<i>Policy NR-5.6</i>	The San Bernardino Countywide Plan includes policy NR-5.5, which supports the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. We require public and private conservation lands or mitigation banks to ensure that easement and fee

title agreements provide funding methods sufficient to manage the land in perpetuity.

Renewable Energy and Conservation Element

GOAL RE-4 The County will establish a new era of sustainable energy production and consumption in the context of sound resource conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels.

Policy RE-4.1 Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.

Policy RE-4.7 Renewable Energy project site selection and site design shall be guided by the following priorities relative to habitat conservation and mitigation:

1. Avoid sensitive habitat, including wildlife corridors, during site selection and project design.
2. Where necessary and feasible, conduct mitigation on-site.
3. When on-site habitat mitigation is not possible or adequate, establish mitigation off-site in an area designated for habitat conservation.

Policy RE-4.8 Encourage mitigation for Renewable Energy generation facility projects to locate habitat conservation offsets on public lands where suitable habitat is available.

Policy RE-4.8.1 Collaborate with appropriate state and federal agencies to facilitate mitigation/habitat conservation activities on public lands.

Policy RE-4.9 Encourage Renewable Energy facility developers to design projects in ways that provide sanctuary (i.e., a safe place to nest, breed and/or feed) for native bees, butterflies and birds where feasible and appropriate, according to expert recommendations.

San Bernardino County Development Code

Development Code Section 88.01.060 is a subset of the County's Plant Protection and Management Code, which focuses on the conservation of specified desert plant species and is therefore applicable to the project site since the project site is in the County's Desert Planning Region.

Division 2, Land Use Zoning Districts and Allowed Land Uses

Chapter 82.11, Biotic Resources (BR) Overlay, implements Countywide Plan/Policy Plan policies for the protection and conservation of beneficial unique, rare, threatened, or endangered plants and animal resources and their habitats in certain unincorporated areas identified by a federal, State, or county agency. For new developments or increased development of existing land uses by more than 25 percent, the land use application must include a biotic resources report evaluating all biotic resources

on and adjacent to the project site which could be impacted and identifying mitigation measures for significant impacts.

Division 8, Resource Management and Conservation

Chapter 88.01, Plant Protection and Management, includes regulations and guidelines for the management of biotic resources in unincorporated areas under private or public ownership, including conservation of native plant heritage; regulation of native plant and tree removal activities; protection and maintenance of local watersheds; preservation of habitats for rare, endangered, or threatened plants; and protection of wildlife with limited or specialized habitats. Chapter 88.01 also requires a permit prior to removal of regulated trees and plants.

Division 4, Standards for Specific Land Uses and Activities

Chapter 84.29, Renewable Energy Generation Facilities, establishes standards and permit procedures for the establishment, maintenance and decommissioning of renewable energy generation facilities. These regulations are intended to ensure that renewable energy generation facilities are designed and located in a manner that minimizes visual and safety impacts on the surrounding community. It also outlines the regulations for the conservation of native desert plant species within the county. It establishes the requirements for permits needed to remove or disturb specified plants, including Joshua trees, Mojave yuccas, and various species of cacti. The section mandates that any development or land use activity that impacts these plants must follow strict guidelines to minimize harm, ensure proper relocation or replacement, and maintain ecological balance. Additionally, the code specifies penalties for non-compliance and emphasizes the importance of protecting the native desert flora to preserve biodiversity and the natural landscape.

3.3.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to biological resources if it would do any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by CWA Section 404 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State HCP.

3.3.4 Project Impacts and Mitigation

Impact 3.3-1: The project could have a potentially adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Impacts would be less than significant with mitigation.

Special-Status Plant Species

Silver cholla, a cactus protected by the CDNPA and the County Development Code, is present within the project site. The stated purpose of the CDNPA is to protect California desert native plants from unlawful harvesting on both public and privately owned lands. Compliance with the CDNPA includes permitting requirements for harvesting protected species.

The proposed project has the potential to directly impact silver cholla by removing and/or relocating species located within the project site. This potential direct impact would be mitigated to less than significant with implementation of **Mitigation Measure BIO-1. Mitigation Measure BIO-1** would reduce direct impacts to silver cholla by requiring compliance with the CDNPA. Specifically, surveyors shall mark all silver cholla individuals prior to ground-disturbing activities. All cacti and other plants protected by the CDNPA shall be transplanted outside of a disturbance area whenever feasible. Required permits shall be obtained to allow for take and other impacts to CDNPA protected species.

Special-Status Wildlife Species

A total of 10 special-status wildlife species, including 1 reptile, 3 mammals, and 6 avian species, were determined to be present or assumed present within the project site. These species and potential direct and indirect impacts resulting from the proposed project are discussed in detail below.

Direct Impacts

Reptiles

Mojave Desert Tortoise

Several live Mojave desert tortoises were observed on the project site during surveys. Project disturbance activities (e.g., vegetation clearing, project site grading, excavation earthwork) present a potentially significant impact to desert tortoises including habitat loss, disruption of burrows, increased mortality, increased predation, and stress and behavioral changes. Potential direct impacts would be mitigated to less than significant levels with implementation of **Mitigation Measures BIO-2 through BIO-5**. These mitigation measures include conducting biological resources training as part of a worker environmental awareness program (WEAP) that discusses desert tortoise and other special-status species (**BIO-2**), biological monitoring (**BIO-3**), establishing limits of disturbance areas and installation of desert tortoise exclusion fencing (**BIO-4**), coordinating with agencies and purchasing compensatory mitigation (**BIO-5**).

Mammals

American badger and desert kit fox are presumed present within the project site due to the presence of suitable habitat and potentially suitable burrows. Initial surveys for MGS did not identify the species, but additional survey efforts are required to determine presence or absence of the species.

Burrows and sign potentially belonging to American badger and one potential desert kit fox burrow were observed within the project site. MGS were not observed during the 9-day visual survey period, nor were any other sensitive mammal species. This finding (or lack thereof) does not constitute absence of MGS, particularly since the project site is within a CPA for MGS. Additionally, one small mammal burrow was observed that fit the criteria of a potential MGS burrow. Additional surveys following the live trap sampling grid protocol designated by CDFW (2010) would need to be performed to arrive at a presence/absence determination for MGS. Due to the project's location, historical database records, and presence of suitable habitat, MGS are assumed to be present within the project site, unless determined absent in subsequent survey efforts. Because the project has the potential to impact federal and State protected species, and other sensitive biological resources, consultation with USFWS and CDFW shall be conducted on an ongoing basis to determine if the project will result in take of special-status species. Project disturbance activities (e.g., vegetation clearing, project site grading, excavation earthwork) present potentially significant impacts to American badger, desert kit fox, and MGS through habitat loss, disruption of burrows and dens, increased mortality, and stress and behavioral changes. These potential direct impacts to these three mammal species would be reduced to less than significant with implementation of **Mitigation Measures BIO-2, BIO-3, and BIO-5**, determining presence or absence of MGS through trapping efforts (**Mitigation Measure BIO-6**), and conducting den surveys and establishing non-disturbance buffers for American badger and desert kit fox (**Mitigation Measure BIO-12**).

Birds

Western Burrowing Owl

During March 2024, multiple conservation groups petitioned the California Fish and Game Commission to request legal protection for this species under the CESA. Potentially active western burrowing owl burrows were observed during project surveys; therefore, this species is assumed to be present on the project site. The project has the potential to impact burrowing owl individuals if they are present on the project site at the time of scheduled disturbance activities. **Mitigation Measure BIO-7** would reduce impacts to western burrowing owl to less than significant by requiring pre-construction burrowing owl surveys and coordination with CDFW if relocation is required.

Bell's Sparrow, Le Conte's Thrasher, Loggerhead Shrike, and Prairie Falcon

Nests belonging to Bell's sparrow and Le Conte's thrasher were observed within the project site, and suitable foraging and nesting habitat for loggerhead shrike and prairie falcon is also present. Although loggerhead shrike and prairie falcon were not observed during surveys, the presence of suitable habitat within the project site introduces potential for these species to occur. None of these species are likely to nest within developed areas; however, any of these species could use fences and utility lines associated with the existing solar facility and gen-tie connection area.

Removal of on-site vegetation communities during project disturbance activities could result in direct impacts to the sensitive bird species discussed above, as well as avian nests protected by the MBTA and CDFW (e.g., nest abandonment or mortality of young), if nesting birds are present on the project site at the time of construction.

Potential direct impacts to sensitive avian species and all nesting birds would be reduced to less than significant with implementation of **Mitigation Measure BIO-8**. This measure includes the implementation of pre-construction nesting bird surveys, establishment of non-disturbance buffers around active nests, and monitoring active nests.

Golden Eagle

As with nearly all desert scrub habitats through San Bernardino County, the project site has the potential to be used for foraging by golden eagle. Unincorporated San Bernardino County consists of over 12.3 million acres of land and over 9.8 million acres, or over 80 percent of that land consists of desert scrub (NLCD 2023). The proposed project would convert about 596 acres of desert scrub habitat, or less than 0.0001 percent of such lands present within unincorporated San Bernardino County. Further, some prey may inhabit the area around solar modules, especially as some vegetation re-establishes between the panels, in order to escape detection from raptors flying overhead (due to the cover that the solar modules would provide). Even after the conversion of existing scrub habitat to solar generation, raptors may still be able to hunt for rodents, small birds, and reptiles in solar fields from perches such as the solar modules themselves or fencing and utility structures surrounding the facilities.

With respect to golden eagles, the DRECP lists some parts of Harper Valley and Water Valley as predicted suitable foraging habitat. Given the abundance of desert scrub habitat in the surrounding area, and the fact that the Mojave Solar Facility currently exists between the project site and the recorded nest occurrences, conversion of a small amount of desert scrub to solar generation uses would not constitute a significant loss of foraging land. There would continue to be sufficient remaining nesting and foraging habitat in the vicinity to support viable raptor populations on a regional scale.

In general, although the project would result in the conversion of desert scrub with the potential to be used for foraging by raptors, it would not cause individuals to be killed or otherwise significantly harmed because the birds are highly mobile, would naturally avoid the active construction site for nesting, and would be afforded adequate foraging habitat during project operation and after decommissioning. Additionally, WEAP (**Mitigation Measure BIO-2**), biological monitoring (**Mitigation Measure BIO-3**), coordinating with agencies and purchasing compensatory mitigation (**Mitigation Measure BIO-5**), and pre-construction nesting bird surveys, establishment of non-disturbance buffers around active nests, and monitoring active nests (**Mitigation Measure BIO-8**) shall be implemented to avoid and reduce impacts to golden eagle and other protected species. As such, the project would result in less than significant impacts to golden eagle foraging.

Avian Collisions

The “lake effect” hypothesis suggests that solar arrays could be an attractant to avian species. When solar arrays are oriented in a horizontal position, birds or their insect prey may mistake them for a water body and may attempt to land or fly towards solar arrays. These often result in a collision leading to

death, injury, or being trapped among arrays or other infrastructure at solar facilities (Lovich and Ennen 2011; BLM and DOE 2012; Kagan et al. 2014).

Walston et al. (2016) reviewed information on the lake effect hypothesis and synthesized available information on avian monitoring and mortality at utility-scale solar energy facilities in the United States. The study identified three concentrating solar energy facilities in southern California for which there was sufficient information to calculate avian mortality.

The study estimated that the combined annual rate of avian mortality from the three solar energy facilities ranged from 0.5 to 10.24 birds per megawatt (MW) per year after adjusting to account for average searcher efficiency and average carcass persistence. However, the total avian mortality at each site was more consistent and averaged 9.9 birds per MW. As a comparison, the rate of mortality calculated for all solar energy facilities in Southern California is far lower than other common causes of avian mortality including collision with transmission lines, predation, electrocution, and emaciation. Thus, avian collisions with solar arrays are not considered a significant effect on a population level.

As with any human-made structures (such as buildings, windows, and communications towers), avian species may directly collide with the project's solar arrays. However, it should be noted that avian mortality resulting from collision with human-made structures is typically highest when projects are sited in areas of high bird use such as wetlands, riparian areas, migration corridors, and other avian habitat features (Lovich and Ennen 2011; Walston et al. 2016). While the project site is generally located along the Pacific Flyway, a major north-south flyway for migratory birds, major avian stopover locations in California, such as the Colorado River, Salton Sea, and Mono Lake, are distant from the project site.

During the project's construction, operation, and decommissioning, potential impacts to avian species would include collision risks associated with the project's solar arrays, transmission wires, fencing, and heavy equipment. Risk factors associated with collisions include the size of the facility, height of structures, specific attributes of structures (i.e., guy wires or lighting), development type, frequency of inclement weather, and differences in species or taxa's potential collision risk. Although impacts to individual birds as a result of a collision may occur over the life of the project, including during operation, the frequency and nature of collisions are not expected to significantly exacerbate, and no population-level impacts are anticipated. Thus, the project impacts associated with avian collisions are considered less than significant.

Decommissioning of Facilities

Over time, vegetation may re-establish between the panels through natural succession, and wildlife may inhabit the project site. Similar to impacts during the initial construction phase, potential direct impacts to such post-development wildlife habitats that may become established on-site could occur in the decommissioning phases. Such potential direct impacts would be reduced to less than significant with implementation of **Mitigation Measures BIO-1** through **BIO-8** and **Mitigation Measure BIO-12**. The mitigation measures identified would reduce impacts through determination of species presence prior to construction; worker education; identification of proper procedures to follow if a special-status species, or signs of the species, is observed within the project disturbance area; and implementation of other standard avoidance and/or minimization measures.

All decommissioning activities would comply with federal, State, and local standards and all regulations that exist when the project is decommissioned, including the requirements of San Bernardino County Development Code Section 84.29.060.

Indirect Impacts

Common Raven

The common raven (*Corvus corax*) is a common predator of desert tortoise. Ravens are opportunistic foragers who can be attracted to anthropogenic sources of food, water, and nesting substrates (Boarman 2002). To reduce the subsidies available to ravens, the project shall implement **Mitigation Measure BIO-9**, which will ensure that trash, debris, and other construction resources that could attract ravens are minimized and properly managed to the extent feasible.

General Best Management Practices

During project construction, indirect impacts to plants and wildlife may include increased exposure to dust and construction-related soil erosion and runoff. This could result in short-term indirect impacts on plant growth and vitality, and long-term indirect impacts on sedimentation, hydrology, and/or localized changes in topography, all of which may affect habitat quality. In addition, development of the project may result in edge effects to habitat surrounding the project site. This may include increased human presence in the surrounding areas resulting in trampling of plants and disruption of habitat, introduction of invasive plants and wildlife, and exposure to urban pollutants.

Mitigation Measure BIO-10 would provide for the implementation of best management practices (BMPs), including backfilling of trenches and covering materials to minimize the potential for wildlife entrapment, avoidance of toxic substances and other hazardous materials to the extent possible, and practices to manage runoff and erosion. These measures would help to reduce indirect impacts to special-status species to less than significant levels.

Decommissioning of Facilities

Similar to the impacts discussed previously for the construction phase of the project, indirect impacts could occur to wildlife or plant life during the decommissioning phase. Implementation of **Mitigation Measures BIO-2, BIO-3, and BIO-10** would reduce such potential impacts to less than significant.

All decommissioning activities would comply with federal, State, and local standards and all regulations that exist when the project is decommissioned, including the requirements of County Development Code Section 84.29.060.

Mitigation Measures:

- BIO-1** In compliance with the CDNPA, biologists familiar with silver cholla shall mark all the plants prior to ground-disturbing activities. All cacti and other plants protected by the CDNPA shall be transplanted outside of a disturbance area whenever feasible. Required permits shall be obtained to allow for take and other impacts to CDNPA protected species.
- BIO-2** Prior to any construction and decommissioning activity, the Applicant, in coordination with the Designated Biologist and Biological Monitor, shall provide all workers on the project with a WEAP briefing informing them of the biological resources on site and the required measures

to avoid unnecessary impact or take of these resources or their habitat. The WEAP shall place special emphasis on protected species including those listed below, and nesting birds protected under the FGC and MBTA, and any special status plants.

- Federally Threatened and State Threatened Mojave Desert Tortoise
- State Threatened Mohave Ground Squirrel
- California SSC/ Protected:
 - Western Burrowing Owl
 - Le Conte's Thrasher
 - Loggerhead Shrike
 - American Badger
 - Desert Kit fox
- California Watch-list Species:
 - Bell's Sparrow
 - Prairie Falcon
 - Golden Eagle

The program shall include the following elements:

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

BIO-3 The Applicant shall designate a Designated Biologist and/ or Biological Monitor(s) for all disturbance activities during construction and decommissioning of the project, outside of cleared areas or areas that are not encompassed by desert tortoise exclusionary fencing.

- Designated Biologist(s) and Biological Monitor(s) – Applicant shall ensure that the Designated Biologist(s) and Biological Monitor(s) are knowledgeable and experienced in the biology and natural history of the covered species. The Designated Biologist(s)

and Biological Monitor(s) shall be responsible for monitoring covered activities to help minimize and fully mitigate or avoid the incidental take of individual covered species and to minimize disturbance of covered species habitat.

- BIO-4** Desert tortoise exclusionary fencing shall be installed around the facility, in conjunction with the security fence, according to the specifications provided by the USFWS Desert Tortoise Field Manual (2009). The installation of desert tortoise exclusionary fencing will precede any ground-disturbing construction activities. Installation of desert tortoise exclusionary fencing will be supervised by a Designated Biologist or Biological Monitor.

Biological Monitors shall perform a clearance survey for desert tortoise within the exclusionary perimeter fencing, in accordance with the 2019 USFWS Clearance Survey Protocol for the Mojave Desert Tortoise. If the species is determined present within the project site, individual(s) shall be allowed to leave the site on their own or will be relocated by a biologist that is authorized to relocate desert tortoise by USFWS and CDFW.

Disturbance activities shall be monitored, as follows:

- Environmental awareness training (see **BIO-2**) shall include education on desert tortoise and Mohave ground squirrel, protective status, and avoidance measures to be implemented by all personnel, including looking under vehicles and equipment prior to moving. If desert tortoises or other protected species are encountered, such vehicles shall not be moved until they have voluntarily moved away from the vehicle and out of harm's way, or a qualified biologist has moved them.
- If a desert tortoise is present, a Biological Monitor shall be present during all disturbance activities in the vicinity of exclusionary fencing (if required) and shall have the authority to stop work as needed to avoid direct impacts to desert tortoises. Periodic biological inspections and maintenance shall be conducted during the construction period to ensure the integrity of exclusionary fencing (if required). Work may proceed within the excluded area when the Biological Monitor confirms all desert tortoises have left the excluded area.
- Should desert tortoises be found during construction activities, the Biological Monitor shall have the authority to stop work as needed to avoid direct impacts to tortoises, and further consultations with the USFWS and CDFW shall take place prior to relocating the desert tortoises.

Trash and food items shall be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators of desert tortoise (e.g., ravens, coyotes, feral dogs).

Employees shall not bring pets to the construction site.

- BIO-5** The Applicant shall acquire land to offset impacts to Mojave desert tortoise, Mohave ground squirrel and Western Burrowing Owl as applicable, as well as follow any regulations pertaining to applicable agency permits and agency coordination, such as Incidental Take Permits (ITPs). As applicable and as required and approved by USFWS and CDFW, offsite

compensatory mitigation land shall be put into a conservation easement and managed with the goal of providing suitable habitat and ensuring long-term protection for these species.

BIO-6 An MGS trapping routine shall be implemented prior to project site blading and clearing, or other significant impacts to vegetation that may directly affect this species. The trapping routine shall be similar in scope and scale to what is required to determine presence/absence in accordance with the 2023 CDFW Conservation Strategy for the Mohave Ground Squirrel *Xerospermophilus mohavensis*. Live trapped animals shall be moved offsite to a translocation area preapproved by CDFW. A Mohave Ground Squirrel Translocation Plan will provide details on the trapping and translocation of this species. A CDFW approved Mohave Ground Squirrel Translocation Plan will be in place at least 60-days prior to the start of construction.

BIO-7 Not more than 30 days prior to project disturbance activities, a qualified biologist(s) familiar and experienced with western burrowing owl shall perform a pre-construction clearance survey for this species in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. If western burrowing owl are not detected during pre-construction surveys, and if no burrows have active sign (tracks or scat), then construction related activities may begin and no further action shall be required and no further mitigation under this measure is necessary.

If western burrowing owl is present on-site, a non-disturbance buffer will be implemented. Fencing or flagging shall be installed to create a non-disturbance buffer area where no work activities may be conducted. The non-disturbance buffer will be a 200-meter radius from the occupied burrow during the breeding season (February 1st – August 31st), unless authorized by a qualified biologist. During the non-breeding season (September 1st – January 31st), no ground disturbing activities shall be permitted within 50-meters of an occupied burrow. A smaller buffer may be established in consultation with a qualified biologist.

If avoidance of an occupied burrow is infeasible, western burrowing owl may be passively relocated by a qualified biologist during the non-breeding season, or when owls have not laid eggs, or whenever juveniles are capable of independent survival. Passive translocation will follow a CDFW approved Burrowing Owl Exclusion Plan or Passive Relocation Plan that will be prepared and approved by CDFW prior to implementing relocation efforts. At a minimum, the plan will be prepared by a qualified biologist in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. The Burrowing Owl Exclusion Plan or Passive Relocation Plan shall include the following performance standards:

- Excavation shall require nonpowered hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow and monitored for at least 48 hours after installation. If burrows will not be directly impacted by the project, one-way doors shall be installed to prevent use and shall be removed after ground-disturbing activities have concluded in the area. Only burrows that will be directly impacted by the project shall be excavated and filled.
- Detailed methods and guidance for passive relocation of burrowing owls to off-site

“replacement burrow site(s)” consisting of a minimum of two suitable, unoccupied burrows for every Burrowing Owl or pair to be passively relocated.

- Monitoring and management of the replacement burrow site(s) and a reporting plan. The objective shall be to manage the replacement burrow sites for the benefit of Burrowing Owls (e.g., minimizing weed cover), with the specific goal of maintaining the functionality of the burrows for a minimum of 2 years.
- Monitoring active burrows during construction periods to ensure Burrowing Owls are not detrimentally affected. The Applicant, in consultation with CDFW, shall respond to monitoring results and implement additional measures to avoid disturbances that could result in nest failure during the breeding season, or impacts that could result in injury or mortality at any time.
- Compensatory Mitigation to offset impacts by purchasing and managing off-site habitat or by purchasing mitigation credit, as approved by CDFW. (see **BIO-5**).

BIO-8 To avoid construction-level impacts to nesting birds during the nesting breeding bird season (February 1st through August 31st), no earlier than 7 days prior to commencement of scheduled ground disturbance activities, a qualified biologist with prior nesting bird survey experience shall perform a nest survey within 150-meters of the disturbance footprint, as accessible. If active nests are found, project disturbance activities shall be postponed or halted within a non-disturbance buffer surrounding each active nest (to be established by a qualified biologist) that is suitable to the particular bird species and nest location(s) until the nest(s) are vacated and juveniles have fledged or failed, as determined by the qualified biologist. Any such buffer(s) shall be clearly demarcated in the field with highly visible construction fencing or flagging, and construction personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall monitor construction activities near all such buffer(s) to ensure no inadvertent impacts on active nest(s). If special status species are involved and a non-disturbance buffer cannot be established, CDFW and/or USFWS shall be notified immediately for consultation on how to proceed.

BIO-9 To reduce the subsidies available to Common Ravens, a qualified biologist shall ensure the following measures are taken throughout the pre-construction, construction, operations and maintenance, and decommissioning stages of the project:

- Water used for construction and operation shall not be applied in such a manner to create pools or puddles. Availability of water subsidies to Common Ravens will be minimized to the extent practical.
- Roadkill and common wildlife killed during construction shall be removed and disposed of in ways that do not encourage scavenging. Availability of food subsidies to Common Ravens will be minimized to the extent practical.
- Sensitive species killed by Common Ravens shall be collected and reported to CDFW.
- Inactive Common Raven nests shall be removed, and deterrents erected, if possible, to reduce onsite presence.

- Active Common Raven nests will be reported to the appropriate agency for management and removal.
- Trash receptacles shall be covered and secured to prevent scavenger access. WEAP training shall inform all workers about the need to prevent scavenger access to open trash and food scraps.
- The Applicant will contribute \$105/ acres of disturbance to the Regional Raven Management Program.

BIO-10 The following BMPs shall be implemented during project grading and construction and decommissioning activities to address potential indirect impacts:

- **Backfill trenches.** At the end of each workday, all potential wildlife pitfalls (e.g., trenches, bores, excavation pits) shall be backfilled, covered, or sloped to allow wildlife egress. Should wildlife become trapped, the biological monitor shall be notified by construction personnel to remove and relocate the individual(s).
- **Cover materials.** All open ends of pipes, culverts, or other hollow materials temporarily installed in open trenches or stored in staging/laydown areas shall be covered/capped at the end of each workday. Any such materials that have not been capped shall be inspected by construction personnel for wildlife before being moved, buried, or handled. Should wildlife become trapped, a qualified biologist shall be notified by construction personnel to remove and relocate the individual(s).
- Soil binding and weighting agents used on unpaved surfaces shall be nontoxic to wildlife and plants.
- All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly handled or disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated staging area.
- The project shall incorporate methods to control runoff, including a stormwater pollution prevention plan to meet NPDES regulations. Implementation of stormwater regulations is expected to substantially control adverse edge effects (e.g., erosion, sedimentation, habitat conversion) during and following construction, both adjacent to and downstream from the project area. Typical construction BMPs specifically related to reducing impacts from dust, erosion, and runoff generated by construction activities shall be implemented. During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns, which will protect sensitive vegetation from being inundated with sediment-laden runoff. Dewatering shall be conducted in accordance with standard regulations of the RWQCB. An NPDES permit, issued by the RWQCB to discharge water from dewatering activities, shall be required prior to the start of dewatering. This permit will minimize erosion, siltation, and pollution in sensitive vegetation communities.

BIO-12 Qualified biologists shall conduct pre-construction den surveys for desert kit fox and American badger on the project site 14-30 days and 24 hours prior to any vegetation removal or ground disturbing construction activities. Because Mojave desert tortoises will utilize shelter sites created by American badger and desert kit fox, these surveys may take place concurrently with desert tortoise preconstruction clearance surveys. Pre-construction surveys for desert kit fox and American Badger will include disturbance areas and a 30-meter buffer to the extent allowable. The locations of American badger and desert kit fox dens will be recorded. Current status and use by American badger and desert kit fox will be determined through the use of wildlife cameras, scopes, and/ or tracking substrate. Inactive and unoccupied dens will be collapsed during clearance surveys. Active dens will be monitored, and a qualified biologist will establish a 50-meter non-disturbance buffer during the non-breeding season and a 150-meter non-disturbance buffer during the breeding/ pupping season (February 1 – May 15). The buffer size may be amended by a qualified biologist through consultation with CDFW. Active burrows shall be avoided until they are confirmed unoccupied by a qualified biologist.

Burrow occupancy will be determined using a tracking medium such as diatomaceous earth or fine clay, or infrared cameras placed at the entrance. If no tracks or evidence of activity is observed after 3 consecutive nights of monitoring, the burrow shall be scoped and backfilled using nonpowered tools. If tracks or evidence of burrow occupancy is observed, burrows shall be fitted with one-way trap doors for exclusion purposes. Infrared cameras will be used in conjunction with one-way trap doors to assess the effectiveness of exclusion efforts. At least forty-eight hours after installing one-way exclusion doors, and after confirming the effectiveness of exclusion efforts through photo review, the burrow will be scoped and backfilled using nonpowered tools. If occupancy monitoring reveals the burrow is being used for breeding/ reproductive purposes, CDFW will be consulted to determine the course of action pertaining to exclusion efforts and passive translocation.

To guard against the spread of distemper and other diseases, equipment and tools used for burrow occupancy monitoring and excavation will be treated with a disinfectant that's proven effective. This includes but is not limited to accelerated hydrogen peroxide, potassium peroxymonosulfate, or a 1:20 dilution of household bleach. Fieldworker clothing will be washed in hot water and dried using a dryer.

CDFW will be notified in dealing with injured, sick, or dead American badger or desert kit fox.

Level of Significance: Less than significant with mitigation.

Impact 3.3-2: The project could impact special-status riparian habitats or have a substantial adverse effect on sensitive or other special-status natural vegetation communities identified in local or regional plans, policies, or regulations or by the CDFW or USFWS. This impact would be less than significant with mitigation.

Special-Status Vegetation Communities

Direct Impacts

Due to proposed grading and construction requirements, it is anticipated that the project would directly impact all vegetation present within the project site. The gen-tie connection area is developed and therefore devoid of natural vegetation. The project site contains one vegetation community: alkali desert scrub, dominated by cattle saltbush. This vegetation community is commonly found adjacent to dry lake playa in low-lying areas and is not considered to be a sensitive vegetation community. It is not considered high priority by the CDFW or USFWS, nor is it identified in local or regional plans, policies, or regulations. No riparian habitats are present within the project site.

As depicted in **Figure 3.3-2**, the project site contains two distinct streams: one that crosses the northwest portion of the project site (the northern watercourse), and one that crosses the southeast portion of the project site (the southern watercourse). Because of the lack of a significant nexus to a traditional navigable water or other regulated waters, both the northern and southern waterways are considered isolated waters and are therefore not expected to be considered jurisdictional under CWA Sections 401 and 404.

Due to historical modifications and existing impoundments to the northern waterway, it is unlikely to fall under the jurisdiction of federal, State, or local agencies. The southern waterway is likely to be regulated by the CDFW under CFGC Section 1600, and by the RWQCB under California's Porter-Cologne Water Quality Control Act. The project would be designed to avoid all direct impacts to both waterways.¹

As discussed above, there is no riparian habitat present at the project site and alkali desert scrub is not a sensitive or special-status natural vegetation community. With the implementation of **Mitigation Measures BIO-1, BIO-2, and BIO-10**, direct impacts to vegetation communities would be reduced to less than significant.

For these reasons, project impacts to riparian habitats, or sensitive or other special-status natural vegetation communities would be less than significant with mitigation.

Decommissioning of Facilities

The project would not result in a significant impact to vegetation communities or other special-status habitats. Over time, as the newly installed infrastructure becomes part of the environmental setting, vegetation may re-establish through succession, and wildlife may inhabit the project site. Impacts associated with decommissioning would be similar in nature to those from construction. As discussed previously, there is no riparian habitat on the project site and alkali desert scrub is not a sensitive or

¹ Note that field work was completed before the project footprint was reduced for impact avoidance. Figures in this section do not reflect the current project boundary. The project footprint has been reduced to avoid both waterways.

special-status vegetation community. Therefore, no riparian habitat or sensitive or special-status vegetation communities would be directly impacted by decommissioning activity. Off-site vegetation communities would have the potential to be indirectly impacted in the form of dust. Mitigation measures applied during construction would be similarly applicable to decommissioning activities. Implementation of **Mitigation Measures BIO-1, BIO-2, and BIO-10** would reduce such potential impacts to riparian habitats, or sensitive or other special-status natural vegetation communities to less than significant.

Indirect Impacts

There are no off-site riparian areas or wetlands associated with the dry channel of the Mojave River floodplain near the project site. Therefore, the project would not result in significant riparian or wetland impacts (off-site) that could otherwise be related to indirect effects from dust, construction-related soil erosion and runoff, invasive plant species, and increased human presence during both the initial construction phase and the decommissioning phase.

Mitigation Measures: Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-10 would be required.

Level of Significance: Less than significant with mitigation.

Impact 3.3-3: The project would not have a substantial adverse effect on federally protected wetlands as defined by CWA Section 404 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Impacts would be less than significant with mitigation.

As previously described, the project site contains two aquatic features: one that crosses the northwest portion of the project site (the northern watercourse), and one that crosses the southeast portion of the project site (the southern watercourse). Due to the lack of a significant nexus to a traditional navigable water or other regulated waters, both the northern and southern waterways are considered isolated waters and are therefore not expected to be considered jurisdictional under CWA Sections 401 and 404. Further, implementation of **Mitigation Measure BIO-11** would ensure that impacts are avoided to any on-site jurisdictional waters, potentially including the northern and southern watercourse, and therefore would reduce potential impacts to federally protected wetlands to less than significant.

In addition, there are no riparian areas or wetlands associated with these aquatic features adjacent to the project site. Therefore, the project would have no impact on riparian or wetland impacts (off-site) that could otherwise be related to indirect effects from dust, construction-related soil erosion and runoff, invasive plant species, and increased human presence during both the initial construction phase and the decommissioning phase.

Mitigation Measures:

BIO-11 The project will avoid direct and indirect impacts to jurisdictional waters by excluding them from the development area. No construction related activities shall occur within 50 feet of the areas delineated as jurisdictional waters.

Level of Significance: Less than significant with mitigation.

Impact 3.3-4: The project would not interfere with the movement of native resident wildlife species or wildlife corridors, and it would not impede the use of native wildlife nursery sites. No impact would occur.

Wildlife corridors are landscape elements that provide for species movement and dispersal between two or more open spaces or large core habitat areas, allowing gene flow through diffusion of populations over a period of generations, as well as allowing “jump-dispersal” for some species between neighboring habitats. Habitat linkages are typically large open space areas (on a landscape scale) containing natural habitats that provide such connections. Linkages can form large tracts of natural open space and serve as “live-in” or “resident” habitats. There are no wildlife corridors traversing the project site, as designated by the San Bernardino Countywide Plan/Policy Plan, or DRECP. Further, the project site is located immediately to the south of the existing Lockhart Solar Facility and west of the existing Mojave Solar Facility and is surrounded to the west and south by undeveloped land. Therefore, the project would not reduce areas that would be utilized for wildlife movement, and opportunities for wildlife movement outside of the immediate vicinity of the project site would remain available.

In the Mojave Desert, native wildlife nursery sites are essential habitats where young animals are born and raised. Joshua tree woodlands, for example, provide nesting sites for birds and shelter and food for various reptiles and small mammals during their early life stages. Riparian areas support a high diversity of life and serve as nursery sites for amphibians. Caves and rock crevices are crucial for bats, offering safe nesting and roosting sites for giving birth and raising young, protected from predators and extreme temperatures. Sandy dunes are important for reptiles like the Mojave fringe-toed lizard, which lays its eggs in the sand where the loose soil provides ideal conditions for incubating eggs and foraging for young lizards. Biological surveys did not identify any native wildlife nursery sites within the project site and therefore no impacts would occur.

For these reasons, the project would have no impact on the movements of native resident wildlife species; similarly, it would have no impact to potential regional or local migratory wildlife corridors/linkages, nor would it impede the use of native wildlife nursery sites.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.3-5: The project could conflict with local policies or ordinances protecting biological resources. Impacts would be less than significant with mitigation.

The project site is within the planning area of several adopted local plans, including the Countywide Plan/Policy Plan (San Bernardino County 2022), the DRECP, and the County Development Code. However, the West Mojave Plan and the DRECP apply only to BLM-administered lands and therefore do not apply to the project. As such, the following analysis demonstrates project consistency with the following relevant County goals and policies relating to the protection of biological resources:

Natural Resources Element Goal NR 5 and Policies NR 5.1, NR 5.2, NR 5.3, NR 5.6, and NR 5.7. With implementation of Mitigation Measures BIO-1 through BIO-12, the project would be consistent with the

stated intent of this element to maintain and enhance biological diversity because the project would not interfere with the County's programs to:

1. Protect areas of special habitat value;
2. Conserve populations and habitats of commonly occurring species;
3. Provide a balanced approach to resource protection, preservation of rare and endangered species, and conservation of biological resources;
4. Establish long-term comprehensive plans to protect native species;
5. Establish conditions of approval for land use applications within the BR Overlay district for habitat protection and preservation of identified plants and/or animals specific to this district; and
6. Adopt a Mitigation Monitoring and Reporting Program as a condition of approval for projects requiring mitigation measures for impacts to biological resources.

Renewable Energy and Conservation Element Goal RE 4 and Policies RE 4.1, RE 4.7, RE 4.8, RE 4.8.1, and RE 4.9. With implementation of **Mitigation Measures BIO-1 through BIO-12**, the proposed project would be consistent with the stated intent of this element to collaborate with appropriate federal and State agencies to facilitate mitigation/habitat conservation offsets on public lands where suitable habitat is available because the project would not interfere with the County's programs to:

1. Balance sustainable energy production with sound resource conservation;
2. Apply standards to the design, siting, and operation of renewable energy facilities that protect special-status biological resources; and
3. Select and design renewable energy sites to conserve habitat; avoid impacts to special-status habitats and wildlife corridors; and provide sanctuary for native bees, butterflies, and birds, where feasible and appropriate.

Development Code Section 88.01.060. With implementation of **Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-5, and BIO-10**, the project would be consistent with the stated intent of this code section to conserve specified desert plant species because the project would not impact special-status plants.

Development Code Chapter 82.11. This EIR is consistent with the requirement of Development Code Chapter 82.11 for a biotic resources report evaluating significant project impacts to and mitigation measures for biotic resources on and adjacent to the project site. In addition, the proposed project would not interfere with the County's programs to protect and conserve beneficial unique, rare, threatened, or endangered plants and animal resources and their habitats in unincorporated areas because the project would implement mitigation measures to reduce potential direct and indirect impacts to special-status habitats and wildlife species to less than significant levels.

Development Code Chapter 88.01. Because the project would implement mitigation measures to reduce potential direct and indirect impacts to special-status habitats and wildlife species to less than

significant levels, the proposed project would be consistent with and would not interfere with the County's programs for the:

1. Management of biotic resources in unincorporated areas under private or public ownership, including conservation of native plant heritage;
2. Regulation of native plant and tree removal activities;
3. Protection and maintenance of local watersheds;
4. Preservation of habitats for rare, endangered, or threatened plants; and
5. Protection of wildlife with limited or specialized habitats.

Mitigation Measures: Implement **Mitigation Measures BIO-1** through **BIO-12**.

Level of Significance: Less than significant with mitigation.

Impact 3.3-6: There are no adopted local, regional, or State HCPs or NCCPs with which the proposed project must comply. No impact would occur.

The proposed project would be located on private land and therefore is not subject to this plan. Additionally, the DRECP applies to the Mojave and Colorado deserts and provides binding, long-term endangered species permit assurances and facilitates renewable energy project review and approval processes. Although the project site is identified as a Development Focus Area in the DRECP, the proposed project is not subject to the DRECP because the project site is on private land. As such, the project would not be under the jurisdiction of an adopted HCP or NCCP and is not within sensitive areas identified by other State, regional, or local plans. In addition, as evaluated above, the project would not result in the loss or adverse modification of Critical Habitat. The project would have no impact.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.3-7: The proposed project in conjunction with other related projects could result in cumulatively considerable impacts to biological resources in the region. Impacts would be less than significant with mitigation.

The geographic scope for considering cumulative impacts on biological resources includes other related projects in the County's Desert Planning Region. **Table 3-1, Cumulative Projects**, and **Figure 3-1, Cumulative Projects Map**, in Section 3.0 of this EIR identify the related projects considered for this cumulative impact analysis, which consist primarily of other renewable energy projects.

Development of cumulative projects could result in direct take to special-status plant and wildlife species; construction, operational, and decommissioning disturbances; and/or special-status habitat conversion. While most of the cumulative projects would convert undeveloped land into renewable energy facilities, over time, vegetation communities would re-establish between the panels, fencing, and utility structures, allowing wildlife (e.g., rodents, raptors, small birds, and reptiles) to continue inhabiting and foraging on the sites over the lifetime of the projects (approximately 30 years). Decommissioning plans, required for solar projects, also outline revegetation requirements for potential habitat growth. Therefore, while habitat would be temporarily disturbed or removed

during the construction and decommissioning phases, operation and post-operation of such renewable energy facilities would not result in substantial permanent impacts to special-status species and habitats, and the affected lands could return to existing conditions for the foreseeable future.

Further, as with the proposed project, these cumulative projects would also be required to avoid and/or mitigate impacts to special-status species and habitats in accordance with County, CDFW, and USFWS requirements. Therefore, the project's less than significant impacts with mitigation incorporated, in combination with other reasonably foreseeable development projects in the County's Desert Planning Region, would not result in significant cumulative impacts to special-status species or habitats. Accordingly, the proposed project would not result in a considerable contribution to a significant cumulative impact.

Mitigation Measures: Implement Mitigation Measures BIO-1 through BIO-12.

Level of Significance: Less than significant with mitigation.

3.4 Cultural and Tribal Cultural Resources

This section evaluates the potential cultural and tribal cultural resource impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to cultural and tribal cultural resources, and includes mitigation measures required to reduce or avoid these impacts, as applicable. Paleontological resources and unique geological features are addressed in Section 3.6, Geology and Soils. A site-specific Cultural Resources Assessment prepared by PaleoWest, LLC was conducted and is provided as **Appendix E**. The analysis in this section is based on information from that report. San Bernardino County (County) did not receive any scoping comments related to cultural or tribal cultural resources.

A cultural resource is broadly defined in California Public Resources Code (PRC) Section 21074(a)(1) as any object or specific location of past human activity, occupation, or use that may be tangible or intangible, and identifiable through historical documentation, inventory, or oral evidence. By statute, the California Environmental Quality Act (CEQA) is primarily concerned with two classes of cultural resources: “historical resources,” which are defined in PRC Section 21084.1 and CEQA Guidelines Section 15064.5, and “unique archaeological resources,” which are defined in PRC Section 21083.2(g).

Historical resources include the following: 1) a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR); 2) a resource included in a local register of historical resources; and 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant.

Unique archaeological resources are defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal cultural resources, as defined in PRC Section 21074(a)(1), are resources with cultural value to a California Native American Tribe. A California Native American Tribe is a Native American Tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004. Tribal cultural resources may include archaeological sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe and are further defined in PRC Section 21074(a)(1)(A)-(B). The identification and appropriate treatment of tribal cultural resources is determined through consultation with Tribes.

3.4.1 Environmental Setting

3.4.1.1 Pre-contact, Ethnographic, and Historic Setting

The following short summary is derived from the cultural resources assessment prepared for this project (referenced in **Appendix E**) and the Cultural Resources Assessment for the Desert Breeze Solar Project (LSA Associates 2023).

Pre-contact Setting

The pre-contact history of the Western Mojave Desert is commonly divided into a cultural-ecological framework based on climactic periods: the Late Pleistocene (10,000–8000 calibrated [cal] B.P.), the Early Holocene (8000–6000 cal B.P.), the Middle Holocene (7000–3000 cal B.P.), and the Late Holocene (2000 cal B.P. to Contact). Changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, which begins with gradual environmental warming in the late Pleistocene, continues with the desiccation of the desert lakes, followed by a brief return to pluvial conditions (which occurred at Harper Lake and presumably facilitated a transient increase in occupation), and concludes with a general warming and drying trend, with periodic reversals that continue to the present.

The overall cultural ecology of the project region was dominated by response to the changing climate of the Late Pleistocene/Holocene and its direct effects on the environment, more specifically the fluctuating levels of the gradually receding Harper Lake and its related resources. Refinements of technology would have been required (such as a general reduction in point size for smaller game or an expansion of milling for increased reliance on floral resources) to continue effective exploitation of the changing floral and faunal resources of Harper Lake's environment.

The Rose Spring Complex marks the introduction of bow and arrow technology to the Mojave Desert, likely from neighboring groups to the north and east. As populations increased, groups began to consolidate into larger, more sedentary residential settlements indicated by the presence of well-developed middens and architectural styles. West and north of the Mojave River, increased trade activity along existing exchange networks ushered in a period of relative material wealth, exhibited by increased frequencies of marine shell ornaments and tool stone, procured almost exclusively from the Coso obsidian source. East and south of the Mojave River, archaeological evidence suggests there was a greater influence from Southwest and Colorado River cultures (i.e., Hakataya and Patayan).

Between approximately A.D. 1100 and contact, several cultural complexes emerged that archaeologists believe may represent prehistoric correlates of known ethnographic groups. Collectively known as the Late Prehistoric Cultural Complexes, material distinctions between groups were more apparent during this time, as displayed by the distribution of projectile point styles (e.g., Cottonwood vs. Desert Side-notched), ceramics, and lithic materials. Long-distance trade continued, benefiting those occupying "middleman" village sites along the Mojave River, where abundant shell beads, ornaments, and lithic tools have been recovered from archaeological contexts. Later, trade in Coso obsidian was significantly reduced as groups shifted focus to the procurement of local silicate stone.

Ethnohistorical Setting

The project area encompasses the traditional use areas of the Vanyume and the Serrano. The Vanyume, who are sometimes referred to as the Desert Serrano, are a subdivision of the Serrano that resided in villages and settlements along the Mojave River corridor in the Victorville region and to the north and east along the river as far as Soda Lake. At the time of Spanish contact, the project area was likely occupied by the Vanyume, a Takic-speaking branch of the larger Uto-Aztecan (or Shoshonean) language family. The Vanyume territory is generally accepted as consisting of the area south of the lower Mojave Riverbed and to the southeast into the foothills of the San Bernardino Mountains, and to the north and east along the river as far as Soda Lake. Ethnohistorical information on the Mojave River area from the 1770s through the 1840s makes it clear that the Mojave River communities of the Vanyume had developed long-standing political and social ties with the Mojave and functioned as intermediaries in the long-distance trade networks maintained by the Mojave.

The Serrano also belonged to the Takic-speaking branch of the larger Uto-Aztecan language family. Serrano territory included the San Bernardino Mountains, east of Cajon Pass, as well as the desert area that is immediately south of Victorville, extending east as far as Twentynine Palms and south as far as Yucaipa Valley. The Serrano were primarily hunters and gatherers. Vegetal staples varied with village locality, and included acorns and pinyon nuts in the foothills, along with mesquite, yucca roots, cacti fruits, and pinyon nuts in or near the desert regions. The Serrano lived in circular, domed structures that were constructed of willow frames and covered with tule thatch. These structures were used primarily as sleeping and storage areas, with most Serrano activities taking place outside or under a shade structure constructed simply of four posts and a roof.

Historical Setting

In California, the historic era is generally divided into three periods: the Spanish Period (1769–1821), the Mexican Period (1821–1848), and the American Period (1848–present). European exploration of the Mojave Desert began in the 16th century, but sustained Euro-American settlement of the region did not occur until the mid-19th century. As the historic period resources within the study area date to the 20th century, this historic context will focus on the County and related local communities.

San Bernardino County

The State of California was established in response to the surge of migration brought on by the discovery of gold in 1848, and San Bernardino County was created in 1853 from portions of Los Angeles and San Diego Counties due to mineral wealth. After the San Bernardino Baseline and Meridian were established that same year, the desert began to be surveyed in earnest. This facilitated an expansion of mining activities and the construction of a railroad that fostered the initial settlement of the Mojave. However, mineral resources proved transient and, facilitated by the Enlarged Homestead Act of 1909, agriculture would ultimately replace mining as a cornerstone of the County's economic base in the 20th century, with thousands of acres under cultivation by the beginning of World War I.

Transportation

The Mojave Desert has long been noted as a transit region between Los Angeles and Las Vegas, with a population predominantly serving the commercial traffic between these two cities. The arrival of the

Santa Fe Railroad in the early 1880s led directly to the establishment of the community of Barstow, and later highways would play an even greater role in the importance of transportation to and through the region.

Barstow

What began as Waterman Junction on the Santa Fe Railroad (constructed in 1882) became the center of gold and silver mining north of the Mojave River, including the Grapevine District to the north. In 1886, a post office was established and the community was named after railroad president William Barstow Strong. Barstow's prosperity in the late 19th and 20th centuries fostered the development of outlying communities such as Lockhart, around which there was some minor mining activity.

Lockhart

The area was originally settled by homesteaders and small-scale farmers in the 1920s, relying on Harper Lake (to the east of the study area) for irrigation. Leslie M. Lockhart and Victor York (successful oil men from Texas) acquired land on the western edge of Harper Lake (the north half of Section 24 and unspecified portions of Section 13), and York established a dairy and farmed alfalfa in the mid-1920s. The deep wells required for large-scale farming by York and another nearby ranch established by Hugh Evans in the latter half of the 1920s lowered the water table beyond the reach of the shallow wells of the homesteaders making farming on their lands impossible, and those who did not leave became employees of York. However, both York's and Evan's operations were also in decline during the Depression, and both had sold out to Lockhart by the end of the 1930s. Lockhart ultimately developed an alfalfa and cattle operation of over 2,800 acres (in Sections 29, 30, and portions of Sections 19, 31 and 32) with a virtually self-contained community (in the southeast quarter of Section 30) including its own post office, telephone system, worker's housing, recreation hall, swimming pool, café, gas station, and supermarket. The community of Lockhart began to decline in the late 1950s, but the ranch continued operations into the 1980s, when the first plans for solar energy farms were made.

3.4.1.2 Records Search Results

On February 10, 2023, the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, provided a records search of all archaeological and historical resources within 1 mile of the 825-acre project parcel. The records search identified 19 previous investigations and 125 previously recorded cultural resources within 1 mile of the 825-acre project parcel. As a result of the previous studies, it appears that 100 percent the project's area of potential impact (API) has been previously inventoried for cultural resources. Within the project's API (the 596-acre project site), there are 24 previously documented cultural resources, including 5 historic-period archaeological sites, 4 historic-period isolated artifacts, and 15 pre-contact isolated artifacts, as shown in **Table 3.4-1, Previously Identified Cultural Resources in the API**.

Table 3.4-1. Previously Identified Cultural Resources in the API

Primary Number	Trinomial/OHP Number	Type	Description
P-36-000677*	CA-SBR-000677H	Historic Site	Refuse Scatter
P-36-000704	CA-SBR-000704H	Historic Site	Refuse Scatter
P-36-000705*	CA-SBR-000705H	Historic Site	Refuse Scatter
P-36-020988*	CA-SBR-0013520H	Historic Site	Refuse Scatter
P-36-020989*	CA-SBR-0013521H	Historic Site	Refuse Scatter
P-36-022196*	—	Historic Isolate	Two condensed milk cans
P-36-022198*	—	Historic Isolate	Three condensed milk cans
P-36-027304	—	Pre-contact Isolate	Handstone
P-36-062618	—	Pre-contact Isolate	Lithic flake
P-36-062620*	—	Historic Isolate	Automobile parts
P-36-062632	—	Pre-contact Isolate	Lithic flake
P-36-062633	—	Pre-contact Isolate	Lithic flake
P-36-062634	—	Pre-contact Isolate	Lithic flake
P-36-062636	—	Pre-contact Isolate	Lithic flake
P-36-062638	—	Pre-contact Isolate	Lithic flake
P-36-062639	—	Pre-contact Isolate	Lithic flake
P-36-062642	—	Pre-contact Isolate	Edge-modified flake
P-36-062643	—	Pre-contact Isolate	Lithic flake
P-36-062646	—	Pre-contact Isolate	Edge-modified flake
P-36-062647	—	Pre-contact Isolate	Edge-modified flake
P-36-062648	—	Pre-contact Isolate	Lithic flake
P-36-062652	—	Historic Isolate	Sherds from two crocks
P-36-062728	—	Pre-contact Isolate	Lithic flake
P-36-062730	—	Pre-contact Isolate	Lithic uniface; collected

*Relocated during cultural resources survey

3.4.1.3 Additional Sources

Historical maps and aerial images were consulted, including *Searles Lake, California* (1915) 1 by 2 degree, *Trona, California* (1947, 1960) 1 by 2 degree, *Fremont Peak, California* (1956) 15-minute, *Cuddleback Lake, California* (1976) 30 x 60-minute, and *Lockhart, California* (1986) 7.5-minute U.S. Geological Survey series maps. Historical aerial images were available on NETROnline dating to 1952, 1972, 1984, 1994, 2005, 2012, and 2020. A review of Bureau of Land Management General Land Office records indicate that no patents have been issued within the project area.

Results of the archival review indicate that the project area remained primarily undeveloped until 1994, when an access road was developed (now Kramer Road) and the nearby solar facilities were constructed. The area surrounding the project site appears to have been utilized for agricultural purposes, specifically alfalfa fields. The community of Lockhart, east of the project site, was first settled in the 1920s. Due to the solar farm development in the surrounding area and the abandonment of the alfalfa fields, much of Lockhart was no longer extant by the mid-1990s. It does not appear that any buildings or isolated structures have been constructed within the project parcel.

3.4.1.4 Cultural Resources Survey Results

PaleoWest conducted a pedestrian survey of the project site between March 13 and 16, and May 23 and 25, 2023 (see **Appendix E**). The survey covered the entire 825-acre project parcel where cultural resources could have been directly affected by construction and operation of the project. The proposed 1.1-mile generation interconnect corridor did not require resurvey as it is located along an existing road within the fully developed Mojave Solar Facility that was previously surveyed and monitored for cultural resources (SWCA 2016; see **Appendix E**, Figure 1-2, Project Location Map). The PaleoWest survey area was based on a larger, early-stage design/layout that encompassed the 596-acre project site. The resource counts presented here reflect those within the project's API, comprising the 596-acre project site, and thus differ from the counts presented in the Cultural Resources Assessment (**Appendix E**).

A total of 13 cultural resources were identified in the 596-acre project site and evaluated for inclusion in the CRHR, including 7 previously recorded resources and 6 newly identified resources, as shown in **Table 3.4-2, Eligibility of Historical Resources in the Project Site**. Of these 13 resources, 9 were historic period refuse scatters, 3 were historic period isolates, and 1 was a pre-contact isolated lithic flake. All of these resources were recommended as not eligible for listing in the CRHR. Additionally, none of these resources qualified as a historical resource or unique archaeological resource.

Table 3.4-2. Eligibility of Historical Resources in the Project Site

Primary Number	Trinomial/OHP Number	Type	Description	CRHR Eligibility Recommendation ^{1/}
P-36-000677	CA-SBR-000677H	Historic Site	Refuse Scatter	Not eligible
P-36-000705	CA-SBR-000705H	Historic Site	Refuse Scatter	Not eligible
P-36-020988	CA-SBR-0013520H	Historic Site	Refuse Scatter	Not eligible
P-36-020989	CA-SBR-0013521H	Historic Site	Refuse Scatter	Not eligible
P-36-022196	—	Historic Isolate	Two condensed milk cans	Not eligible
P-36-022198	—	Historic Isolate	Three condensed milk cans	Not eligible
P-36-062620	—	Historic Isolate	Automobile parts	Not eligible
23-0087-MH-SITE-001	—	Historic Site	Refuse Scatter	Not eligible
23-0087-MH-SITE-002	—	Historic Site	Refuse Scatter	Not eligible
23-0087-MH-SITE-003	—	Historic Site	Refuse Scatter	Not eligible
23-0087-MH-SITE-004	—	Historic Site	Refuse Scatter	Not eligible
23-0087-MH-SITE-005	—	Historic Site	Refuse Scatter	Not eligible
23-0087-MH-ISO-001	—	Pre-contact Isolate	Lithic flake	Not eligible

^{1/} Eligibility recommendation from new survey (see Appendix E: Cultural Resource Assessment)

All of the resources identified and documented in the project site date to the historic period, except for one pre-contact isolated artifact. The historic-period resources appear to be limited to surface manifestations resulting from episodic refuse dumping, suggesting that there is a relatively low likelihood of encountering buried historic-period deposits in the project site.

The failure to relocate the 15 previously documented pre-contact isolated artifacts is attributed to a fair degree of surface disturbance across the project site, as well as the depositional context and dynamic nature of the desert surface, which is subject to periodic sheetwash, flooding, and erosion. At least one

of the artifacts is noted as having been collected, and most of the isolates were documented decades ago. In addition, a cultural inventory conducted for the nearby Desert Breeze solar facility EIR failed to find 18 of 20 previously documented resources for similar reasons (LSA Associates 2023).

Although only one pre-contact isolate was identified during the cultural survey of the project site, there is a high density of previously recorded pre-contact archaeological resources in the vicinity of the project. Based on this wider archaeological context, the deposition across the desert surface, and the failure to relocate previously documented pre-contact isolates in the project site, there is a moderate to high likelihood for encountering intact buried archaeological resources during construction that may qualify as historic resources under CEQA.

3.4.2 Native American Coordination and Assembly Bill 52 / Senate Bill 18 Tribal Consultation

On February 7, 2023, PaleoWest submitted a request to the California NAHC for a search of the Sacred Lands File. The NAHC responded on February 27, 2023, and indicated there are no known sacred lands or sites near the project. The NAHC identified seven Native American tribal groups with a potential interest in the project (see **Appendix E**):

- Kern Valley Indian Community
- Morongo Bando of Mission Indians
- Quechan Tribe of Fort Yuma Reservation
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians
- Serrano Nation of Mission Indians
- Twenty-Nine Palms Band of Mission Indians

PaleoWest sent outreach letters to 14 individuals representing the seven Native American tribal groups on March 1, 2023. Follow-up phone calls were conducted on March 15, 2023.

The applicant's tribal liaison, David Harper, conducted additional outreach for the project with 20 Tribes that may have ties to the area, per San Bernardino County's tribal list (listed below). The outreach consisted of information letters and phone calls.

San Bernardino County sent notices via email to the following 20 Tribes on December 13, 2023, as part of consultation required under Senate Bill (SB) 18 (see **Appendix E**):

- Colorado River Indian Tribes
- Chemehuevi Indian Tribe
- Desert Cahuilla Indian Tribe
- Fort McDowell Yavapai Tribe
- Fort Mojave Indian Tribe
- Fort Yuma Quechan Tribe

- Kaibab Band of Paiute Indians
- Kern Valley Indian Community
- Las Vegas Tribe of Paiute Indians
- Kw'ts'an (Quechan) Indian Tribe
- Moapa Band of Paiute Indians
- Morongo Band of Mission Indians
- Paiute Indian Tribe of Utah
- San Fernando Band of Mission Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseño Indians
- Tubatulabal Tribe
- Twenty-Nine Palms Band of Mission Indians
- Yavapai-Apache Nation
- Yuhaaviatam San Manuel Nation

On January 17, 2024, the County sent certified Notice of Opportunity consultation letters via mail, as required by Assembly Bill (AB) 52, to the following eight Tribes that had previously requested notification based on County and NAHC records (see **Appendix E**):

- Colorado River Indian Tribes
- Chemehuevi Indian Tribe
- Fort Mojave Indian Tribe
- Fort Yuma Quechan Tribe
- Morongo Band of Mission Indians
- Soboba Band of Luiseño Indians
- Twenty-Nine Palms Band of Mission Indians
- Yuhaaviatam San Manuel Nation

The Kern Valley Indian Community responded to the SB 18 notice with a request to consult on the project. In response, the County send a certified consultation letter to the Kern Valley Indian Community on April 5, 2024.

To date, the Twenty-Nine Palms Band of Mission Indians is the only Tribe that stated they do not wish to consult on the project.

To date, the following Tribes are requesting formal consultation regarding the project based on an interest in the area:

- Colorado River Indian Tribes
- Kern Valley Indian Community
- Morongo Band of Mission Indians
- Yuhaaviatam San Manuel Nation

3.4.3 Regulatory Framework

3.4.3.1 Federal

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological sites and resources that are on Native American lands or federal lands.

Section 106 of the National Historic Preservation Act of 1966

Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act of 1966. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The council's implementing regulations, Protection of Historic Properties, are found in 36 Code of Federal Regulations (CFR) Section 800. The goal of the Section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the National Register of Historic Places (NRHP). The criteria for determining NRHP eligibility are found in 36 CFR 60. Amendments to the act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or if it uses federal funding.

National Register of Historic Places

The NRHP is "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." However, the federal regulations explicitly provide that a listing of private property on the NRHP "does not prohibit under federal law or regulation any actions which may otherwise be taken by the property owner with respect to the property."

Historic properties, as defined by the Advisory Council on Historic Preservation, include any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior" (36 CFR Section 800.16[1]). Eligibility for inclusion in the NRHP is determined by applying the following criteria, developed by the National Park Service in accordance with the National Historic Preservation Act:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- a) that are associated with events that have made a significant contribution to the broad patterns of our history; or*
- b) that are associated with the lives of persons significant in our past; or*
- c) that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).*

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains, associated funerary objects, and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American Tribe claiming affiliation.

National Park Service – National Register Bulletin 38

The National Park Service has prepared guidelines to assist in the documentation of Traditional Cultural Properties (TCPs) by public entities. National Register Bulletin 38 is intended to be an aid in determining whether properties have traditional cultural significance and if they are eligible for inclusion in the NRHP. It is also intended to assist federal agencies, State Historic Preservation Officers, Certified Local Governments, Tribes, and other historic preservation practitioners who need to evaluate such properties when considering their eligibility for the NRHP as part of the review process prescribed by the Advisory Council on Historic Preservation.

TCPs are a broad group of places that can include the following:

- Location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- Rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;

- Location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- Location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

3.4.3.2 State

California Environmental Quality Act

State historic preservation regulations affecting the project include the statutes and guidelines contained in CEQA, PRC Sections 20183.2 and 21084.1, and CEQA Guidelines Section 15064.5. CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. A historical resource includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript which is historically or archaeologically significant (PRC Section 5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the significance or importance of cultural resources, including:

- The resource is associated with events that have made a contribution to the broad patterns of California history;
- The resource is associated with the lives of important persons from our past;
- The resource embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important individual or possesses high artistic values; or
- The resource has yielded, or may be likely to yield, important information in prehistory or history.

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications, such as the series produced by the Governor's Office of Planning and Research (OPR). The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations, and societies, be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains.

Assembly Bill 52 and Related Public Resources Code Sections

With the enactment of AB 52, CEQA recognizes tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation by identifying a category of resources called tribal cultural resources. In order to qualify as a tribal cultural resource, a resource must be listed, or determined eligible for listing, on the national, State, or local register of historic resources; or be a resource that a lead agency chooses to treat as a tribal cultural resource based on the CRHR criteria and the cultural value of a resource to a California Native American Tribe (PRC Section 21074). In order to identify tribal cultural resources, lead agencies are required to consult with local Native American

Tribes in a manner that is cognizant of all parties' cultural values and, where feasible, seek agreement on a proposed action. A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (PRC Section 21084.2).

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the Tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

California Senate Bill 18

SB 18 requires cities and counties to conduct consultations with California Native American Tribes before the local officials adopt or amend their general plans (Government Code Section 65352). These consultations are for preserving or mitigating impacts to Native American historic, cultural, sacred sites, features, and objects located within the city or county. The city or county must protect the confidentiality of information about the specific identity, location, character, and use of those places, features, and objects, consistent with the General Plan Guidelines issued by the Governor's Office of Planning and Research.

California Register of Historical Resources

The CRHR is an authoritative guide in California used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change. The criteria for eligibility for the CRHR are based on NRHP criteria. Certain resources are determined by the statute to be included on the CRHR, including California properties formally determined eligible for, or listed in, the NRHP, State Landmarks, and State Points of Interest.

The California Office of Historic Preservation (OHP) has broad authority under federal and State law for the implementation of historic preservation programs in California. The State Historic Preservation Officer makes determinations of eligibility for listing on the NRHP and the CRHR.

The appropriate standard for evaluating "substantial adverse effect" is defined in PRC Sections 5020.1(q) and 21084.1. Substantial adverse change means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. Such impairment of significance would be an adverse impact on the environment.

Cultural resources consist of buildings, structures, objects, or archaeological sites. Each of these entities may have historic, architectural, archaeological, cultural, or scientific importance. Under the CEQA Guidelines, a significant impact would result if the significance of a cultural resource would be

changed by project activities. Activities that could potentially result in a significant impact include demolition, replacement, substantial alteration, and relocation of the resource. The significance of a resource is required to be determined prior to analysis of the level of significance of project activities. The steps required to be implemented to determine significance in order to comply with CEQA Guidelines are:

- Identify cultural resources.
- Evaluate the significance of the cultural resources based on established thresholds of significance.
- Evaluate the effects of a project on all cultural resources.
- Develop and implement measures to mitigate the effects of the project on significant cultural resources.

California Government Code Sections 6253, 6254, and 6254.10 authorize State agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (CPRA; Government Code [GC] Section 6250 et seq.) and California's open meeting laws (the Brown Act, GC Section 54950 et seq.) protect the confidentiality of Native American cultural place information. The CPRA (as amended, 2005) contains two exemptions that aid in the protection of records relating to Native American cultural places by permitting any State or local agency to deny a CPRA request and withhold from public disclosure:

- Records of Native American graves, cemeteries, and sacred places and records of Native American places, features, and objects described in Section 5097.9 and Section 5097.993 of the Public Resources Code maintained by, or in the possession of, the Native American Heritage Commission, another state agency, or a local agency (GC Section 6254[r]); and
- Records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency (GC Section 6254.10).

Likewise, the Information Centers of the California Historical Resources Information System (CHRIS) maintained by the OHP prohibit public dissemination of records and site location information. In compliance with these requirements and those of the Code of Ethics of the Society for California Archaeology and the Register of Professional Archaeologists, the locations of cultural resources are considered restricted information with highly restricted distribution and are not publicly accessible.

Any project site located on non-federal land in California is also required to comply with State laws pertaining to the inadvertent discovery of Native American human remains.

California Health and Safety Code Sections 7050.5, 7051, and 7054

California Health and Safety Code (HSC) Sections 7050.5, 7051, and 7054 collectively address the illegality of interference with human burial remains as well as the disposition of Native American burials

in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

Native American Heritage Commission

PRC Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner

California Public Records Act

The California Public Records Act (CG Section 7920 et seq.) was enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 7920 explicitly authorizes public agencies to withhold information from the public relating to “records of Native American places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code, which are maintained by, or in the possession of, the [NAHC].” Section 7927.005 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the [NAHC], another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency.”

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010-8030, the California Native American Graves Protection and Repatriation Act (Cal NAGPRA) is consistent with the federal NAGPRA. Intended to “provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect,” Cal NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The Cal NAGPRA also provides a process for non-federally recognized Tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

3.4.3.3 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County’s General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Cultural Resources Element

GOAL CR-1 **Tribal Cultural Resources.** Tribal cultural resources that are preserved and celebrated out of respect for Native American beliefs and traditions.

Policy CR-1.1 **Tribal notification and coordination.** The County will notify and coordinate with tribal representatives in accordance with state and federal laws to strengthen their working relationship with area tribes, avoid inadvertent discoveries of Native American archaeological sites and burials, assist with the treatment and disposition of inadvertent discoveries, and explore options of avoidance of cultural resources early in the planning process.

Policy CR-1.2 **Tribal planning.** The County will collaborate with local tribes on countywide planning efforts and, as permitted or required, planning efforts initiated by local tribes.

Policy CR-1.3 **Mitigation and avoidance.** The County will consult with local tribes to establish appropriate project-specific mitigation measures and resource-specific treatment of potential cultural resources. The County requires project applicants to design projects to avoid known tribal cultural resources, whenever possible. If avoidance is not possible, the County requires appropriate mitigation to minimize project impacts on tribal cultural resources.

Policy CR-1.4 **Resource monitoring.** The County encourages active participation by local tribes as monitors in surveys, testing, excavation, and grading phases of development projects with potential impacts on tribal resources.

GOAL CR-2 **Historic and Paleontological Resources.** Historic resources (buildings, structures, or archaeological resources) and paleontological resources that are protected and preserved for their cultural importance to local communities as well as their research and educational potential.

Policy CR-2.1 **National and state historic resources.** The County encourages the preservation of archaeological sites and structures of state or national significance in accordance with the Secretary of Interior's standards.

Policy CR-2.2 **Local historic resources.** The County encourages property owners to maintain the historic integrity of resources on their property by (listed in order of preference): preservation, adaptive reuse, or memorialization.

Policy CR-2.2 **Paleontological and archaeological resources.** The County strives to protect paleontological and archaeological resources from loss or destruction by requiring that new development include appropriate mitigation to preserve the quality and integrity of these resources. The County requires new development to avoid paleontological and archeological resources whenever possible. If

avoidance is not possible, the County requires the salvage and preservation of paleontological and archeological resources.

3.4.4 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this EIR, the project may have a significant adverse impact related to cultural and tribal cultural resources if it would do any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.4.5 Project Impacts and Mitigation

IMPACT 3.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. Impacts would be less than significant with mitigation.

All of the cultural resources documented during the survey were recommended as not eligible for listing on the CRHR and would thereby not qualify as historical resources under CEQA. No known historical resources are located within the project site. Thus, there would be no impacts to known historical resources. However, there is potential for unidentified historical resources to be inadvertently discovered during construction.

Should buried archaeological deposits be uncovered during project implementation, and should such resources qualify as historical resources under CEQA, they could be subject to significant impacts. To reduce potential impacts to less than significant, **Mitigation Measures CUL-1** through **CUL-3** require cultural resources sensitivity training for construction workers, the preparation of a Cultural Resources Monitoring Plan (CRMP), archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction. The following mitigation measures incorporate comments received from the Morongo Band of Mission Indians and the Yuhaaviatam San Manuel Nation (YSMN).

Mitigation Measures:

CUL-1 The project proponent/owner shall conduct a Worker Education Awareness Program (WEAP) for relevant construction personnel working on the proposed project and conducting subsurface activities. Development of the WEAP shall include consultation with an archaeologist who meets Secretary of the Interior Professional Qualifications in Archaeology (Lead Archaeologist). The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the Lead Archaeologist.

CUL-2 The Lead Archaeologist shall prepare a Cultural Resources Monitoring and Treatment Plan to be implemented during ground-disturbing activities associated with project construction. The plan shall outline monitoring procedures and the process for the identification of cultural and tribal resources during project construction. The Morongo Band of Mission Indians and the YSMN shall be given the opportunity to be present and provide monitoring of ground clearing and ground disturbing activities. The Project Applicant shall arrange for a Tribal Monitoring Services Agreement to be in place prior to the start of construction by contacting the Morongo Band of Mission Indians and the YSMN. After monitoring has been completed, the Lead Archaeologist shall prepare a Monitoring and Treatment Report detailing the results of monitoring, to be submitted to the Director of the San Bernardino County Planning Division.

CUL-3 In the event that previously unknown pre-contact or historic-period archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all work occurring within 100 feet of the find shall immediately stop until the Lead Archaeologist can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the County.

Pursuant to CEQA Guidelines Section 15126.4(b)(3), proposed project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with the County, which may include testing for CRHR-eligibility, data recovery or other appropriate measures. The Monitoring and Treatment Report shall also document the evaluation and/or treatment of the resource.

Level of Significance: Less than significant with mitigation.

IMPACT 3.4-2: The project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. Impacts would be less than significant with mitigation.

Archaeological resources identified during the cultural investigation are recommended as not eligible for listing in the CRHR. As surficial refuse scatters, they do not qualify as unique archaeological

resources. According to CEQA Guidelines Section 15064.5 (c)(4), the effects of the project on these resources shall not be considered a significant effect on the environment.

As discussed under Impact 3.4-1, previously unknown significant archaeological deposits may underlie the ground surface. Should buried archaeological deposits be uncovered during project implementation, they could be subject to significant impacts. To reduce potential impacts to less than significant, **Mitigation Measures CUL-1** through **CUL-3** require cultural resources sensitivity training for construction workers, the development and implementation of a CRMP, archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction.

Mitigation Measures: Implementation of **Mitigation Measures CUL-1** through **CUL-3** would be required.

Level of Significance: Less than significant with mitigation.

IMPACT 3.4-3: The project could disturb human remains, including those interred outside of formal cemeteries. Impacts would be less than significant with mitigation.

There is no indication from research results, the archaeological survey, tribal outreach efforts, or the County's ongoing SB 18 and AB 52 tribal consultation process that any particular location within the project site has been used for human burial purposes in the recent or distant past. However, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be damaged or disturbed, which would be a significant impact.

The project would be compliant with the requirements for treatment of Native American human remains contained in California HSC Sections 7050.5-7055 and PRC Sections 5097.98 and 5097.99. HSC Sections 7050.5-7055 describe the general provisions for treatment of human remains. Specifically, HSC Section 7050.5 prescribes the requirements for the treatment of any human remains that are accidentally discovered during excavation of a site. HSC Section 7050.5 also requires that all activities cease immediately and that the County Coroner be contacted immediately. As required by State law, the procedures set forth in PRC Section 5097.98 would be implemented, including evaluation by the County Coroner to identify if the remains are of Native American origin and, if so, notification of the NAHC. The NAHC would then designate the "Most Likely Descendent" (MLD) of unearthed human remains.

If human remains are found during excavation, excavation would be halted in the vicinity of the discovery and any area that is reasonably suspected to overlay adjacent remains shall remain undisturbed until the County Coroner has investigated, and appropriate recommendations have been made for the treatment and disposition of the remains. Compliance with the established regulatory framework (i.e., HSC Sections 7050.5-7055 and PRC Sections 5097.98 and 5097.99) would ensure potential project impacts concerning human remains are less than significant.

Operation of the project would not require substantial ground disturbing activities, such as grading or excavation; therefore, it is not anticipated that project operation would encounter subsurface human remains. Therefore, impacts related to human remains during project operation are not anticipated.

Mitigation Measure CUL-4 would ensure project conformance with standard procedures in the event that human remains are discovered during project construction and would reduce impacts to such resources to less than significant levels.

Mitigation Measures:

CUL-4 In accordance with California Health and Safety Code Section 7050.5, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. The Morongo Band of Mission Indians requests no photographs are to be taken except by the coroner, with written approval by the consulting tribes. The project lead/foreman shall designate an Environmentally Sensitive Area physical demarcation/barrier 100 feet around the remains and no further excavation or disturbance of the Environmentally Sensitive Area shall occur while the County Coroner makes his/her assessment regarding the nature of the remains. If the remains are determined to be Native American, the coroner shall notify the NAHC in Sacramento within 24 hours. In accordance with PRC 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 Environmentally Sensitive Area. The MLD shall then determine, in consultation with the property owner, the disposition of the human remains.

Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California PRC Sections 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The applicant/developer/landowner should accommodate on-site reburial in a location mutually agreed upon by the Parties.

It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The County Coroner, parties, and Lead Agencies shall be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code Section 6254 (r).

Level of Significance: Less than significant with mitigation.

IMPACT 3.4-4: The project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

The NAHC Sacred Lands File search, Cultural Resources Assessment (see **Appendix E**), tribal outreach efforts, and San Bernardino's consultation with interested Native American groups conducted pursuant to AB 52 and SB 18 have not resulted in the identification of any sacred sites or other tribal cultural resources within, or immediately adjacent to, the project site. To date, one Tribe has expressed that the project site is near an ancestral migration and trade/travel route; however, the location of this resource has not been disclosed. The Morongo Band of Mission Indians and the YSNM have consulted with the County and provided mitigation measures which will be included in the Tribal Monitoring Services Agreement to be in place prior to the start of construction, as required by **Mitigation Measure CUL-2**. No other tribes have consulted with the County or provided Mitigation Measures.

As described in the Impact 3.4-1 section above, previously unknown archaeological deposits may underlie the ground surface. Should buried archaeological deposits be uncovered during project implementation, and should such resources qualify as historical resources and/or tribal cultural resources under CEQA, they could be subject to significant impacts. To reduce potential impacts to less than significant, **Mitigation Measures CUL-1** through **CUL-3** require cultural resources sensitivity training for construction workers, the preparation of a CRMP, archaeological and Native American monitoring during construction, and appropriate treatment of inadvertent archaeological resources during construction.

There is no indication, either from research results or the archaeological survey, that any particular location within the project site has been used for human burial purposes in the recent or distant past. However, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be damaged or disturbed, which would be a significant impact. Existing regulations identified in **Mitigation Measure CUL-4** would ensure that any human remains encountered during project implementation are properly treated, thus reducing impacts to a less-than-significant level.

Mitigation Measures: Implementation of **Mitigation Measures CUL-1** through **CUL-4** would be required.

Level of Significance: Less than significant with mitigation.

IMPACT 3.4-5: The project could result in cumulative impacts related to historical, archaeological, or tribal cultural resources. Impacts would be less than significant with mitigation.

The geographic area of analysis for cultural resources includes the project site and adjacent lands within 20 miles, as depicted in **Figure 3-1, Cumulative Projects Map**, of this EIR. This geographic scope of analysis is appropriate because the archaeological, historical, and tribal cultural resources within this area are expected to be similar to those that occur on the project site. Their proximity and similarity in environments, landforms, habitation patterns, and hydrology would result in similar land-use, and thus, site types.

In addition, the defined area of analysis is large enough to encompass any effects of the project on cultural and tribal cultural resources that may combine with similar effects caused by other projects and provides a reasonable context wherein cumulative actions could affect cultural and tribal cultural resources. The project could cause impacts on cultural and tribal cultural resources during the grading and construction period or as a result of operation and maintenance, or closure and decommissioning activities.

Cumulative projects within the geographic scope of analysis include eight existing or proposed solar energy production facilities and associated infrastructure (see **Figure 3-1**). These solar projects impact large swaths of land and, when considered in conjunction with the proposed project, have the potential of resulting in cumulative impacts to cultural and tribal cultural resources and cultural landscapes in the region. In general, ongoing development and growth in the broader region may result in a cumulatively significant impact to cultural and tribal cultural resources due to the continuing disturbance and fragmentation of undeveloped areas, which could potentially contain significant archaeological, historical, or tribal cultural resources.

Because there is always a potential to encounter unrecorded archaeological and tribal cultural resources during construction activities, no matter the location or sensitivity of a particular site, **Mitigation Measures CUL-1** through **CUL-4** would be required to protect, preserve, and maintain the integrity and significance of cultural and tribal cultural resources in the event of the unanticipated discovery of a significant resource.

As discussed above, the individual, project-level impacts were found to be less than significant with incorporation of mitigation measures, and the proposed project would be required by law to comply with all applicable federal, State, and local requirements related to historical, archaeological, and tribal cultural resources. Other related cumulative projects would similarly be required to comply with all such requirements and regulations, to undergo tribal consultation processes if applicable, to be consistent with the provisions set forth by CEQA, and to implement all feasible mitigation measures should a significant project-related or cumulative impact be identified. With implementation of applicable regulatory requirements and **Mitigation Measures CUL-1** through **CUL-4**, the proposed project would not have a cumulatively considerable contribution to impacts to cultural and tribal cultural resources from decommissioning activities.

Mitigation Measures: Implement mitigation measures **CUL-1** through **CUL-4**.

Level of Significance: Less than significant with mitigation.

3.5 Energy

This section evaluates the potential energy impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to energy, and includes mitigation measures required to reduce or avoid these impacts, as applicable. San Bernardino County (County) did not receive any scoping comments related to energy.

3.5.1 Environmental Setting

3.5.1.1 Electricity

Electricity, a consumptive utility, is a manufactured resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines, commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100-W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is 1 billion watt-hours.

According to the U.S. Energy Information Administration (EIA), California used approximately 6,882.4 trillion British thermal units of electricity in 2022 (EIA 2022a). The sector-specific breakdown for energy consumption in 2022 indicates that transportation uses utilized 42.4 percent of the State's total energy consumption, followed by 22.4 percent for industrial uses, 17.5 percent for residential uses, and 17.3 percent for commercial uses (EIA 2022a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the State's energy efficiency building standards and efficiency and conservation programs, California's energy use per capita in the residential sector is lower than any other state except Hawaii (EIA 2022b).

Southern California Edison (SCE) provides electricity to the project parcel. SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and southern California. SCE receives electric power from a variety of sources (SCE 2023a). **Table 3.5-1, Electric Power Mix Delivered to Retail Customers in 2022**, shows the electric power mix that was delivered to retail customers for SCE compared to the Statewide power mix for 2022, the most recent year for which data are available.

SCE updates all load forecasts for gas and electricity services every year. Load growth forecasts for the project area are currently determined using load growth projection tools that use a number of sources of data, including past peak loading, population, development characteristics, and temperature history information.

Table 3.5-1. Electric Power Mix Delivered to Retail Customers in 2022

Energy Resource	SCE	CA Power Mix (for comparison)
Eligible Renewable^{1/}	33.2%	35.8%
Biomass & bio-waste	0.1%	2.1%
Geothermal	5.7%	4.7%
Small hydroelectric	0.5%	1.1%
Solar	17.0%	17.0%
Wind	9.8%	10.8%
Coal	0%	2.1%
Large Hydroelectric	3.4%	9.2%
Natural Gas	24.7%	36.4%
Nuclear	8.3%	9.2%
Other	0.1%	0.1%
Unspecified sources of power^{2/}	30.3%	7.1%
TOTAL	100%	100%

1/ The Eligible Renewables category is further delineated into the specific sources: biomass & waste, geothermal, small hydroelectric, solar, and wind.

2/ "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

Source: SCE 2023b

SCE – Southern California Edison

3.5.1.2 Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines.

According to the EIA, California used approximately 2,056,267 million cubic feet of natural gas in 2022 (EIA 2024). Most of California's natural gas customers are residential and small commercial customers (core customers). These customers accounted for approximately 45 percent of the natural gas delivered by California utilities in 2021. Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 54 percent and vehicle fuel accounted for approximately 1 percent of the natural gas delivered by California utilities in 2021 (EIA 2024). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little and imports 95 percent of its supply of natural gas (EIA 2024).

Natural gas is measured in terms of cubic feet (cf). Southern California Gas Company (SoCalGas) is the natural gas provider in San Bernardino County; however, there is not a known natural gas service for the project parcel. SoCalGas' service territory encompasses approximately 20,000 square miles and more than 500 communities (SoCalGas 2023). In the California Energy Demand mid-energy demand scenario, natural gas demand in SoCalGas' service territory is projected to remain flat and increase by only 0.01 percent in 2030 above the last recorded demand in 2018 (CEC 2020). In 2021, approximately 2,438 million cubic feet per day (MMcfd) were used in SoCalGas' service area (California Gas and Electric Utilities 2021). For the winter of 2022 to 2023, the average daily SoCalGas pipeline capacity varied from 2,812 MMcfd for the worst-case scenario to 3,040 MMcfd for the best-case scenario. With the current natural gas assets and withdrawal protocols in place and sufficient interstate gas supplies, the

California Public Utilities Commission issued no curtailments or emergency flow orders in the winter of 2023 to 2024 (CPUC 2023a).

3.5.1.3 Transportation

California used approximately 19.8 billion gallons of petroleum in 2022 (EIA 2023a). Most of California's petroleum customers are residential and small commercial customers (core customers). This equates to a daily use of approximately 54 million gallons of petroleum. By sector, transportation uses utilize approximately 85 percent of the State's petroleum, followed by 11 percent from industrial, 3 percent from commercial, and less than 1 percent from residential and electric power uses (EIA 2023a). In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products, such as motor gasoline, diesel fuel, liquefied petroleum gases, and jet fuel. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gas (GHG) from the transportation sector, and reduce vehicle miles traveled (CEC 2020). The California Energy Commission (CEC) predicts that the demand for gasoline will continue to decline over the next 10 years and that there will be an increase in the use of alternative fuels (CEC 2020).

3.5.2 Regulatory Framework

3.5.2.1 Federal

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards (NHTSA 2023). The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by the USEPA and NHTSA. The Phase 1 heavy duty truck standards apply to combination tractors, heavy duty pickup trucks and vans, and vocational vehicles, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. The USEPA and NHTSA have also adopted the Phase 2 heavy duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline, depending on the compliance year and vehicle type (USEPA and NHTSA 2016). In 2022, a final rule established standards for passenger cars and light trucks, requiring an industry wide fleet average of 49 miles per gallon in 2026 (NHTSA 2023).

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles;

improve the energy performance of the federal government; increase U.S. energy security; develop renewable fuel production; and improve vehicle fuel economy. The act included the first increase in fuel economy standards for passenger cars since 1975, and also included a new energy grant program for use by local governments in implemented energy efficiency initiatives, as well as a variety of green building incentives and programs.

Inflation Reduction Act of 2022

The Inflation Reduction Act (IRA) of 2022 will make the single largest investment in climate and energy in American history. The IRA enables the U.S. to tackle the climate crisis, advance environmental justice, and secure the U.S.'s position as a world leader in domestic clean energy manufacturing, and puts the U.S. on a pathway to achieving the Biden Administration's climate goals, including a net-zero economy by 2050.

3.5.2.2 State

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2023 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California, including energy efficiency, strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan, building energy efficiency standards, the impact of drought on California's energy system, achieving 50 percent renewables by 2030, the California Energy Demand Forecast, the Natural Gas Outlook, the Transportation Energy Demand Forecast, Alternative and Renewable Fuel and Vehicle Technology Program benefits updates, update on electricity infrastructure in Southern California, an update on trends in California's sources of crude oil, an update on California's nuclear plants, and other energy issues.

California's Renewables Portfolio Standard

California's Renewables Portfolio Standard (RPS) Program was enacted in 2002 with SB 1078 and accelerated in 2006, requiring investor-owned utilities to obtain 20 percent of their electric supply from renewable energy sources, such as solar, by 2010. On April 12, 2011, Governor Brown signed SB 2X, requiring California retail electric providers to procure 33 percent of their retail energy sales from eligible renewable sources by 2020. In October 2015, Governor Brown signed into legislation SB 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030 (CPUC 2023b).

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also created new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned and publicly owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers

also are required to have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350. Governor Brown signed Executive Order B-55-18 with a new Statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter.

On September 16, 2022, Governor Newsom signed SB 1020, the Clean Energy, Jobs, and Affordability Act, which adds interim targets to the policy framework originally established in SB 100. The interim targets require renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all retail electricity sales by 2040. The bill also requires all State agencies to rely on 100 percent renewable energy and zero-carbon resources to power their own facilities by 2035 and encourages better information sharing and coordination between agencies for transmission planning.

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO₂) emissions, Assembly Bill (AB) 1493 (commonly referred to as the California Air Resources Board's [CARB] Pavley regulations), enacted in 2002, requires CARB to set GHG emission standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2015–2025 (CARB 2019).

California Health and Safety Code, Division 25.5/California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted AB 32 (codified in the California Health and Safety Code (HSC), Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. Under HSC Division 25.5, CARB has the primary responsibility for reducing the State's GHG emissions; however, AB 32 also tasked the CEC and the CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, SB 32 and its companion bill AB 197 amended HSC Division 25.5, established a new climate pollution reduction target of 40 percent below 1990 levels by 2030, and included provisions to ensure that the benefits of State climate policies reach into disadvantaged communities.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with 0.25 percent in 2011 and culminating in a 10 percent total reduction in 2020. Petroleum importers, refiners and wholesalers can either develop their own low carbon fuel products, or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas and hydrogen.

AB 32 Climate Change Scoping Plan

AB 32, also known as the California Global Warming Solutions Act of 2006, was passed to create a comprehensive, multi-year program to reduce GHG emissions within California. As a requirement of AB

32, CARB developed a Scoping Plan that describes the approach California will take to reduce GHG emissions to achieve the goal of reducing emissions to 1990 levels by 2020. The original Scoping Plan was approved in 2008 and is required to be updated at least every 5 years (CARB 2023).

California Air Resources Board

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle regulations (ZEV) to require manufacturers to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles between 2018 and 2025.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

In addition to limiting exhaust from idling trucks, in 2008, CARB approved the Truck and Bus regulation to reduce nitrogen oxide, particulate matter less than 10 microns in diameter, and particulate matter less than 2.5 microns in diameter emissions from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation has full implementation by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

3.5.2.3 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Land Use Element

GOAL LU-5 **Military Mission.** The federal government maintains and invests in military facilities and operations in the county to further the mission of national defense, thereby generating employment opportunities for residents and commercial opportunities for businesses in the county.

Policy LU-5.4 **Ranged activities and projects.** We require activities and projects that can exert impacts beyond project boundaries, such as renewable energy facilities, wireless communication systems, and unmanned aircraft systems, to coordinate with military installation is preliminary planning and throughout the project's construction stages and long-term operation.

Natural Resources Element

GOAL NR-1 **Air Quality.** Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.

Policy NR-1.8 **Construction and operations.** We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

Infrastructure and Utilities Element

GOAL IU-5 **Power and Communications.** Unincorporated area residents and businesses have access to reliable power and communication systems.

Policy IU-5.1 **Electricity and natural gas service.** The County will partner with public agencies and providers to improve the availability and stability of electricity and natural gas service to unincorporated communities.

Policy IU-5.4 **Electric transmission lines.** The maintenance of existing and development of new electric transmission lines along existing rights-of-way and easements to maintain the stability and capacity of the electric distribution system in southern California will be supported.

Policy IU-5.5 **Energy and fuel facilities.** The development and upgrade of energy and regional fuel facilities in areas that do not pose significant environmental or public health and safety hazards is encouraged.

Renewable Energy & Conservation Element

GOAL RE-1 **Energy Conservation and Efficiency.** The County will pursue energy efficiency tools and conservation practices that optimize the benefits of renewable energy.

Policy RE-1.1 Continue implementing the energy conservation and efficiency measures identified in the County of San Bernardino Greenhouse Gas Emissions Reduction Plan.

GOAL RE-2 **Renewable Energy Systems.** The County will be a home to diverse and innovative renewable energy systems that provide reliable and affordable energy to our unique Valley, Mountain, and Desert regions.

Policy RE-2.1.1 Utilize renewable energy development standards in the Development Code to minimize impacts on surrounding properties.

Policy RE-2.2 Promote use of energy storage technologies that are appropriate for the character of the proposed location .

Policy RE-2.3 Encourage the use of feasible emerging and experimental renewable energy technologies that are compatible with County regulatory.

San Bernardino County Greenhouse Gas Emissions Reduction Plan

In August 2007, the San Bernardino County Board of Supervisors launched Green County San Bernardino to spur the use of “green” technologies and building practices among residents, business owners, and developers in the County. The County Board of Supervisors also directed the Land Use Services Department to prepare a GHG Reduction Plan (GHGRP) to provide a framework and strategy for the County’s efforts. This GHGRP was completed in September 2011 and the GHG development review process was updated in March 2015 to bring the GHGRP up to date. This GHGRP presents a comprehensive set of actions to reduce the County’s internal and external GHG emissions to 15 percent below then-current levels to be consistent with the AB 32 Scoping Plan. The GHGRP also identifies specific objectives to reduce GHG emissions. Some of the goals to achieve these objectives come in the form of promoting the use of energy efficient technologies, increasing the use of renewable energies within the County, and providing incentives to retrofit energy inefficient buildings to be more energy efficient. The objectives of the GHGRP are as follows:

- Reduce emissions from activities over which the County has jurisdictional and operational control consistent with the target reductions of AB 32 Scoping Plan;
- Provide estimated GHG reductions associated with the County’s existing sustainability efforts and integrate the County’s sustainability efforts into the discrete actions of this Plan;
- Provide a list of discrete actions that will reduce GHG emissions; and
- Approve a GHG Plan that satisfies the requirements of Section 15183.5 of the California Environmental Quality Act (CEQA) Guidelines so that compliance with the GHG Plan can be used

in appropriate situations to determine the significance of a project's effects relating to GHG emissions, thus providing streamlined CEQA analysis of future projects that are consistent with the approved GHG Plan.

3.5.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to energy if it would do any of the following:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

3.5.4 Project Impacts and Mitigation

Impact 3.6-1: The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Impacts would be less than significant.

Construction

Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning [HVAC]) would be provided by a total of 22 portable generators and local distribution. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be less than significant.

Natural gas is not anticipated to be required during construction of the project. Any minor amounts of natural gas that may be consumed as a result of project construction would be temporary and negligible, and would not have an adverse effect; therefore, impacts would be less than significant.

Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction. Heavy-duty construction equipment associated with construction activities and on-site haul trucks involved in relocating soil around the project site and gen-tie corridor would rely on diesel fuel.

Construction and decommissioning of the project are expected to require the use of nonrenewable resources in the form of diesel to power off-road construction equipment and on-road vehicles. Fuel consumption from construction equipment was estimated by converting the total CO₂ emissions from the construction phase to gallons using conversion factors for CO₂ to gallons of diesel.

In order to determine the estimated total fuel use during construction, the total amount of construction CO₂ emissions, 11,717 metric tons (11,717,000 kilograms [kg]), calculated in the Air Quality and Greenhouse Gas Technical Report (**Appendix C**) was converted into gallons of diesel, as shown in **Table 3.5-2, Fuel Consumption of Construction and Operations**. According to the Air Quality and

Greenhouse Gas Technical Report, all construction equipment was assumed to be diesel-powered (**Appendix C**). The conversion factor for diesel is 10.19 kg CO₂ per gallon (The Climate Registry 2023). Accordingly, the project would consume 1,149,852.8 gallons of diesel fuel during construction. By comparison, 2.3 billion gallons of diesel were consumed in the State and 258 million gallons in the County in 2022 (CEC 2023); project construction would account for approximately 0.0005 percent of the diesel consumed in the State and approximately 0.004 percent of the diesel consumed in the County.

In addition to calculating the amount of diesel consumed during the proposed project, the amount of gasoline was calculated for the Air Quality and Greenhouse Gas Technical Report (**Appendix C**). Gasoline would be used to fuel construction worker on-road vehicles driving to and from the project area. The amount of gasoline anticipated to be used during the construction of the project is estimated to be 128,767 gallons. In 2022, the State consumed 13.6 billion gallons of gasoline, and the County consumed 915 million gallons of gasoline (CEC 2023). The total amount of gasoline consumed during the project would account for less than one percent of the total amount of gasoline consumed by the State and less than one percent of the total amount of gasoline consumed by the County. As a result, the proposed project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction.

Table 3.5-2. Fuel Consumption of Construction and Operations

Phase	CO ₂ (MT) ^{1/}	CO ₂ (kg)	Kg CO ₂ /gal	Gallons
Construction (MT, Diesel)	11,717.00	11,717,000.00	10.19	1,149,852.8

1/ Source: Appendix C, Air Quality and Greenhouse Gas Technical Report

CO₂ – carbon dioxide; kg – kilogram; MT – metric tonne

Operation

The project would assist the State in achieving or exceeding its RPS and GHG emissions reduction objectives by developing and constructing a new solar facility and battery energy storage system to generate and store renewable energy, which would also help in achieving or exceeding its energy storage mandates. As a utility-scale energy facility, the project would result in a net positive change to the energy grid. Operational energy usage or efficiency losses due to equipment failure and subsequent replacement would be outweighed by the positive aspects of energy grid stabilization created by the project. Operation of the project would require water for panel washing and fire suppression. Water would be pumped from the four existing wells at the adjacent Mojave Water Facility. The four water well pumps at the Mojave Solar Facility utilize on average approximately 1866 MWh of electricity per year. The total electricity needed to pump water would be significantly less than the amount of electricity that the proposed project would generate and store. For more information on the wells that will be used as part of the proposed project, see Section 3.9, *Hydrology and Water Quality*.

Fuel consumption from operations is expected to be low, as the facility would be unstaffed and would require limited vehicle usage for operations and maintenance activities. Fuel consumption is anticipated to come primarily from gasoline-powered vehicles.

The Air Quality and Greenhouse Gas Technical Report (**Appendix C**) calculated for the amount of gasoline during operations for all worker vehicle trips. The estimated total amount of gasoline that would be used during operations is approximately 6,428 gallons. In 2022, the State consumed 13.6 billion gallons of

gasoline, and the County consumed 915 million gallons of gasoline; the project would consume less than one percent of the gasoline consumed in the State per year and less than one percent of the gasoline consumed by the County per year (CEC 2023b). As a result, the proposed project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project operations.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.6-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant.

Construction

Construction equipment would comply with federal, State, and regional requirements where applicable. With respect to truck fleet operators, the USEPA and NHTSA have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. The USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline, depending on the compliance year and vehicle type. The energy modeling for trucks does not take into account specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of 5 minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy.

Operation

In order to meet the AB 32 GHG emissions reduction mandate, the Climate Change Scoping Plan relies on achievement of the 33 percent RPS by 2020 and 50 percent by 2030. The 2017 Scoping Plan relies on achievement of the RPS target of 50 percent of California's energy coming from renewable sources by 2030. SB 100 further increased California's RPS and required retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

The project would include the development of a solar facility and associated infrastructure with the capacity to generate up to 150 MW of renewable electric energy and the installation of an energy storage

facility and accessories that would provide energy storage capacity of up to 150 MW for the electrical grid. The project and other similar projects are essential to achieving the RPS.

Any on-site building would be subject to Building Energy Efficiency Standards as required by the CCR. The Building Energy Efficiency Standards are intended to save energy, increase electricity supply reliability, and avoid the need to construct new power plants. Pursuant to the California Green Building Standards Code (CALGreen) and the Energy Efficiency Standards, the County would review the design components of the project's energy conservation measures when the project's building plans are submitted. These measures could include insulation; use of energy efficient HVAC; solar-reflective roofing materials; energy efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water; incorporation of skylights; and other measures. The project would also be subject to CALGreen, which requires 65 percent construction solid waste diversion.

Overall, because one of the objectives of the project is to assist California in meeting its GHG emissions reduction goals by 2030 and 2045, as required by the California Global Warming Solutions Act (AB 32) and as amended by SB 32 in 2016, the project would be compliant with the applicable recommended actions of the CARB Climate Change Scoping Plan, as well as applicable federal, State, and local policies. Specifically, the project would assist the State and regulated utility providers to generate a greater portion of energy from renewable sources consistent with the 2030 and 2045 RPS. Therefore, this impact would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.5-3: The project would not result in cumulative impacts related to energy. Impacts would be less than significant.

Cumulative impacts occur when the incremental effects of a project are significant when combined with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. The geographic context for the analysis of cumulative impacts on electricity is SCE's service area because the project and related projects are located within the service boundaries of SCE. The cumulative projects in the project area listed in **Table 3-1, Cumulative Projects**, largely consist of utility-scale solar power generation facilities.

The main contribution of energy consumption from the project would be from construction equipment usage, haul truck trips, and employee trips during the construction phase and panel washing activities, maintenance trips, and employee trips during project operation of the project. The project's emissions would, therefore, contribute to the increase in emissions in the transportation sector as well as the electricity generation sector. Construction emissions, however, would be finite and temporary and would cease at the end of construction activities.

Although the project would result in a contribution to cumulative energy consumption in California, construction of the project would require the use of energy-efficient equipment during project construction. Additionally, operation of the project could offset emissions from the electricity

generation sector estimated at 1,971,000 MWh of renewable electricity annually, which would align with the goals of the RPS.

The nature of these projects is such that, like the project, they would be consistent with the strategies of the Climate Change Scoping Plan by aiding in the reduction of GHG emissions below the 1990 levels by the year 2045. In order to meet the SB 32 GHG emissions reduction mandate, the Scoping Plan relies on achievement of the RPS target of 60 percent of California's energy coming from renewable sources by 2030 and 100 percent renewable sources by 2045. The project and other similar projects are essential to achieving the RPS. Also like the project, the related solar projects would have similar energy use that would be offset by renewable energy generation and would have minimal operational trips to and from the sites. Solar panel washing would be required as routine maintenance of the project and would occur at least once per year and potentially up to four times per year. Panel washing may require up to 12 employees with water trucks and would take approximately 20 days to complete for each panel washing event. Therefore, it was assumed that the project would generate approximately 24 average daily trips during operations. Overall, the project would not contribute to cumulative energy consumption in California because operation of the project would provide electric power with negligible operational energy consumption over the long term when compared to traditional fossil-fueled generation technologies. Thus, the project would not have a cumulatively considerable impact on energy consumption, would not conflict with any renewable energy plans, and cumulative impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.6 Geology and Soils

This section evaluates the potential geological, soils, and paleontological resource impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to geological soils, and paleontological resources, and includes mitigation measures required to reduce or avoid these impacts, as applicable. A site-specific geotechnical investigation (Geotechnical Report) was performed by Kleinfelder for the project parcel and a report providing results and recommendations has been prepared and provided as **Appendix F1**. A subsequent evaluation of two features identified by Kleinfelder on the site was performed by the RMA Group. They prepared a Geologic Fault Investigation presenting the results of their evaluation, included here as **Appendix F2**. The Geotechnical Investigation for the Overnight Solar Interconnection Project (gen-tie geotechnical investigation) was performed by the RMA Group, and their report is provided as **Appendix F3**. A site-specific paleontological resource assessment was also conducted for the project parcel by PaleoWest, LLC, and is provided as **Appendix G**. Information from these reports has been incorporated into this discussion. Note that these technical reports were completed for the entire project parcel (825 acres), before the project site boundary was reduced to 596 acres. The 596-acre project site and the proposed 1.1-mile gen-tie corridor, connecting the proposed facility to an existing gen-tie line associated with the Mojave Solar Facility, are shown in **Figure 2-2, Project Site Map**, of Section 2, Project Description. San Bernardino County (County) did not receive any scoping comments related to geology, soils, or paleontological resources.

3.6.1 Environmental Setting

3.6.1.1 Regional Geology

The project is located within the Antelope Valley on the western side of the Mojave Desert Geomorphic Province, about 20 miles west-northwest of Barstow (**Figure 3.6-1, Regional Setting**). This geomorphic province is bounded by mountains to the northwest (Tehachapi) and to the southwest (San Gabriel) that are within the Transverse Ranges and Sierra Nevada geomorphic provinces, respectively. The Mojave Desert province is a broad, generally flat area punctuated by a number of small, isolated mountain ranges that extend to the east beyond the California-Nevada border. Two prominent fault zones, the Garlock and San Andreas, are located along the northwestern and southwestern edges of the Mojave Desert province, generally in alignment with the mountain ranges previously noted. Additionally, there are numerous smaller faults and fault zones within the province, commonly in conjunction with the isolated mountain ranges. Similar to the Basin and Range provinces to the north and east, the Mojave Desert province is a region of interior drainage characterized by ephemeral dry lakes, also known as playas (CGS 2002).

The Antelope Valley and much of the Mojave Desert province is considered to be “high desert,” as the elevation of the broad flat areas between the isolated mountain ranges is mostly at, or above, 2,000 feet in elevation (above mean sea level). Within the Antelope Valley there are four prominent playas, each of which is an end point for different drainage areas within the valley: Cuddeback Lake, Harper Lake, Rogers Lake, and Rosamond Lake.

3.6.1.2 Local Geology

Current bedrock geologic mapping for the area, available for the State, is shown in **Figure 3.6-2, Geology** (USGS 2023a). In general, geology surrounding the project parcel and gen-tie corridor is dominated by various types of Quaternary alluvium (Q) that are lumped together at the scale of this map. Also, within approximately 10 miles of the site are scattered occurrences of Quaternary dune sand (Qs) and basalt (Qv), along with older igneous rock (grMz) and much older metamorphic rock (pC). A more detailed focus on the local surficial geology is provided by Amoroso and Miller (2012), differentiating the alluvium shown in **Figure 3.6-2** into a number of distinct types of deposits (see **Table 3.6-1, Surficial Geologic Units in the Vicinity of the Project Site**) underlain by older rocks which have been broadly classified into four categories:

1. High-pressure, high-temperature metamorphic rocks from the Precambrian through the Paleozoic periods.
2. Metasedimentary rocks (including marble, phyllite, chert, quartzite, and conglomerate) from the Precambrian through the early Cenozoic periods.
3. Shallow-depth intrusive and metavolcanic rocks, from the Cenozoic.
4. Plutonic rocks from the Mesozoic period (granites and granitic rocks).

Table 3.6-1. Surficial Geologic Units in the Vicinity of the Project Site

ID	Age	Description
QUATERNARY		
ml	latest Holocene	Made land or artificial fill. Surficial material moved for mining, construction, and agriculture that is extensively disturbed, making landforms and deposits difficult to classify.
Qav	latest Holocene	Active valley-axis deposit. Loose, fine-grained deposits in valley axes characterized by anastomosing ephemeral washes, low-relief interfluvies, and eolian deposits.
Qaa	latest Holocene	Active alluvial fan deposit. Alluvial fan deposits characterized by surfaces that are active and have received deposits within the last few decades.
Qap	Holocene	Active playa deposit. Playa deposits that have been flooded and have received sediment in the last few decades.
Qaps	Holocene	Active playa sandy facies deposit. Playa deposits that contain layers of sand. Typically found near margins of playa.
Qya	Holocene and latest Pleistocene	Young alluvial fan deposit. Moderately to poorly sorted sand and silt, sandy gravel, and clasts to 85 cm in diameter. Characterized by abandoned surfaces that receive material infrequently.
Qyag	Holocene and latest Pleistocene	Young alluvial fan deposit composed of grus. Moderately to poorly sorted sand and fine gravel derived from grus-producing granite sources but may contain clasts from other lithologic sources.
Qyes	Holocene and latest Pleistocene	Young eolian sand sheet deposit. Eolian sand deposits forming featureless broad sheets.
Qils	late to middle Pleistocene	Intermediate-age lacustrine sand deposit. Well-sorted fine, very fine, and medium-grained sand forming thin-bedded low-relief platforms. Sparsely vegetated.

Source: Amoroso and Miller 2021

The regional geology is significantly controlled by tectonics associated with the two primary fault zones identified earlier, the San Andreas and Garlock fault zones, and the triangular-shaped Mojave block formed between them. Numerous smaller faults and fault zones have formed within the Mojave block, resulting in the isolated mountain ranges. Erosion of these mountains locally, along with erosion of the bordering San Gabriel and Tehachapi mountains, has provided the source of sediments which have filled the broad, relatively flat areas between the mountains.

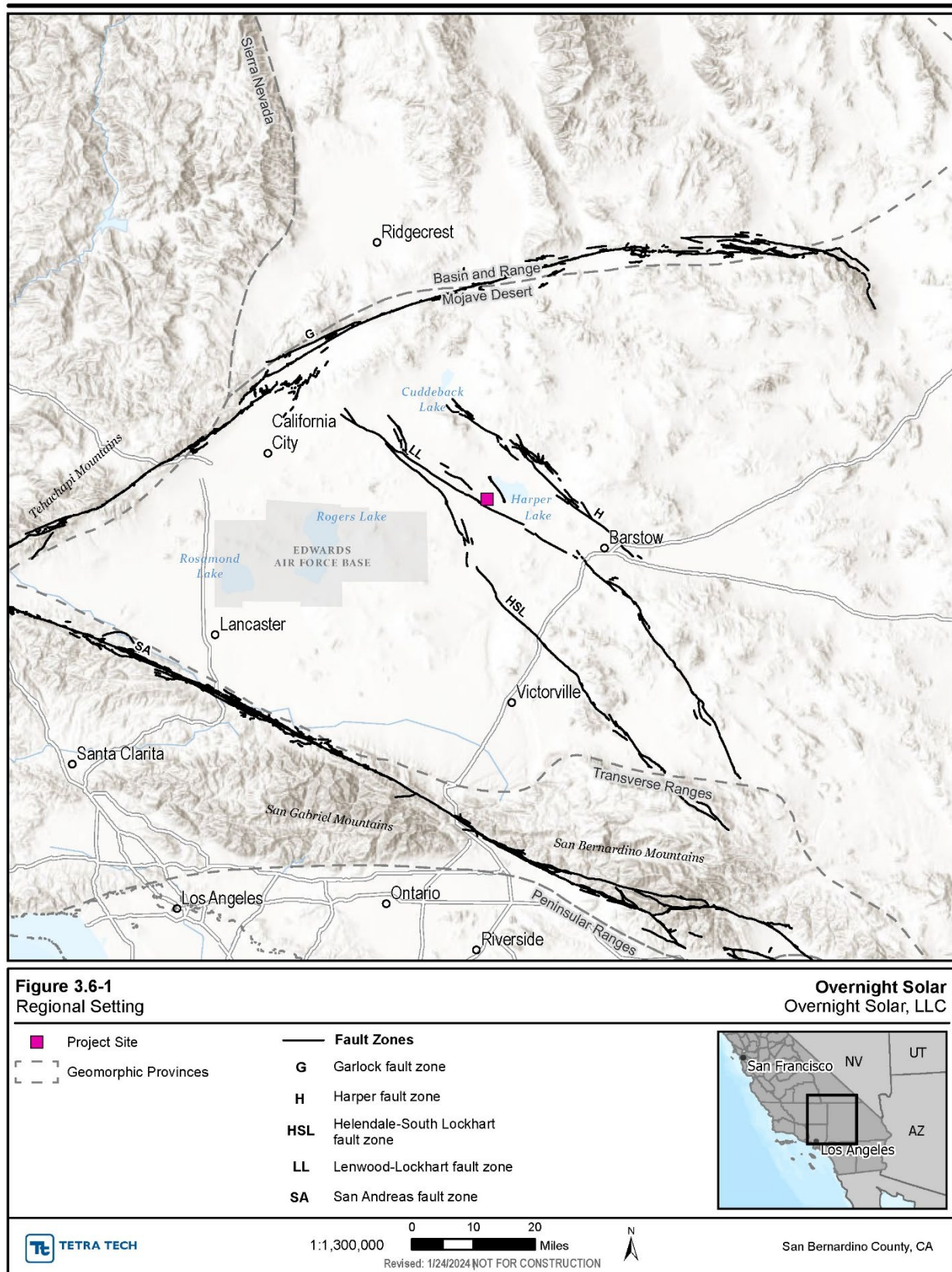


Figure 3.6-1. Regional Setting

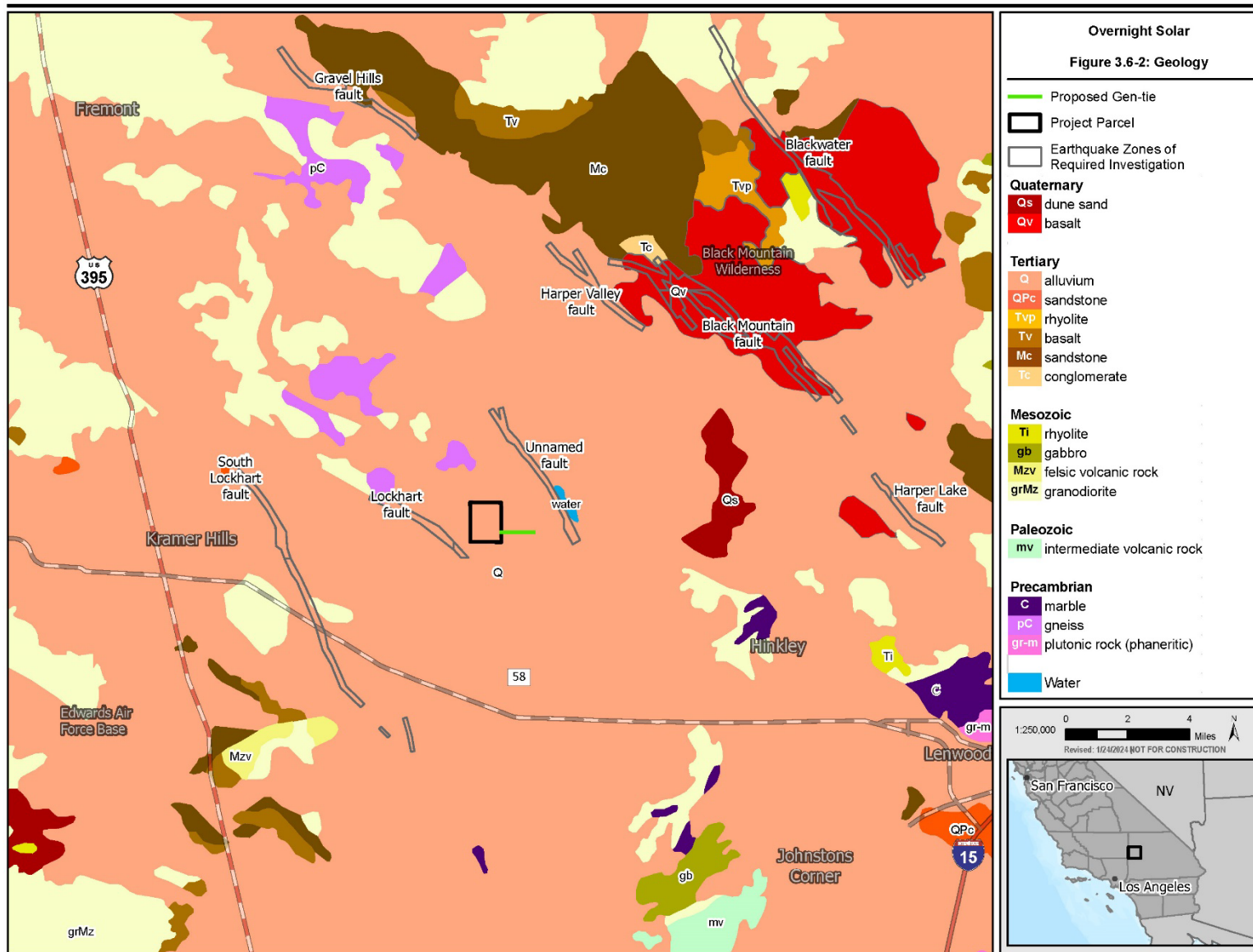


Figure 3.6-2. Geology

3.6.1.3 Seismicity

The State provides current information on identified faults and fault zones throughout the state (DOC 2023). Faults are classified into four categories according to how recently they have had activity (youngest to oldest): (1) historic, (2) Holocene, (3) late Quaternary, and (4) Quaternary. There are no historic faults in the immediate vicinity of the project; the two closest are the Lenwood section of the Lenwood-Lockhart fault zone (about 18 miles to the southeast, and just west of Barstow) and the Saltdale SE fault (about 33 miles to the northwest). There are three Holocene faults within 5 miles of the project site: the SW branch of Lockhart section of the Lenwood-Lockhart fault (about 0.6 mile to the southwest), the NE branch of Lockhart section of the Lenwood-Lockhart fault zone (about 1.6 miles to the northeast), and the South Lockhart fault (about 5.4 miles to the southwest). The three Holocene faults also include Alquist-Priolo Zones of Required Investigation; however, none of these cross the project parcel (CGS 2023).

Kleinfelder recommended the site be classified as Seismic Site Class D, which is defined as a stiff soil profile with associated value ranges for shear wave velocity and undrained shear strength (**Appendix F1**). Based on this recommendation, specific design parameters were provided relative to industry standards for building safety (ASCE 2016).

3.6.1.4 Surface Fault Rupture

The project does not intersect an established Alquist-Priolo Earthquake Fault Zone, as noted above. The nearest fault that has been designated an Earthquake Zone of Required Investigation is the Lockhart fault, which at its closest point is approximately 0.5 mile to the southwest of the project parcel. Other Earthquake Zones of Required Investigation are located to the southwest (South Lockhart fault), and to the north and east (Black Mountain, Blackwater, Gravel Hills, Harper Lake, Harper Valley, and Unnamed faults), as shown on **Figure 3.6-2, Geology**.

The U.S. Geological Survey (USGS) and California Geologic Survey (CGS) developed a version of the Uniform California Earthquake Rupture Forecast (UCERF3) model to evaluate the likelihood of surface rupture caused by an earthquake (Field and 2014 Working Group 2015). The UCERF3 results are available in a Google Earth file showing the probability of earthquakes with various magnitudes on the Richter scale for specific faults located near the project. The model results for six nearby Holocene faults gives probabilities from less than 0.01 percent to only 1.04 percent of significant earthquakes occurring within the next 30 years (see **Table 3.6-2, Earthquake Probabilities**).

Table 3.6-2. Earthquake Probabilities

Fault/Zone	Probability of an Earthquake in the next 30 years		
	≥ 6.7	≥ 7.0	≥ 7.5
Lockhart fault	1.04%	0.72%	0.02%
Black Mountain fault (Gravel Hills-Harper Lake fault Zone, subsection 6)	0.89%	0.42%	0.07%
Harper Lake faults (Gravel Hills-Harper Lake fault Zone, subsection 4)	0.87%	0.46%	0.08%
South Lockhart fault	0.57%	0.43%	<0.01%

Fault/Zone Richter-Scale Magnitude:	Probability of an Earthquake in the next 30 years		
	≥ 6.7	≥ 7.0	≥ 7.5
Gravel Hills fault (Gravel Hills-Harper Lake fault Zone, subsection 11)	0.53%	0.18%	0.03%
Blackwater fault (subsection 3)	0.44%	0.03%	--

Source: Field and 2014 Working Group (2015)

Kleinfelder did not identify any fault-related features on-site during their site investigation, but did identify surface lineaments using air photo and light detection and ranging (LiDAR) analysis. Surface lineaments are suggestive of fault movement, and two of the lineaments identified cross portions of the project site. Based on the proximity to the Holocene faults and the presence of lineaments on-site, they considered the hazard for ground surface rupture to be moderate to high (**Appendix F1**). A subsequent fault investigation of these lineaments (**Appendix F2**) used additional aerial photograph and LiDAR assessment, and visual inspection of trenching across the lineaments, concluded they were not faults. The gen-tie geotechnical investigation (**Appendix F3**) provided supplementary assessment data for the gen-tie corridor and confirmed the geotechnical evaluation of the project site (**Appendix F1**).

3.6.1.5 Seismic Ground Shaking

Ground shaking caused by a seismic event can cause extensive damage to life and property and may affect areas quite distant from the earthquake's epicenter. The extent of the damage varies by event as a result of several factors, including (but not limited to) magnitude and depth of the earthquake, distance from epicenter, duration and intensity of the shaking, underlying soil and rock types, and integrity of structures. Historically, Southern California has been a seismically active area, and therefore moderate to severe ground shaking in the vicinity of the project is possible. However, the UCSRF3 model results discussed above suggest that the probability of a significant ground shaking caused by an earthquake near the project is relatively low. Kleinfelder (**Appendix F1**) classified the project's location as a Class D seismic site (stiff soil profile) and recommended seismic design parameters to resist ground movement per American Society of Civil Engineers (ASCE) Standard 7-16, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, Section 11.4.8 (Site Specific Ground Motion Values). The subsequent fault investigation (**Appendix F2**) and gen-tie geotechnical investigation (**Appendix F3**) confirmed both the project site and gen-tie corridor as Class D seismic sites.

3.6.1.6 Liquefaction

Liquefaction is a phenomenon in which unconsolidated, water-saturated sediments become unstable due to the effects of strong seismic shaking. During an earthquake, these sediments can behave like a liquid, potentially causing severe damage to overlying structures. Lateral spreading is a type of landslide that can occur when unconsolidated liquefiable materials break and spread due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, the particle-size distribution of the soil, the density of the soil, and shallow groundwater.

The State does not identify any areas of concern for liquefaction in this part of the Mojave Desert (DOC 2023). The Geotechnical Report (**Appendix F1**) asserted the potential for liquefaction to occur at the site “is not apparent” due to the “absence of groundwater and the presence of shallow, dense, cemented (cohesive) caliche materials.” No groundwater was encountered in any of the boreholes drilled for the investigation on the project site, which reached a little more than 16 feet below the ground surface (**Appendix F1**). The gen-tie geotechnical investigation (**Appendix F3**) reported that groundwater depths in the general area are expected to be more than 50 feet below the ground surface, and that a water well owned by the Mojave Water Agency located southeast of the project site recorded a groundwater level of 218 feet below the ground surface in 2023 and the shallowest level of 170 feet below the ground surface in 1962. Therefore, the potential for liquefaction at the project is expected to be low.

3.6.1.7 Landslides

Landslides can occur when rock, soil, and other debris are displaced due to the effects of gravity. The potential for material to detach and move downslope depends on multiple factors including the soils, moisture content, and steepness of terrain. However, the project parcel has very low topographic relief with no adjacent hills, and no mapped areas of landslide hazard on or near the site (DOC 2023). The Geotechnical Report (**Appendix F1**) assessed the relative risk of landslides at the project site to be low and the gen-tie geotechnical investigation (**Appendix F3**) reported similar findings. Therefore, the relative risk of landslide in the gen-tie corridor is also anticipated to be low. For these reasons, the potential for landslide hazards at the site is judged to be very low.

3.6.1.8 Subsidence

Land subsidence is the gradual settling or sudden sinking of the earth’s surface due to subsurface movement of earth materials. Compaction of subsurface geologic layers due to a reduction in pore space is the primary cause of land subsidence. Local and even regional ground subsidence typically is caused by compaction of subsurface geology as a result of petroleum or groundwater withdrawal. Subsidence has been documented in parts of the Mojave Desert, particularly near Harper Lake, a dry lakebed. However, the documented areas of subsidence are on the eastern side of Harper Lake (USGS 2023b). Seismic-induced settlement is similar to land subsidence, but more sudden and directly related to seismic activity. For the purposes of the project impacts and CEQA thresholds analyzed below, these terms are interchangeable. Neither the Geotechnical Report (**Appendix F1**) nor the gen-tie geotechnical investigation (**Appendix F3**) found the potential for seismic-induced settlement at the project parcel to be likely. Both describe similar conditions and conclude the potential for seismic-induced settlement is unlikely.

3.6.1.9 Soils

The Natural Resources Conservation Service (NRCS) describes the project “bedrock” (i.e., the soil parent material) in the immediate area of the project as alluvium derived from various sources (NRCS 2023), such that presumably these soils were developed on unconsolidated Quaternary sediment. **Figure 3.6-3, NRCS Soils**, shows the mapped soil units in and around the project. Five of these soils are most prominent within and surrounding the project parcel and gen-tie corridor boundaries; their

descriptions are provided in **Table 3.6-3, Primary Soil Series in the Vicinity of the Project**. The Geotechnical Report (**Appendix F1**) summarized the relative risk for erosion or scour of surface materials due to runoff water to be low. The Geotechnical Report also assessed the risk for siltation (wind-carried sediment) to be low to moderate, with the application of required dust-control measures.

Table 3.6-3. Primary Soil Series in the Vicinity of the Project

ID	Soil Series/Complex	Description
112	Cajon Sand (0 to 2 percent slopes)	The Cajon series consists of very deep, somewhat excessively drained soils on alluvial fans and river terraces. Cajon soils formed on alluvium derived predominantly from granitic material.
113	Cajon Sand (2 to 9 percent slopes)	
117	Cajon Loamy Sand (0 to 2 percent slopes)	
137	Kimberlina Loamy Fine Sand, Cool (0 to 2 percent slopes)	Kimberlina series consists of very deep, well drained soils on alluvial fans. Kimberlina soils formed in alluvium derived from mixed sources.
152	Norob-Halloran Complex (0 to 5 percent slopes)	This complex consists of about 60 percent Norob loamy sand 20 percent Halloran sandy loam. It is generally found on terraces with a microrelief of small depressions. Some areas are dissected by deep intermittent drainageways. Halloran and Norob soils formed on alluvium derived dominantly from granitic material.

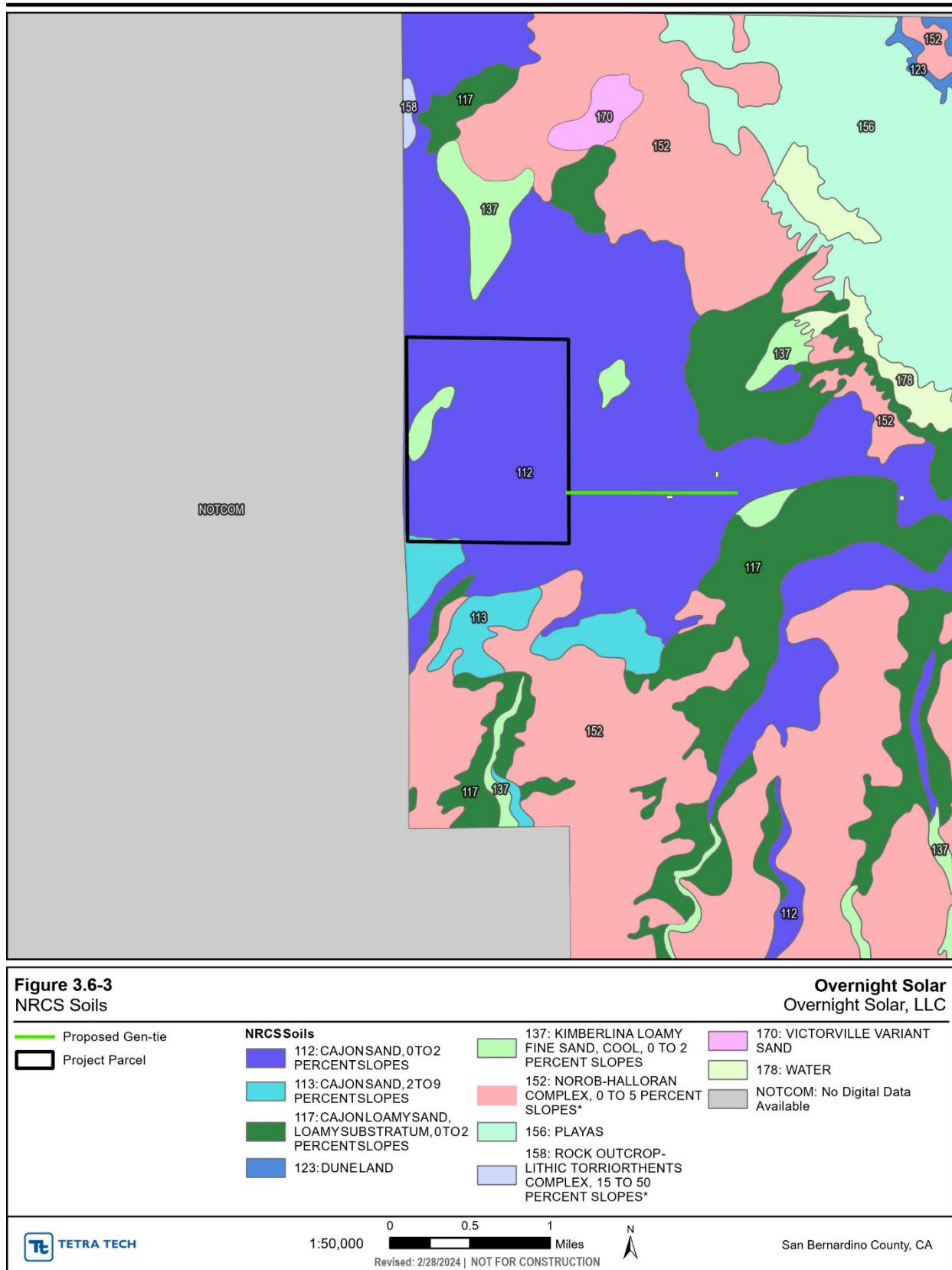


Figure 3.6-3. NRCSS Soils

3.6.1.10 Paleontological Resources

Paleontological resources are fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (animals without backbones), and microscopic plants and animals (microfossils), and can include mineralized body parts, body impressions, or footprints and burrows. They are valuable, non-renewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which plants or animals became fossilized usually were quite different from the present environments in which the geologic formations exist.

PaleoWest prepared an assessment report that evaluates the potential for paleontological resources to be found within and surrounding the project parcel as well as along the gen-tie corridor, which is entirely within the existing Mojave Solar Facility (**Appendix G**). Their report also provides management recommendations for the construction period based on the likelihood of encountering such resources and their potential sensitivity (**Appendix G**). The report is based on the geologic formations mapped within the project parcel and surrounding area, a database search for previous finds in the area, and a pedestrian survey of the project parcel. A pedestrian survey of the gen-tie line was not conducted due to its location within an existing facility, previous ground disturbance for construction of the existing Mojave Solar facility, and limited ground disturbance for the proposed gen-tie line. Due to the depth of the geologic formation in which paleontological resources are likely to occur, as well as the results from the pedestrian survey of the project parcel, and the consistent topography and geology along the gen-tie corridor, a pedestrian survey along the gen-tie corridor was deemed unnecessary. Nevertheless, any mitigation for paleontological resources applied to the project site would also apply to the gen-tie corridor. Management recommendations are based on the assessed likelihood for encountering paleontological resources both at the surface and in the subsurface.

Results of the paleontological resource database search conducted by the Natural History Museum of Los Angeles County in March 2023, along with other published literature, identified nine paleontological resource locations in the “region” (including Harper Lake). They were all found in Pleistocene age geologic units and included large vertebrates (mammoth, horse, camel, etc.) and small freshwater, aquatic organisms (pea clam, ostracod, etc.). A pedestrian survey of the project parcel was conducted along north-south transects spaced at 10 meters for the initial 300 acres and 50 meters for the remaining 525 acres. No paleontological resources were discovered during the pedestrian survey, which only evaluated the ground surface. However, the possibility was noted that such resources could be encountered at depth, where the Pleistocene sediments are found, underlying the more recent alluvial deposits (**Appendix G**).

PaleoWest used the widely accepted classification system of resource sensitivity provided by the Society of Vertebrate Paleontologists (SVP 2010) to evaluate the sensitivity (possibility) of encountering fossils in the various sedimentary units. Based on the fossil finds identified in the database search, literature, and at previous development sites in the immediate vicinity, the general sensitivity for the project parcel was assessed to be high. The Holocene sediments found at the surface are considered to

have low sensitivity, but the underlying Pleistocene sediments were assessed to have high sensitivity, and have been encountered within 5 feet of the surface at adjacent facilities (**Appendix G**). Due to the consistent topography and geology along the gen-tie corridor, the corridor's general sensitivity is also anticipated to be high.

3.6.2 Regulatory Framework

3.6.2.1 Federal

Earthquake Hazards Reduction Act

The United States Congress passed the Earthquake Hazards Reduction Act in 1977 to address risks to life and property from future earthquakes through the establishment and maintenance of an earthquake hazards reduction program. The act established the National Earthquake Hazards Reduction Program, which, in November 1990 was amended by the National Earthquake Hazards Reduction Program Act. This Act substantially refined agency responsibilities, program goals, and objectives.

3.6.2.2 State

The Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates the development and construction of buildings intended for human occupancy to avoid hazards associated with surface fault rupture. In accordance with this law, the CGS maps active faults and designates Earthquake Fault Zones along mapped faults. This act groups faults into categories (i.e., active, potentially active, or inactive). Historic and Holocene faults are considered active, Late Quaternary and Quaternary faults are considered potentially active, and pre-Quaternary faults are considered inactive. These classifications are qualified by conditions. For example, a fault must be shown to be “sufficiently active” and “well defined” through detailed, site-specific, geologic explorations to determine whether building setbacks should be established. Any project that involves the construction of buildings or structures for human occupancy is subject to review under the Alquist-Priolo Earthquake Fault Zoning Act, and any structures for human occupancy must be located at least 50 feet from any active fault.

The Seismic Hazards Mapping Act of 1990

In accordance with Public Resources Code (PRC) Chapter 7.8, Division 2, the CGS is directed to delineate seismic hazard zones. The purpose of the act is to reduce the threat to public health and safety and minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by the CGS in their land use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code (CBC) is codified in Title 24 of the California Code of Regulations, Part 2. The CBC establishes minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. The provisions of the CBC apply to the construction, alteration, movement, replacement, repair, location, maintenance, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California. The CBC would apply to structures proposed for the project.

Chapter 18 of the CBC covers the requirements of geotechnical investigations, including expansive soils (§1803); excavation, grading, and fills (§1804); load-bearing of soils (§1806); as well as foundations (§1808), shallow foundations (§1809), and deep foundations (§1810). Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also discusses mitigation measures that can be considered for structural design, including ground stabilization, foundation type and depths, structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

If a project is approved, then the project proponent would prepare a site-specific, design-level geotechnical report with recommendations for final project design. The design-level geotechnical report should incorporate the results and recommendations from the preliminary geotechnical report, add further details as needed to address final project design, and include all relevant mitigation measures identified in the California Environmental Quality Act (CEQA) document, conditions of approval or other agency requirements.

Public Resources Code Section 5097.5 and Section 30244

Other State requirements for paleontological resource management are included in PRC Sections 5097.5 and 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (e.g., State, county, city, district) lands.

National Pollutant Discharge Elimination System Construction General Permit

Project construction and decommissioning would disturb 1 acre or more of land surface and could affect the quality of stormwater discharges into waters of the U.S.; therefore, each phase would be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). See Section 3.9, Hydrology and Water Quality, for additional details.

California Public Utilities Commission General Order 95

General Order 95 of the California Public Utilities Commission applies to construction and reconstruction of overhead and underground electric lines in California, including those proposed as part of the project. Design of transmission lines must adhere to the National Electric Safety Code. Guidance documents are published by the Institute of Electrical and Electronics Engineers and ASCE, including ASCE 74, *Guidelines for Electrical Transmission Line Structural Loading*, which states, “Transmission structures are not typically designed for vibration caused by earthquakes because these loads are less than that of wind/ice combinations.”

California Environmental Quality Act

Appendix G of the State CEQA Guidelines (California Code of Regulations Title 14, Chapter 3) provides an Environmental Checklist of questions intended to guide analysis pertaining to project-level impacts to geology and soils and paleontological resources. For purposes of the Environmental Checklist, CEQA does not define “a unique paleontological resource or site.” However, the Society of Vertebrate Paleontology (SVP) has defined a “significant paleontological resource” in the context of environmental review. The SVP defines a Significant Paleontological Resource as: “Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)” (SVP 2010: 11).

3.6.2.3 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County’s General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Cultural Resources Element

GOAL CR-2

Historic and Paleontological Resources. Historic resources (buildings, structures, or archaeological resources) and paleontological resources that are protected and preserved for their cultural importance to local communities as well as their research and educational potential.

Policy CR-2.3

Paleontological and Archaeological Resources. We strive to protect paleontological and archaeological resources from loss or destruction by requiring that new development include appropriate mitigation to preserve the quality and integrity of these resources. We require new development to avoid paleontological and archeological resources whenever possible. If avoidance is

not possible, we require the salvage and preservation of paleontological and archeological resources.

Hazards Element

GOAL HZ-1

Natural Environmental Hazards. Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

Policy HZ1.2:

New development in environmental hazard areas. We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

Policy HZ1.6:

Critical and essential facility location. We require new critical and essential facilities to be located outside of hazard areas, whenever feasible.

Policy HZ1.7:

Underground utilities. We require that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.

Policy HZ1.8:

Wind erosion hazards. We require new development in medium-high or high wind erosion hazard areas to minimize the effects of wind-blown soil through building and site design features such as fencing, surface treatment or pavement, attenuation or wind barriers, architectural features, building materials, and drought resistant landscaping.

Policy HZ1.9:

Hazard areas maintained as open space. We minimize risk associated with flood, geologic, and fire hazard zones or areas by encouraging such areas to be preserved and maintained as open space.

Policy HZ1.12:

Local hazard mitigation plan implementation. We require adherence to the goals, objectives and actions in the Multi-jurisdictional Hazard Mitigation Plan and subsequent amendments to reduce and mitigate damages from hazards in the county.

San Bernardino County Building Regulations***Title 6, Division 3, Building Regulations, Chapter 63.01, California Building Code***

Chapter 63.01 of the County Code of Ordinances adopts the CBC for the unincorporated area of the County.

San Bernardino County Development Code***Title 8, Division 2, Land Use Zoning Districts and Allowed Land Uses, Section 82.15.040, Development Standards***

Development and land uses proposed within the GH (Geologic Hazard) Overlay shall comply with the following standards.

- (a) A structure used for human occupancy shall be located 50 feet or farther from any active earthquake fault traces. Lesser setbacks may be applicable in certain situations as determined by an appropriate geologic investigation and approved by the County Geologist or other engineering geologist designated by the Building Official.

Title 8, Division 5 (Permit Application and Review Procedures), Section 85.11.030 (Erosion Control Plan and Inspection Required)

- (a) *No Land Disturbance or Construction Activity without Prior Approval.* No person except as provided in this Chapter, shall commence with a disturbance of land (e.g., grading or land clearing) or construction activity that has that potential to cause erosion without first obtaining approval of erosion control measures to ensure that erosion would not reasonably be expected to occur. Best Management Practices (BMPs) shall be implemented at all land disturbance sites, regardless of the area of disturbance.
- (b) *Inspections Required.* Site inspections shall be conducted as needed to verify compliance with this Chapter. Project proponents must also recognize that their project is subject to inspection by the Public Works Department, Environmental Management Division, and Regional Water Quality Control Board staff as part of their General Construction Permit obligations.
- (c) *Stormwater Pollution Prevention Plan.* Projects disturbing more than one acre are also required to have coverage under the State General Construction Permit issued by the State Water Resources Control Board and develop a Stormwater Pollution Prevention Plan (SWPPP). The property owner is required to abide by all provisions of the State General Construction Permit and obtain a Waste Discharge Identification (WDID) number prior to the issuance of building or grading permits when the disturbance is more than one acre.
- (d) *Review Requirements of Plan.* The Building Official, with the concurrence of the Planning Division and the Land Development Division, when appropriate, shall review the plan and determine that the proposed erosion control measures will be adequate and whether or not an erosion control permit is specifically required.
- (e) *Maintenance of Features.* The required features of the approved Erosion Control Plan shall be implemented during the land disturbing activity and maintained thereafter in accordance with the approved plan.

3.6.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to geology and soils if it would do any of the following:

- Directly or indirectly cause 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),
 - Strong seismic ground shaking,
 - Seismic-related ground failure, including liquefaction,
 - Landslides.
- Result in substantial soil erosion or loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.6.4 Project Impacts and Mitigation

Impact 3.6-1: The project would not directly or indirectly cause 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 or strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides. Impacts would be less than significant.

Construction and Operations

Known Faults and Strong Seismic Ground-Shaking. The project does not lie within any mapped earthquake fault zones according to the latest available data. There are no historic or “active” faults nearby; the closest is 18 miles to the southeast. There are three Holocene faults within 6 miles of the project, with the closest (the Lockhart fault) only 0.4 mile to the southwest. Two lineaments noted on the site by the Geotechnical Report (**Appendix F1**) were later assessed by a fault investigation (**Appendix F2**) as not actually faults. Nevertheless, the area could be affected by earthquakes or seismic ground shaking. Should strong seismic ground shaking occur at the project, damage to the photovoltaic

(PV) solar arrays or other ancillary facilities could result in potential damage and/or injury to staff if on-site at the time of a significant earthquake.

The project would not include habitable structures and would have personnel on-site for maintenance purposes and intermittent panel washing. Therefore, the project would not potentially expose people or structures to substantial adverse effects associated with rupture of a known earthquake fault. There would be no impact related to surface fault rupture during project construction, operations and maintenance, or decommissioning.

The project would be subject to the seismic design criteria of the CBC, which requires that all improvements be constructed to withstand any anticipated ground shaking from regional fault sources and require that the project owner retain a licensed geotechnical engineer to design the project components to withstand probable seismically-induced ground shaking. All construction on-site would adhere to the specifications, procedures, and maintenance of site conditions required by the final design plans, which must comply with the seismic recommendations of a California-registered, professional geotechnical engineer in accordance with the CBC (**Appendix F1**). The final structural design would be subject to approval and follow-up inspection by the County Building Division. Final design requirements would be provided to the on-site construction supervisor and the County Building Inspector to ensure compliance. Adherence to the applicable CBC requirements and local agency enforcement would ensure that the project does not directly or indirectly cause substantial adverse effects, resulting in property loss, personal injury, or death from strong seismic ground shaking. Therefore, impacts related to ground shaking during project construction, operations and maintenance, or decommissioning would be limited.

The project is not in an earthquake fault zone established by California under the Alquist-Priolo Earthquake Fault Zoning Act, and no faults are mapped by the CGS and USGS as crossing the site. The nearest faults are Holocene age and located from 0.4 to 5.4 miles from the site. While there is the potential for surface rupture, ground shaking, and ground failure to occur at the project site due to the proximity of Holocene faults, the geotechnical evaluations (**Appendices F1 and F3**) provide recommendations for design loads and criteria that would minimize the risks through appropriate structural design.

Seismic-Related Ground Failure, Liquefaction, and Landslides. Other types of ground failure related to seismic event ground shaking, such as liquefaction and landslides, are unlikely due to conditions at the project site and within the gen-tie corridor. Further discussion of these issues is provided under Impact 3.6-3.

Therefore, impacts related to these risks along a known earthquake fault would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.6-2: The project could result in substantial soil erosion or loss of topsoil. Impacts would be less than significant.**Construction**

The project location is in a very low relief area with a well-developed topsoil layer present. The project's construction would result in ground surface disturbance during site clearance, excavation, and grading that could create the potential for soil erosion and loss of topsoil. The project site is currently undeveloped desert land and the gen-tie corridor is within the Mojave Solar Facility. The project, including the gen-tie, would be designed and constructed in accordance with State and local guidelines regarding erosion control and management. As discussed in **Appendix F3**, temporary slopes made during excavation activities, including for the gen-tie, would include BMPs such as diverting surface waters away from temporary excavations and preventing them from draining over the top of the excavation and down the slope face. During periods of heavy rain, slope faces would be protected with sandbags to prevent drainage over the edge of the slope, and a visqueen liner placed on the slope face to prevent erosion of the slope face. A Stormwater Pollution Prevention Plan (SWPPP), a Water Quality Management Plan (WQMP), and a Dust Control Plan all would be required as part of the project's implementation elements and the requirements of San Bernardino County Development Code, Section 85.11.030 would be followed. Therefore, erosion and loss of topsoil would be controlled as part of project implementation, resulting in less than significant impacts with no mitigation measures required. See also Section 3.9, Hydrology and Water Quality, for additional discussion of SWPPP requirements and Section 3.2, Air Quality, for Dust Control Plan requirements.

Operations

Because no large-scale ground-disturbing activities are anticipated during project operations, the design would include establishing and maintaining stable surfaces throughout the project. Long-term wind erosion control features would be included in the project design that would be designed, constructed, and maintained to satisfy all applicable San Bernardino County regulations. The site-specific design for this project has not yet been completed, but it would include planting of native vegetation for surface stabilization, a maintenance plan to assure plant viability, wind fencing (to control sand and silt movement), and any other surface stabilization measures deemed appropriate to control wind entrainment of particles. In addition, the project would comply with applicable regulatory requirements for long-term stormwater and water quality control as part of project operations. As a result, impacts from project operations would be less than significant.

Decommissioning

The amount of soil disturbance during decommissioning would be similar to project construction, and similarly could increase the risk of erosion or sediment transport by either wind or water transport. Without appropriate stormwater control measures, the potential impact could be significant. However, as decommissioning would also disturb more than 1 acre, the Applicant would be required (under the Construction General Permit) to prepare and implement a SWPPP with BMPs, similar to the SWPPP that would be implemented during construction. The decommissioning SWPPP would also reduce impacts related to soil erosion during decommissioning. The implementation of the SWPPP during

decommissioning would ensure that impacts from soil erosion during decommissioning would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.6-3: The project would not 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. Impacts would be less than significant.

The project has limited topographic relief with no hills in the immediate vicinity. There are no mapped landslides on or around the site (DOC 2023). The Geotechnical Report (**Appendix F1**) and gen-tie geotechnical investigation (**Appendix F3**) both indicated a lack of recorded landslide incidence in the vicinity as well as a low susceptibility of landslide on the site itself. For these reasons, the potential for landslide hazards at the site is low.

While the project site and gen-tie corridor are subject to moderate-to-strong seismic ground shaking in the event of an earthquake in the area, the risk of liquefaction, lateral spreading, or collapse is low to moderate because the on-site soils and groundwater conditions are not susceptible to this type of soil failure.

Subsidence caused by groundwater pumping has been noted in the Harper Lake area, but it is more pronounced on the eastern side of Harper Lake (USGS 2023b). This project, over the long term (and even during construction), will not require a significant amount of groundwater, and therefore is very unlikely to cause local subsidence due to pumping.

The project owner would be required to design all proposed improvements in accordance with applicable CBC seismic design standards and any recommendations by a California-registered professional geotechnical engineer provided in a site-specific geotechnical review, as provided in **Appendix F1** and **Appendix F3**. The geotechnical reviews considered the potential for landslides, lateral spreading, subsidence, and liquefaction, and this would be incorporated into the design plans, consistent with CBC seismic design standards.

Compliance with CBC requirements, including implementation of recommendations provided in the geotechnical and geological fault investigation reports (**Appendix F1, F2, and F3**), and County enforcement would reduce or avoid impacts related to ground failure, including liquefaction. Project construction, operations and maintenance, and decommissioning would not directly or indirectly cause adverse effects related to ground failure, including liquefaction.

Construction

The project is located adjacent to other infrastructure similar to the project (substation and solar panels) which show no signs of instability. Based on visual inspection of surface features at the project parcel and gen-tie corridor during field activities, there is no indication that the ground in the project vicinity is inherently unstable (**Appendices F1 and F3**). The project components to be installed are relatively common, and, from a geology and soils perspective, are minimally invasive. Accordingly,

project construction would not cause or exacerbate natural geologic hazards (such as landslides, lateral spreading, subsidence, liquefaction or collapse), or result in significant impacts on the geology and soils of the project area.

Temporary excavations may be needed during construction, as well as foundations that are anticipated to be on the order of 10 feet (or less) below ground surface (bgs). Although soil conditions may be encountered during drilling excavation that could result in caving, the use of common construction techniques would prevent caving and protect construction workers, the facility property, and adjacent areas. Such techniques during drilling can include installing manufactured casing to support borehole walls, or using viscous, nonhazardous, and biodegradable fluids during drilling to support the borehole walls. Shoring can be used to stabilize trench excavations. The soils present may mandate various types/styles of bracing or excavation support. Although the excavation depth and configuration generally drive any requirement for temporary excavation support. All prudent and required excavation precautions, consistent with the San Bernardino County Development Code, would be included within the project design plans.

Use of common, industry-standard construction techniques would minimize impacts on the project site, gen-tie corridor, and adjacent facilities. As a result, impacts associated with on- or off-site ground failure during construction would be less than significant.

Operations

Soils on the project parcel, gen-tie corridor, and in the surrounding area are unlikely to collapse or settle, and thus would not result in differential movement beneath foundations and distress to above-grade and at-grade structures. Activities during operations and maintenance would also not result in impacts to ground settlement. Therefore, operation of the above- and at-grade structures associated with the project are not likely to subject people and structures to the effects of ground settlement, resulting in damage to structures.

Detrimental ground settlement from new structures or earth loads can be alleviated by engineering strategies, including replacement of soils, or deploying structural support systems. The project would be designed in accordance with CBC requirements for site-specific geotechnical investigations. Kleinfelder has prepared the site-specific investigation and report for the project site and RMA Group has prepared the gen-tie investigation and report for the gen-tie corridor, both of which provide recommendations for the design stage of the project (**Appendices F1 and F3**). The final design would specifically follow the recommendations provided in **Appendices F1 and F3**. Therefore, impacts related to settlement or collapsible soil would be less than significant.

Decommissioning

The decommissioning activities would be similar to project construction activities, so, as described above, there is little likelihood of causing or exacerbating existing unstable geologic conditions. Use of common, industry-standard earthwork precautions would minimize impacts on the project site, gen-tie corridor, and adjacent facilities. As a result, impacts associated with on- or off-site ground failure during the decommissioning process would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.6-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. Impacts would be less than significant.

Expansive soils are clay-rich soils that swell and shrink with wetting and drying. The shrink-swell capacity of expansive soils can result in differential movement below or adjacent to a structure, resulting in distress. However, there are no clay-rich soils present on the project parcel, gen-tie corridor, or in the area. Therefore, the project is very unlikely to subject people and structures to the effects of expansive soils, resulting in damage to structures.

Construction

Lack of expansive soils in the area eliminates the potential for impacts due to shrinking and swelling of soils. In addition, such effects cause a much lower level of concern during construction activities, unless actions are needed to reduce concerns by removing and replacing soils for building footprints. However, because expansive soils are not present, construction period impacts related to expansive soils will be less than significant.

Operations

As discussed above, because expansive soils are not present in the area it reduces potential impacts from expansive soils on building and structures to zero. Regardless, all structures erected as part of the project would follow County Building Code requirements, which are based on CBC standards specific to expansive soils (the Uniform Building Code is no longer applicable).

Compliance with specific design requirements used to address expansive soils would ensure any operational impacts related to expansive soils would be less than significant.

Decommissioning

Activities during decommissioning would be less affected by expansive soils, just as they are during the construction phase. Combining that with the lack of expansive soils means the potential for impacts due to expansive soils during decommissioning activities would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.6-5: The project would not 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. Impacts would be less than significant.

Construction

The project would use portable toilets on-site during the construction period because the number of regular on-site personnel would vary, and would not warrant permanent facilities. Sanitary waste would be handled with an adjustable number of units based on the projected activities. Waste would

be taken to an off-site facility permitted and equipped to handle sanitary waste. Thus, a septic tank system would not be required on the project site at any point during the construction phase of the project. Therefore, there are no anticipated impacts due to the adequacy of soils to support septic tanks or alternative waste disposal systems. There would be a less than significant impact related to inadequate soils supporting an on-site septic system during construction.

Operations

The project personnel would use the existing facilities located at the Mojave Solar Facility during the operation period because the number of regular on-site personnel would vary and would not warrant permanent facilities. Sanitary waste would be handled with an adjustable number of units based on the projected activities. Waste would be taken to an off-site facility permitted and equipped to handle sanitary waste. The Mojave Solar Facility has an existing septic system and a new septic tank system would not be required for the project. Thus, a septic tank system would not be required on the project site for operations. Therefore, there are no anticipated impacts due to the adequacy of soils to support septic tanks or alternative waste disposal systems. There would be a less than significant impact related to inadequate soils supporting an on-site septic system during operation.

Decommissioning

Decommissioning the project would require similar workers over a similar period of time as the construction phase. The project would use portable toilets on-site during the decommissioning period and sanitary waste would be handled in the same manner as during construction. Therefore, there would be a less than significant impact related to inadequate soils supporting an on-site septic system during decommissioning.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.6-6: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Impacts would be less than significant with mitigation.

Construction

A detailed review of the potential for finding paleontological resources at the site was conducted and is presented in **Appendix G**. The assessment did not find any paleontological resources during an extensive pedestrian survey, but found the general sensitivity for finding such resources at the project parcel to be high, and because the topography and geology along the gen-tie corridor is consistent with the project parcel, the general sensitivity for finding paleontological resources in the gen-tie corridor is also anticipated to be high. This result was based primarily on the expectation that older sediment (Pleistocene age) was likely to be found within 5 feet to 10 feet below the ground surface. This sediment age has produced most, if not all, of the significant paleontological resource finds documented in the area.

Project-related excavation to install the supports for solar panels, foundations for battery storage units, or trenching for various underground collection and delivery lines could occur at depths of up to 7 feet bgs. Most construction activities would disturb only the surface sediments (to depths less than 2 feet),

which are younger Holocene sediments that have not produced any paleontological resources to date, and therefore are considered to have a low potential for producing such resources. Nevertheless, it is considered prudent and conservative to implement mitigation measures related to paleontologic resources. **Mitigation Measure GEO-1** would require a worker training program, **Mitigation Measure GEO-2** would establish a paleontological monitoring process, and **Mitigation Measure GEO-3** would implement a contingency protocol in the case of an inadvertent find of a paleontological resource. By using these mitigation measures, potential impacts to paleontological resources would be reduced to less than significant.

Operations

Facility operation would not require trenching or other disturbance of surface sediments to the depths noted above. As a result, no impacts to paleontological resources are anticipated during operations.

Decommissioning

While soils up to these same depths may be disturbed during project decommissioning, it is unlikely that any of these soils would be previously undisturbed. Therefore, it is very unlikely that there would be any potential impacts to paleontological resources during decommissioning, and any impacts would be less than significant.

Mitigation Measures:

GEO-1: Paleontological Resources Impact Mitigation Program

Prior to the commencement of ground-disturbing activities, the project applicant shall retain a paleontologist qualified according to industry standards (SVP 2010) (Project Paleontologist) to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) which shall include Worker Environmental Awareness training regarding paleontological resources, paleontological resources monitoring requirements, and requirements and contingencies in the event of an unanticipated find of paleontological resources during project construction, operation, or decommissioning.

Worker Environmental Awareness Program (WEAP) – Paleontological Resources: Before starting any ground-disturbing construction or decommissioning activities, all on-site personnel shall receive training related to paleontological resources as part of the project's WEAP. This shall include (1) background on laws and ordinances protecting fossil resources, (2) types of fossil resources that may be encountered in the project area, (3) information regarding basic recognition of fossils, (4) the role of the paleontological monitor, and (5) appropriate notification procedures in the event that fossils are discovered during project activities (an unanticipated find). This portion of the WEAP training shall stress the importance of immediate notification of the paleontological monitor of any suspected find as well as contact information for the Project Paleontologist. The paleontological resources section of the WEAP training shall be developed by the Project Paleontologist and can be delivered concurrent with other training.

GEO-2: Paleontological Monitoring

Paleontological resource monitoring shall be implemented at the start of any ground-disturbing activities (e.g., grading, excavation, etc.) more than 5 feet below ground surface (bgs). At this depth the

likelihood of encountering the geologic formation (Qya) with the greatest potential for containing fossils is expected.

GEO-3: Unanticipated Find Contingency

If a paleontological resource is discovered, the paleontological monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. **Salvage of Fossils.** If a fossil is discovered, all work in the immediate vicinity shall be halted to allow the paleontological monitor, and/or the Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossil is assessed as potentially significant, the paleontological monitor or Project Paleontologist shall recover the fossil, following standard field procedures for collecting paleontological resources, as outlined in the PRIMP. Typically, fossils can be safely and quickly salvaged by a single paleontologist without significant disruption to construction activity. In the case of a larger fossil assemblage (such as complete skeletons or multiple parts of large mammals) the effort shall require more extensive excavation and longer salvage periods. If such a situation occurs, the Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
2. **Fossil Preparation and Curation.** Upon completion of laboratory preparation and fossil identification, all scientifically significant specimens recovered as a result of the project shall be delivered to the San Bernardino County Museum for permanent curation and storage, as outlined in the PRIMP. The fossil specimens shall be accompanied by field notes, photographs, locality data, a signed deed of gift from the landowner, and a copy of the final technical report. The cost of delivery and curation is assessed by the repository and is the responsibility of the landowner, who shall provide confirmation to the San Bernardino County Land Use Services Department that such funding has been paid to the institution. Any non-significant fossils collected from the project area shall first be offered to the landowner, and if unwanted, be discarded or retained for educational purposes by the Project Paleontologist.
3. **Paleontological Mitigation Report.** After completing ground-disturbing activities and fossil curation, the Project Paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall specify the location, duration, and monitoring methods, as well as describe the stratigraphic sections, catalogue any recovered fossils, explain their scientific significance, and identify where fossils have been curated. The report shall be provided to the County for their records upon completion.

Level of Significance: Less than significant with mitigation.

IMPACT 3.6-7: The project could result in cumulative impacts related to geology and soils. Impacts would be less than significant with mitigation.

Impacts related to geology, soils, and seismicity tend to be site-specific and depend on the local geology and soil conditions. For these reasons, the geographic scope for potential cumulative impacts consists of the project site, gen-tie corridor, and adjacent areas as listed in **Table 3-1, Cumulative Projects**, and shown on **Figure 3-1, Cumulative Projects Map**. However, the project would be designed and constructed in accordance with the most current CBC and County Building Code requirements, providing limited potential for the project to exacerbate seismic hazards and a less than significant potential for impact. State and local building regulations and standards have been established to address and reduce the potential for projects to cause or exacerbate seismic hazard impacts. All projects would be required to comply with applicable provisions of these laws and regulations. Compliance with these requirements would limit the potential for impacts to a less than significant level. The purpose of the CBC (and related local ordinances) is to regulate and control the design, construction, quality of materials, use or occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Based on compliance with these requirements, the incremental impacts of the project combined with impacts of other projects in the area would not combine to cause a significant cumulative impact related to seismic hazards.

Other individual projects, and the project, are required to comply with existing codes, standards, and permitting requirements (e.g., preparation of a SWPPP) to reduce erosion impacts. Potential project-related impacts to soil erosion and loss of topsoil would be reduced through the implementation of the BMPs identified in the SWPPP, WQMP, and Dust Control Plan. Requirements in the State construction general permit are designed to reduce adverse cumulative effects of construction-phase erosion. Individual projects' compliance with stormwater control requirements would reduce the overall cumulative impact to a less than significant level.

The geographic scope of cumulative impacts to paleontological resources includes the project site, gen-tie corridor, and immediately adjacent areas where Pleistocene-age deposits could be disturbed. If there were paleontological resources that extended across areas of ground disturbance of the proposed project and cumulative projects, the projects could result in the loss of paleontological resources, a potentially significant impact. However, with implementation of **Mitigation Measures GEO-1, GEO-2, and GEO-3**, the proposed project's impacts on paleontological resources in the event of inadvertent discovery during construction would be reduced to less than significant and would not be cumulatively considerable.

Mitigation Measures: Implement Mitigation Measures GEO-1, GEO-2, and GEO-3.

Level of Significance: Less than significant with mitigation.

3.7 Greenhouse Gas Emissions

This section evaluates the potential greenhouse gas (GHG) emissions impacts that may result from the implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to GHG emissions, and includes mitigation measures required to reduce or avoid these impacts, as applicable. The analysis in this section is based on the Air Quality and Greenhouse Gas Technical Report prepared by SWCA Environmental Consultants (see **Appendix C**). San Bernardino County (County) received comments from the Mojave Desert Air Quality Management District (MDAQMD) during the scoping period (the comment letter is included in **Appendix A**), and those comments have been incorporated into this section.

3.7.1 Environmental Setting

The project is in the Mojave Desert Air Basin (MDAB), which comprises a 21,000-square-mile area encompassing the majority of San Bernardino County, the eastern portion of Kern County, the northeastern portion of Riverside County, and the northeastern portion of Los Angeles County. The MDAB is composed of four California air districts: the MDAQMD, the Antelope Valley Air Quality Management District, the Eastern Kern Air Pollution Control District, and the eastern portion of the South Coast Air Quality Management District. The MDAQMD has jurisdiction over stationary sources of air pollution located within San Bernardino County's High Desert and Riverside County's Palo Verde Valley, which includes the project site. The climate in the air basin is characterized by hot, dry summers, mild winters, infrequent rainfall, moderate- to high-wind episodes, and low humidity. The majority of the MDAB is relatively rural and sparsely populated.

3.7.1.1 Climate Change Overview

Climate change is a distinct change in average meteorological conditions with respect to temperature, precipitation, and storms. Climate change can result from both natural processes and human activities. Natural changes in the climate result from very small variations in the earth's orbit which change the amount of solar energy the planet receives. Human activities can affect the climate by emitting heat-absorbing gases into the atmosphere and by making changes to the planet's surface, such as deforestation and agriculture. The following have been identified as impacts to California from climate change:

- Higher temperatures, particularly in the summer and in inland areas;
- More frequent and more severe extreme heat events;
- Reduced precipitation, and a greater proportion of precipitation falling as rain rather than snow;
- Increased frequency of drought conditions;
- Rising sea levels;
- Ocean water becoming more acidic, harming shellfish and other ocean species; and
- Changes in wind patterns.

These direct effects of climate change may in turn have a number of other impacts, including increases in the number and intensity of wildfires, coastal erosion, reduced water supplies, threats to agriculture, and the spread of insect-borne diseases.

The Earth's climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. GHGs are released by the combustion of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect. Although climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

3.7.1.2 Greenhouse Gas

GHGs are naturally present in the earth's atmosphere and play a critical role in maintaining the planet's temperature. The natural process through which heat is retained in the troposphere is called the greenhouse effect. The greenhouse effect traps heat in the troposphere through a threefold process as follows: shortwave radiation emitted by the sun is absorbed by the earth; the earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and re-emit it in all directions, with some radiation heading out into space and some heading back toward the earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the earth is the underlying process of the greenhouse effect. Without the presence of GHGs, the earth's average temperature would be approximately zero degrees Fahrenheit.

Whereas pollutants with localized effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more carbon dioxide (CO₂) is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere.

Parts of the earth's atmosphere act as an insulating blanket, trapping sufficient solar energy to keep the global average temperature within a range suitable for human habitation. The blanket is a collection of atmospheric gases called greenhouse gases because they trap heat similar to the effect of glass walls in a greenhouse. These gases, mainly water vapor, CO₂, methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and chlorofluorocarbons (CFCs), all act as effective global insulators, reflecting infrared radiation back to the earth. Human activities, such as producing electricity and driving internal combustion vehicles, emit these gases into the atmosphere.

The IPCC identifies the following compounds as key anthropogenic GHGs: CO₂, N₂O, CH₄, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Each is discussed in detail below, along with CFCs, hydrochlorofluorocarbons (HCFCs), and nitrogen trifluoride (NF₃).

Carbon Dioxide

CO₂ is an odorless, colorless gas with both natural and anthropogenic sources. CO₂ is the most important and common anthropogenic GHG. Examples of natural sources are respiration of bacteria, plants, and animals, evaporation from oceans, and decomposition of organic matter. Human activities that emit CO₂ include burning coal, oil, natural gas, and wood. Prior to the Industrial Revolution, CO₂ levels remained at approximately 280 parts per million for close to 6,000 years of human civilization. Since then, humans have generated an estimated 1.5 trillion tons of CO₂ pollution, much of which will continue to warm the atmosphere for thousands of years (NOAA 2022).

Methane

CH₄ is a flammable gas that is the main component of natural gas. When burned in the presence of oxygen, CO₂ and water are released. There are no direct health effects from exposure to CH₄. Natural sources of CH₄ include wetlands, gas hydrates, decay of organic material, oceans, freshwater bodies, non-wetland soils, and wildfires. Human activities that emit CH₄ include fossil fuel production, biomass burning, agricultural practices, and waste management.

Nitrous Oxide

N₂O is a colorless gas that can cause euphoria, dizziness, and slight hallucinations when exposed to higher concentrations. Natural sources include biological sources in soil and water. Human activities that emit N₂O include agricultural soil management, sewage treatment, and combustion of fossil fuels.

Fluorinated Gases

Fluorinated gases are synthetic and emitted from a variety of industrial processes:

- HFCs are human-made chemicals used as a substitute for CFCs for mobile air conditioning and refrigerants. Because HFCs destroy stratospheric ozone, their production was stopped as required by the 1989 Montreal Protocol.
- PFCs are very stable and do not break down through the chemical processes in the lower atmosphere and have long lifetimes (between 10,000 and 50,000 years). The two main sources of PFCs are primarily aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride

SF₆ is an inorganic, colorless, odorless, nontoxic, nonflammable gas used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood by scientists who study atmospheric chemistry that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. The atmospheric lifetime of CO₂ is variable because it is readily exchanged in the

atmosphere. The atmospheric lifetime of CH₄ is about 12 years and the atmospheric lifetime of N₂O is approximately 120 years.

3.7.1.3 Global Warming Potential

The IPCC developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to CO₂, which is used as a reference gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of CO₂. Therefore, GWP-weighted emissions are measured in metric tons (MT) of carbon dioxide equivalent (CO₂e). The GWP for CH₄ is approximately 25 times more powerful than CO₂, and the GWP of N₂O is approximately 298 times more powerful than CO₂ in its ability to trap heat in the atmosphere (CO₂ has a GWP of 1). SF₆ has a GWP of 22,800. CO₂e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO₂e. These GWPs have been adopted by the U.S. Environmental Protection Agency (USEPA) into 40 Code of Federal Regulations (CFR) 98, Mandatory Greenhouse Gas Reporting.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, the IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4; IPCC 2007). The updated GWPs in the IPCC AR4 are used in recent GHG emissions inventories. In 2013, the IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). This was followed by the Sixth Assessment Report (AR6), which was finalized in March 2023. However, the United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories requires the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values, and statewide and national GHG inventories have not yet updated their GWP values to the AR6 values. Therefore, this analysis was completed using the GWP values from AR4.

By applying the GWP ratios, project-related CO₂e emissions can be tabulated in MT per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in **Table 3.7-1, Global Warming Potentials and Atmospheric Lifetimes**.

Table 3.7-1. Global Warming Potentials and Atmospheric Lifetimes

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)		
		AR4	AR5	AR6
Carbon Dioxide (CO ₂)	50 to 200	1	1	1
Methane (CH ₄)	12	25	28	29.8 ^{1/} 27.2 ^{2/}
Nitrous Oxide (N ₂ O)	114	298	265	273
Sulfur Hexafluoride (SF ₆)	3,200	22,800	23,500	-

1/ Fossil origin

2/ Non-fossil origin

Source: IPCC (2007, 2013, and 2021)

HFC – hydrofluorocarbon; PFC – perfluorocarbon

3.7.2 Regulatory Framework

3.7.2.1 Federal

Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, that CO₂ is an air pollutant as defined under the Clean Air Act (CAA), and that the USEPA has the authority to regulate emissions of GHGs. Responding to the mounting issue of climate change, the USEPA has taken actions to regulate, monitor, and potentially reduce GHG emissions.

Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act

On December 7, 2009, the USEPA issued an endangerment finding that current and projected concentrations of the six GHGs in the atmosphere (CO₂, CH₄, N₂O, SF₆, HFCs, and PFCs) threaten the public health and welfare of current and future generations. The Endangerment Finding is based on Section 202(a) of the CAA, which states that the Administrator (of the USEPA) should regulate and develop standards for “emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” The rule addresses Section 202(a) in two distinct findings. The first addresses whether the concentrations of the six key GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) in the atmosphere threaten the health and welfare of current and future generations. The second addresses whether the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and, therefore, the threat of climate change.

The Administrator found that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CAA. The evidence supporting this finding consists of human activity resulting in “high atmospheric levels” of GHG emissions, which are most likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wildfires, droughts, sea level rise, and higher intensity storms) are a threat to public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations.

The Administrator also found that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. The USEPA’s final findings respond to the 2007 U.S. Supreme Court decision that GHGs fit within the CAA definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements, but rather allow the USEPA to define the GHG standards proposed earlier in 2009 for new light-duty vehicles as part of the joint rulemaking with the U.S. Department of Transportation (DOT).

Various subsequent federal rulemakings limit GHG emissions from fossil fuel-fired power plants through the USEPA’s major stationary source permitting program and through the USEPA’s New Source Performance Standards. These rulemakings have been subject to court challenges and political intervention, such that applicants for air permits are required to evaluate the current status of the regulatory requirements. These GHG rules do not apply to the activities associated with the project.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the USEPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the U.S. (40 CFR 98). This Reporting Program requires facilities that emit 25,000 metric tons CO₂ equivalents (MTCO₂e) or more of GHG to report their GHG emissions to the USEPA to inform future policy decisionmakers. These publicly available data allow the reporters to track their own emissions, compare them to similar facilities, and help identify cost-effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers report at the corporate level. An estimated 85 percent of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks

In April 2010, the USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) established a national program consisting of new standards for model year (MY) 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. USEPA finalized the first-ever national GHG emissions standards under the CAA, and NHTSA has finalized the Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. The new standards were applicable to new passenger cars, light-duty trucks, and medium duty passenger vehicles, covering MY 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile in MY 2016 under USEPA's GHG program, and 34.1 miles per gallon in MY 2016 under NHTSA's CAFE program and represent a harmonized and consistent national program (USEPA and NHTSA 2010).

In August 2012, the USEPA and NHTSA issued final rules extending the national program to improve fuel economy for MY 2017 through 2025. These standards require vehicles to meet an estimated combined average emissions level of 163 grams of CO₂ per mile in MY 2025 under USEPA's GHG program, and 49.6 miles per gallon in MY 2025 under NHTSA's CAFE program (USEPA and NHTSA 2012). In August 2018, the "Safer Affordable Fuel-Efficient" (SAFE) Vehicles Rule was proposed for MY 2021–2026 passenger cars and light trucks. This rule went into effect on June 29, 2020, thereby setting new CO₂ standards for MY 2021 and later (85 *Federal Register* 40901).

In December 2021, following Executive Order 13990 (Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis), the USEPA further revised the GHG emissions standards under CAA section 202(a) for light-duty vehicles for 2023 and later MY to adopt the more stringent SAFE rule standards in each MY from 2023 through 2026 (86 *Federal Register* 74434).

On April 18, 2024, USEPA published a final rule, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, that sets new, more protective standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027 (89 *Federal Register* 27842).

Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

In 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 *Federal Register* 57106–57513). The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with MY 2018 through 2027 for certain trailers, and MY 2021 through 2027 for semi-trucks, large pick-up trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (81 *Federal Register* 73478).

Presidential Executive Orders 13990 and 14008

Executive Order 13990 (Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis), issued on January 20, 2021 directs all executive departments and agencies to immediately review and take action to address the promulgation of federal regulations and other actions that conflict with important national objectives and to immediately commence work to confront the climate crisis (Federal Register 2021a).

Executive Order 14008 (Tackling the Climate Crisis at Home and Abroad) issued on January 27, 2021, declares the Administration's policy to build resilience against the impacts of existing climate change and projected changes according to current trajectories in both the United States and with other countries abroad (Federal Register 2021b).

3.7.2.2 State

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various Statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO₂e and produced 424 million gross MTCO₂e in 2017. In the United States, transportation, industrial operations, and utility usages consist over 75 percent of all GHGs emitted.

The State legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32 and California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

The California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 to 38599) establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32

requires the State to create an opportunity for interested parties to comment on the scoping plan by conducting public workshops which are required in regions with low-income communities and minority populations. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. In 2016, statewide GHG emissions fell below the levels recorded in 1990, 4 years ahead of schedule.

California Air Resources Board Scoping Plan

To achieve the goals of AB 32, CARB adopted a Scoping Plan (CARB 2022) establishing an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines an adopted role of a cap-and-trade program.

In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017, CARB adopted a second update to the Scoping Plan. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping Plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other federal actions.

CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan; CARB 2022) was adopted December 15, 2022. The Plan sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. To achieve the targets of AB 1279, the 2022 Scoping Plan relies on existing and emerging fossil fuel alternatives and clean technologies, as well as carbon capture and storage. Specifically, the 2022 Scoping Plan focuses on zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen. The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world.

Executive Order B-55-18 and Senate Bill 100 (100 Percent Clean Energy Act of 2018)

SB 100, also known as the California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases, was approved by the California legislature and signed by Governor Brown in September 2018. SB 100, also known as the 100 Percent Clean Energy Act of 2018, declares that CARB should plan for 100 percent total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by the end of 2045. SB 100 also set interim goals, accelerating the Renewable Portfolio Standard (RPS) requirement to 50 percent from renewable energy sources by 2026 and 60 percent by 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities

procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the State of California by 2045, and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency, California Environmental Protection Agency (CalEPA), the Department of Food and Agriculture, and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

Assembly Bill 1279 (California Crisis Act)

In 2022, California passed AB 1279 (California Crisis Act), which introduced a Statewide policy to achieve net zero GHG emissions by 2045 and maintain net negative GHG emissions thereafter. Furthermore, AB 1279 ensures that by 2045, Statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. This bill would require the State board to work with relevant State agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable CO₂ removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

Executive Order S-3-05

In June 2005, Executive Order S-3-05 set forth a series of target dates by which Statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of CalEPA to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and the California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts.

In 2006, this goal was further reinforced with the passage of AB 32, the Global Warming Solutions Act of 2006. As stated previously, AB 32 sets the same overall GHG emissions reduction goals while further mandating that the CARB create a plan (Scoping Plan), which includes market mechanisms, and implement rules to achieve real, quantifiable, cost-effective reductions of GHGs.

Executive Order S-14-08 and Executive Order S-21-09

Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (2009) directs CARB to adopt regulations requiring that 33 percent of electricity sold in the State come from renewable energy by 2020.

EO S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent

renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15, Senate Bill 32, and Assembly Bill 197 (Statewide Interim GHG Targets)

California Executive Order B-30-15 (April 29, 2015) set an “interim” Statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and directed State agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in MT. AB 197 (September 8, 2016) and SB 32 (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in Executive Order B-30-15. AB 197 also requires additional GHG emissions reporting that is broken down to sub-county levels and requires CARB to consider the social costs of emissions impacting disadvantaged communities.

Senate Bill 350 (Clean Energy & Pollution Reduction Act)

SB 350 was signed into law in September 2015 and establishes tiered increases to the RPS. The bill requires 40 percent of the State’s energy supply come from renewable sources by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also established a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

3.7.2.3 Regional

Southern California Association of Governments – Connect SoCal: Regional Transportation Plan/Sustainable Communities Strategy

On September 3, 2020, the Southern California Association of Governments (SCAG)’s Regional Council adopted Connect SoCal (2020-2045 Regional Transportation Plan/Sustainable Communities Strategy [2020 RTP/SCS]). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS is long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by State law to lower regional GHG emissions.

3.7.2.4 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County’s General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Natural Resources Element

GOAL NR-1 **Air Quality.** Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.

Policy NR-1.7 **Greenhouse gas reduction targets:** We strive to meet the 2040 and 2050 greenhouse gas emission reduction targets in accordance with state law.

Renewable Energy & Conservation Element

GOAL RE-2 **Renewable Energy Systems.** The County will be home to diverse and innovative renewable energy systems that provide reliable and affordable energy to our unique Valley, Mountain, and Desert regions.

Policy RE 2.1 Support solar energy generation, solar water heating, wind energy and bioenergy systems that are consistent with the orientation, siting and environmental compatibility policies of the General Plan

Policy RE 2.2 Promote use of energy storage technologies that are appropriate for the character of the proposed location.

Policy RE- 2.6 Encourage energy efficiency through appropriate renewable energy systems.

GOAL RE-3 **Community-oriented renewable energy.** Community-oriented renewable energy facilities will be prioritized to complement local values and support a high quality of life in unincorporated communities.

GOAL RE-4 **Environmental Compatibility.** The County will establish a new era of sustainable energy production and consumption in the context of sound resource conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels

Policy RE -4.1 Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.

GOAL RE-5 **Siting.** Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental priorities.

GOAL RE-6 **County Government Systems.** County regulatory systems will ensure that renewable energy facilities are designed, sited, developed, operated and decommissioned in ways compatible with our communities, natural environment, and applicable environmental and cultural resource protection laws.

Policy RE-6.4 Support the governor's initiative to obtain 50% of the energy consumed in the state through RE generation sources by 2040.

Infrastructure and Utilities Element

GOAL IU-5 **Power and Communications.** Unincorporated area residents and businesses have access to reliable power and communication systems by partnering with other public agencies and providers to improve the availability and stability of electricity and natural gas service in unincorporated communities.

Policy IU- 5.5 **Energy and fuel facilities.** We encourage the development and upgrade of energy and regional fuel facilities in areas that do not pose significant environmental or public health and safety hazards, and in a manner that is compatible with military operations and local community identity.

San Bernardino County Regional Greenhouse Gas Reduction Plan

In response to SB 32, an informal partnership, led by the San Bernardino Council of Governments (SBCOG), compiled an inventory of GHG emissions and developed reduction measures in the Regional Greenhouse Gas Reduction Plan (Regional Plan; SBCOG 2021) that could be adopted by 25 partnership cities of San Bernardino County, including the County. This Regional Plan is not mandatory for the partnership jurisdictions. Instead, it provides information that can be used by partnership jurisdictions, if they choose so, to develop individual climate action plans.

A final draft of the Regional Plan was made public in March 2021 and was formally adopted on September 21, 2021. The Regional Plan contains substantial evidence to support its recommendations for reducing GHG emissions within the region to achieve the GHG reduction goal set by SB 32. The Partnership has committed to undertake the following actions that will reduce GHG emissions associated with its regional (or countywide) activities:

- Prepare a baseline (2016) GHG emissions inventory for each of the 25 Partnership jurisdictions in the County.
- Prepare future year (2020, 2030, and 2045) GHG emissions forecasts for each of the jurisdictions.
- Develop general GHG reduction measures and jurisdiction-specific measures appropriate for each jurisdiction.
- Develop consistent baseline information for jurisdictions to use for their development of community climate action plans meeting jurisdiction-identified reduction goals.

San Bernardino County Greenhouse Gas Emissions Reduction Plan

The County's Greenhouse Gas Emissions Reduction Plan (GHGRP [San Bernardino County 2011]), adopted in September 2011 has established goals and policies that incorporate environmental responsibility into the everyday management of its community operations. The GHGRP presents a comprehensive set of actions to reduce the County's internal and external GHG emissions to 15 percent below 2007 levels by 2020, consistent with the AB 32 Scoping Plan.

Since the adoption of County's GHGRP, the State has enacted new climate change regulations, most notably SB 32, which provides Statewide targets to reduce GHG emissions to 40 percent below 1990 levels by 2030. In 2021, a new version of the GHGRP (GHGRP Update [San Bernardino County 2021]) was released to reflect the changes in State laws and regulations and serves as a comprehensive roadmap

to outline strategies that the County will implement to continue achieving its GHG emissions reductions into the year 2030 and beyond, thereby ensuring sustainable and healthy growth.

The GHGRP Update has a review standard of 3,000 MTCO₂e per year to identify projects that require screening tables or a project-specific technical analysis to quantify and mitigate GHG emissions. Projects that do not exceed the 3,000 MTCO₂e per year threshold are considered consistent with the reduction plan to reduce emissions to 40 percent below 2007 levels and have a less than significant individual and cumulative impact for GHG emissions (San Bernardino County 2021).

3.7.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the proposed project may have a significant adverse impact related to GHG emissions if it would do any of the following:

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

For the purposes of determining whether GHG emissions from affected projects are adverse, the MDAQMD specifies that project emissions must include direct and indirect emissions during construction and operation. The construction and operational emissions were calculated using the models and emissions factors described in **Appendix C**. The MDAQMD has set the daily significance threshold for GHGs at 548,000 pounds per day of CO₂e and 100,000 short tons per year of CO₂e. In addition, San Bernardino County's GHGRP Update (San Bernardino County 2021) includes a review standard of 3,000 MTCO₂e per year. As stated previously in Section 3.7.2, Regulatory Framework, projects that do not exceed the 3,000 MTCO₂e per year threshold are considered consistent with the County's GHG reduction plan to reduce emissions to 40 percent below 2007 levels and have a less than significant individual and cumulative impact for GHG emissions.

3.7.4 Project Impacts and Mitigation

Impact 3.7-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.

Construction Impacts

The proposed project is expected to be constructed in four stages: 1) site preparation and grading (including mobilization, site preparation, fencing, preparation of laydown areas, and trenching); 2) solar array installation and gen-tie (e.g., solar array structural components including cables, piles, racking systems, inverters, modules, and panels); 3) battery energy storage system (BESS) and gen-tie construction (including BESS installation, commissioning, and testing); and 4) paving of 1 mile of road. The activities that would occur and the equipment that would be used during each stage are described in Tables A-1 through A-3 in **Appendix C**.

Project construction emissions were calculated and compared to the MDAQMD daily and annual significance thresholds. Due to the short-term nature of construction activity, the resulting emissions contribute a relatively small portion of the overall lifetime of the project GHG emissions. Therefore, construction emissions were amortized over a 30-year project lifetime, and addressed as part of the operational GHG emissions (SCAQMD 2008). The California Emissions Estimator Model (CalEEMod) was used to calculate the annual GHG emissions based on the construction scenario described. Construction of the project is anticipated to last approximately 26 months. On-site sources of GHG emissions would include off-road equipment and off-site sources including haul trucks, and worker vehicles.

Total GHG emissions from all stages of construction activities were amortized over the estimated 30-year life of the project and added to the annual operational emissions of GHGs. The project would offset GHG emissions through renewable energy generation and thereby result in environmental benefits by lessening the impacts of global climate change; as such, the annual displaced GHG emissions were estimated to include all direct and indirect emissions associated with implementation of the project.

The total exhaust GHG emissions estimated using CalEEMod are listed in Table 3.7-2, Estimated Maximum Daily Construction Emissions (Pounds per Day), and Table 3.7-3, Estimated Annual Construction Emissions (Short Tons per Year). Typical construction equipment such as bulldozers, backhoes, graders, and water trucks would be used during all stages of project construction and would be stored within the staging area. All equipment was conservatively assumed to operate 12 hours per day, 5 days per week for the duration of the construction.

Table 3.7-2. Estimated Maximum Daily Construction Emissions (Pounds per Day)

Year	GHG Emissions (pounds per day)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
2024	49,614	1.62	2.22	50,319
2025	51,726	1.60	2.22	52,532
2026	43,824	1.28	2.10	44,578
MDAQMD daily significance threshold				548,000
Exceeds Threshold?				No

Source: Appendix C

Table 3.7-3. Estimated Annual Construction Emissions (Short Tons per year)

Year	GHG Emissions (Short Tons per year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
2024	1,876	0.06	0.087	1,906
2025	5,723	0.18	0.26	5,811
2026	4,118	0.06	0.21	4,185
30-year amortized construction emissions				397
MDAQMD annual significance threshold				100,000
Exceeds Threshold?				No

Source: Appendix C

As shown in **Table 3.7-2** and **Table 3.7-3**, the peak daily construction emissions and estimated annual construction emissions would not exceed the MDAQMD's thresholds. The proposed project's short-term construction activities, therefore, would not generate GHG emissions, either directly or indirectly, that may have an adverse effect on the environment.

Operational Impacts

GHG emissions would be primarily generated through motor vehicle trips to and from the project, occasional use of heavy-duty trucks, waste generation, and electricity and water use. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in **Appendix C**. Two CalEEMod analyses were done to account for daily and annual operational emissions. **Table 3.7-4, Estimated Daily Operational Emissions (Pounds Per Day)**, and **Table 3.7-5, Estimated Annual Operational Emissions (Short Tons per Year)**, list the average daily and annual operation emissions associated with the on-site maintenance equipment and employee commutes.

Table 3.7-4. Estimated Daily Operational Emissions (Pounds per Day)

Sector	GHG Emissions (pounds per day)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Mobile	4,027	0.01	0.44	4,171
Energy	11.7	<0.005	<0.005	11.7
Water	22.6	0.01	<0.005	22.9
Waste	129	12.9	0.00	451
Total	4,190	12.93	0.45	4,657
MDAQMD daily significance threshold				548,000
Exceeds Threshold?				No

Source: Appendix C

Table 3.7-5. Estimated Annual Operational Emissions (Short Tons per Year)

Sector	GHG Emissions (short tons per year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Mobile	228.2	<0.005	0.029	235.9
Energy	2.1	<0.005	<0.005	2.1
Water	4.1	<0.005	<0.005	4.2
Waste	23.5	2.35	0.00	82.3
Total	257.9	2.36	0.02	325
Amortized Construction Emissions				397
Decommissioning Emissions ^{1/}				397
Annual operational emissions + amortized construction emissions				722
Displaced annual emissions (from project operations)				152,334
MDAQMD annual significance threshold				100,000
Exceeds Threshold?				No

^{1/} Assumed equal to the amortized construction emissions.

Source: Appendix C

As shown in **Tables 3.7-4** and **3.7-5**, the total operational emissions would be 64,657 pounds of CO₂e per day or approximately 325 short tons of CO₂e per year as a result of project operations. Therefore, project emissions are below the applicable MDAQMD thresholds. Additionally, the project's annual indirect GHG emissions from the displacement of fossil fuel fired electricity generation is significantly higher than the project's direct and indirect emissions sources; as such, the overall effect of the project would reduce GHG emissions. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.7-2: The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.

The proposed project would comply with the strategies recommended by the State, USEPA, and the Climate Change Scoping Plan. CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022) was prepared to address climate legislation passed since the last scoping plan, which was prepared in 2017. The Scoping Plan addresses AB 1279, SB 905, SB 1065, SB 1075, and other legislation and executive orders addressing GHG reductions in various manufacturing sectors and managing natural lands. According to the Scoping Plan, the estimated resources needed to meet future energy demand is approximately 72 gigawatts of utility solar and 37 gigawatts of battery storage by 2045. The Scoping Plan also acknowledges that both solar and battery storage projects over the period 2022–2035 will need to increase from the current proposed projects. The proposed project and other similar projects are essential to achieving this target. Additionally, the proposed project is expected to displace regionwide and Statewide emissions of GHGs over the expected life of the proposed project.

The proposed project would also assist California Investor-Owned utilities in meeting their obligations under California's RPS Program and assist California in meeting the GHG emissions reduction goal of 40 percent below 1990 levels by 2030. Specifically, by adding a 150-megawatt photovoltaic solar facility to the grid, the proposed project would assist the State and regulated utility providers to generate a greater portion of energy from renewable sources consistent with the 2030 and 2045 RPS, including the targets established under SB 100.

As discussed previously, the Countywide Plan/Policy Plan contains long-term goals and policies for decisions and improvements toward achieving the Countywide Vision. As a renewable energy generation facility with battery storage capability, the proposed project will provide reliable and affordable energy to the County while contributing to sustainable energy production and would therefore be consistent with the Countywide Plan/Policy Plan's goals RE-2, RE-3, RE-4, RE-6 and IU-5. As stated above, the proposed project is expected to displace regionwide and Statewide emissions of GHGs over the expected life of the proposed project. By doing so the proposed project would be consistent with the Countywide Plan/Policy Plan's Policy NR-1.7. Therefore, the project would be consistent with meeting the applicable goals from the Natural Resources Element, Renewable Energy and Conservation Element, and Infrastructure and Utilities Element, as stated in Section 3.7.2.4, Local.

In addition to compliance with MDAQMD thresholds of significance, the project would also be consistent with the GHGRP Update by being below the not-to-exceed 3,000 MTCO₂e per year threshold as required to reduce emissions to 40 percent below 2007 levels. **Table 3.7-5** shows that the project operations and amortized construction emissions would generate approximately 722 short tons of CO₂e per year (i.e., 655 MT CO₂e), which would not exceed the screening threshold of 3,000 MTCO₂e per year. The project decommissioning emissions (assumed equal to amortized construction emissions) are also expected to be below the 3,000 MTCO₂e screening threshold.

The project would also be consistent with applicable portions of the GHG reduction measures contained in the Regional Plan such as Local Measures Energy-5 (Renewable Energy-New Commercial/ Industrial).

The plan consistency analysis demonstrates that the project would be consistent with applicable plans, policies, regulations, and GHG reduction actions and strategies and would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. The project would therefore not result in a cumulatively considerable contribution to significant cumulative climate change impacts.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.7-3: The project would not result in cumulative impacts to greenhouse gas emissions. Impacts would be less than significant.

Climate change is an inherently cumulative category of impact. No one project would cause climate change; rather, it is the agglomeration of all global emissions that causes harm. To help address its contribution to the cumulative issue, the State has elected to reduce GHG emissions at the state level for activities under its control and has promulgated policy for local agencies to do the same. Section 3.0, Introduction to the Environmental Analysis, of this draft EIR identifies a list of projects that would have the potential to be considered cumulative in context with the project's contribution. These projects are summarized in **Table 3-1, Cumulative Projects**, and shown in **Figure 3-1, Cumulative Projects Map**. The proposed project operations and amortized construction would generate 722 short tons of CO₂e per year and, as shown in **Table 3.7-5**, the total GHG emissions would be below the MDAQMD annual threshold of 100,000 short tons. Since the listed cumulative projects would also be subject to all applicable regulatory requirements adopted to reduce GHG emissions and in effect at the time of project development, the additive effect of project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change.

Moreover, renewable energy production potentially offsets GHG emissions generated by fossil-fuel power plants. As shown in **Table 3.7-5**, the emissions offset by the project are significantly more than the project's direct and indirect emissions.

Therefore, the proposed project's GHG emissions would not be cumulatively considerable and would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.8 Hazards and Hazardous Materials

This section evaluates the potential hazards and hazardous materials impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to hazards and hazardous materials, and includes mitigation measures required to reduce or avoid these impacts, as applicable. Information in this section is based on publicly available databases, including the Department of Toxic Substances Control's (DTSC) EnviroStor Database and the State Water Resources Control Board's (SWRCB) GeoTracker Database. This section also incorporates information from the site-specific Phase I Environmental Site Assessment (ESA) prepared by SWCA Environmental Consultants (included as **Appendix H**). San Bernardino County (County) did not receive any scoping comments related to hazards and hazardous materials.

3.8.1 Environmental Setting

3.8.1.1 Current and Historic Uses

The project site comprises vacant and undeveloped desert land, with some unpaved roads and existing drainage features. The generation interconnect (gen-tie) corridor would be located within the existing fenceline of the adjacent Mojave Solar Facility, along an existing constructed drainage canal. The project site may have historically been used as grazing land; however, no formal agricultural uses were established on the project site based on a review of historical maps dating back to 1915 and aerial photographs dating back to 1959. Based on the site reconnaissance conducted for the Phase I ESA, two areas of illegal dumping waste were observed, one near the center of the eastern side of the project site and the other near the southeastern corner of the project site. At least one rusted 55-gallon drum was identified. The drum was mostly buried but did not appear to contain a substance. No evidence of significant spills, ground staining, unusual odors, or potential contamination was observed on or adjoining the project site during the site reconnaissance (**Appendix H**).

In the project vicinity, some agricultural fields historically existed on land to the north and east of the project site as far back as 1959, and a utility substation was developed northeast of the project site around the same time. By 1994, the land adjoining the project site to the north was developed into the SEGS VIII solar thermal facility that has since been converted to photovoltaic (PV) solar by the Lockhart PV I Solar Facility. By 2012, the land adjoining the project site to the east was used to start construction for the Mojave Solar Facility, which completed construction on December 24, 2014 (**Appendix H**).

3.8.1.2 Phase I Environmental Assessment Results

While the California Environmental Quality Act (CEQA) does not require a Phase I ESA, it does address relevant information used to support the environmental analysis for potential impacts related to hazards and hazardous materials. A Phase I ESA was prepared for the project site using methods prescribed by American Society for Testing and Materials (ASTM) International. The Phase I ESA identifies existing and potential environmental contamination liabilities, and is generally considered the first step in the process of environmental due diligence. The Phase I ESA was prepared for the project site (identified as "subject property" in the Phase I ESA), and did not evaluate the gen-tie

corridor. Supplemental information for the gen-tie corridor was sourced from publicly available online databases, including the DTSC EnviroStor Database and the SWRCB GeoTracker Database.

The objective of the Phase I ESA was to identify recognized environmental conditions (RECs), historical RECs (HRECs), and controlled RECs (CRECs) that affect the project site. RECs are defined in ASTM International E1527 13 as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.” According to the ASTM Phase I ESA standard, the term “recognized environmental condition” is not intended to include de minimis conditions (e.g., minor or very small spills) that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government authorities.

Based on the Phase I ESA site reconnaissance performed on December 11, 2023, there are no leaking underground storage tanks (LUST) or Cleanup Program sites documented on the project site. Further, no LUST or Cleanup Program sites were identified within the gen-tie corridor as confirmed via the DTSC EnviroStor Database and the SWRCB GeoTracker Database. The closest listed sites, Luz Harper Lake (42524 Lockhart Street) and SEGS 8 & 9: Underground Storage Tanks (43880 Harper Lake Road), are both located within the Lockhart PV I Solar Facility approximately 0.5 mile north of the project site. These sites are listed in the SWRCB GeoTracker Database as LUST sites (SWRCB 2023). According to information reviewed on GeoTracker, the Luz Harper Lake listing was a LUST cleanup site for diesel contaminated soil and was reported on December 12, 1990. Cleanup was completed and the case was closed as of September 8, 1993. Further, the SEGS 8 & 9: Underground Storage Tank listing was a LUST cleanup site for waste oil (motor/hydraulic/lubricating) contaminated soil and was reported on April 30, 2007. Cleanup was completed and the case was closed as of May 27, 2014. Based on the impacted media (soil only), the location, and the regulatory status of these sites, it does not appear that these LUST sites have impacted the environmental condition of the project site. Furthermore, the project site is not located on or in the vicinity of any hazardous waste sites according to the DTSC EnviroStor Database (DTSC 2023). Ultimately, no RECs were identified in the Phase I ESA, including the illegally dumped waste described above under Section 3.8.1.1, Current and Historic Uses, as no significant spills, ground staining, unusual odors, or potential contamination were observed (**Appendix H**).

3.8.1.3 Schools

The closest schools to the project are more than 15 miles away. The closest schools to the project include the following:

- Boron Junior-Senior High School, 26831 Prospect Street, Boron – Approximately 16.5 miles west
- West Boron Elementary School, 12300 Del Oro Street, Boron – Approximately 18.75 miles west
- Lenwood Elementary School, 34374 Ash Road, Barstow – Approximately 17 miles southeast
- Helendale Elementary School, 27274 Peach Tree Lane, Helendale – Approximately 18.5 miles south

3.8.1.4 Airports

The closest airport to the project is Edwards Air Force Base, located approximately 29 miles to the west. Additionally, the Southern California Logistics Airport and Apple Valley Airport are located approximately 30 miles and 32 miles south of the project site, respectively. The Barstow-Daggett Airport is also located approximately 33 miles southeast of the project site. The project is not located within the Airport Influence Area of any of these airports and is not included in an Airport Land Use Compatibility Plan.

3.8.1.5 Wildland Fires

A wildfire or wildland fire is a fire in an area of combustible vegetation that generally occurs in the countryside or a rural area. Depending on the type of vegetation where it occurs, a wildfire can also be classified more specifically as a brush fire, bush fire, desert fire, forest fire, grass fire, hill fire, peat fire, or vegetation fire.

According to the California Department of Forestry and Fire Protection (CAL FIRE), a Fire Hazard Severity Zone (FHSZ) is a mapped area that designates zones (based on factors such as fuel, slope, and fire weather) with varying degrees of fire hazard (i.e., moderate, high, and very high). While the designation of an FHSZ does not predict when or where a wildfire will occur, FHSZs do identify areas where wildfire hazards could be more severe and therefore are of greater concern. FHSZ maps evaluate wildfire hazards, which are physical conditions that create a likelihood that an area will burn over a 30- to 50-year period. The maps do not take into account modifications such as fuel reduction efforts.

According to CAL FIRE San Bernardino County FHSZ Maps, the project site and gen-tie corridor are located outside of the State Responsibility Area (SRA) and is entirely within the Local Responsibility Area (LRA). A majority of the project site is classified as LRA Moderate, which is the lowest fire hazard designation. A small portion of the project site along the eastern project site boundary and the gen-tie corridor are in an Unzoned area of the LRA FHSZ map. Although this small portion of the project site and the gen-tie corridor are in an Unzoned area, along with the adjacent existing solar facilities, all other surrounding zoned areas are classified as Moderate FHSZs as is the vast majority of northwest San Bernardino County (refer to **Figure 3.14-1, Fire Hazard Severity Zones for State Responsibility Area**, and **Figure 3.14-2, Fire Hazard Severity Zones for Local Responsibility Areas**). The San Bernardino Countywide Plan/Policy Plan also includes a map of FHSZs for the County, which delineates the project site and nearly all of the Desert Region of the County as being located within a Moderate FHSZ, similar to CAL FIRE (San Bernardino County 2020). The closest SRA Very High FHSZ is located approximately 57 miles west of the project site, within the Tehachapi Mountains. Finally, the project is not located within the County's Fire Safety Overlay District (San Bernardino County 2010a). The closest Fire Safety Overlay District is located approximately 35 miles south of the project (San Bernardino County 2010b). Refer to Section 3.14, Wildfire, for additional information.

3.8.1.6 Hazardous Materials and Waste

Hazardous materials, as defined by California Health and Safety Code Section 25501(n) and (o), are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed of, or otherwise managed.

Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic: Causes human health effects.
- Ignitable: Has the ability to burn.
- Corrosive: Causes severe burns or damage to materials.
- Reactive: Causes explosions or generates toxic gases.

Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. When improperly handled, hazardous materials and hazardous waste can result in public health hazards if discharged into the environment through releases into soil or groundwater, or via airborne releases in the form of vapors, fumes, or dust. Contaminated soil and groundwater containing concentrations of hazardous constituents that exceed regulatory thresholds must be handled and disposed of as hazardous waste when excavated or pumped. The California Code of Regulations (CCR), Title 22, Section 66261.20 et seq. contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the hazard of these materials and the acceptability of the risk they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure and by the inherent toxicity of a material.

Factors that can influence health effects when human beings are exposed to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Additionally, hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, contaminated or are being stored until they can be disposed of properly. Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria. Various agencies maintain hazardous waste and substance lists in planning documents used by State and local agencies to comply with CEQA requirements in providing information about the location of hazardous materials sites. While hazardous substances are regulated by multiple agencies, as described under Section 3.8.2, Regulatory Framework, below, cleanup requirements for hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over a project.

3.8.1.7 Transportation of Hazardous Materials

The nearest highways from the project are State Route (SR) 58, a four-lane highway located approximately 5.6 miles south of the project site, U.S. Route (US) 395, a two-lane highway located approximately 10.5 miles west of the project site, and Interstate 15, a six-lane interstate highway located approximately 18 miles southeast of the project site. Hazardous materials transported through the County are predominantly carried by truck on the interstate highway system and to a lesser degree via rail. Registered hazardous waste haulers may use specific routes in the County to transport hazardous materials. Both the County and the California Highway Patrol (CHP) designate through

routes to be used for the transportation of hazardous materials. All three highways described are designated truck routes and can be used for the transportation of hazardous materials.

3.8.2 Regulatory Framework

3.8.2.1 Federal

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA) requires infrastructure at the State or local level to plan for emergencies resulting from potential release of chemical materials. Any documented information pertaining to a specific release at a site is required to be made publicly available so that interested parties may become informed about potentially dangerous chemicals released in the community. Sections 301 through 312 of the EPCRA are administered by the U.S. Environmental Protection Agency's (USEPA) Office of Emergency Management.

Hazardous Materials Transportation Act

Under Title 49 of the Code of Federal Regulations (CFR), the U.S. Department of Transportation is responsible for regulating the transport of hazardous materials. The CHP and the California Department of Transportation (Caltrans) are primarily responsible for enforcing federal and State regulations pertaining to such activities and for responding to any related emergencies. These agencies are also responsible for necessary permitting for the transport of hazardous materials.

Toxic Substances Control Act

The Toxic Substances Control Act phased out the use of asbestos and asbestos-containing materials in new building materials. The act identifies requirements for the use, handling, and disposal of asbestos-containing materials. Additionally, Section 402(a)(1) of the act establishes disposal standards for lead-based paint.

Resource Conservation and Recovery Act (as Amended by the Hazardous and Solid Waste Amendments of 1984)

The Resource Conservation and Recovery Act (RCRA) generally communicates federal laws pertaining to hazardous waste management and provides a "cradle-to-grave" approach to the regulation of hazardous wastes. The RCRA requires any entity generating hazardous waste to identify and track such substances from generation to recycling, reuse, or disposal. The California DTSC implements the RCRA program in combination with other State hazardous waste laws, collectively known as the Hazardous Waste Control Law.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law (42 United States Code 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons

responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP (Title 40 CFR Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List.

Occupational Safety and Health Administration

The mission of the Occupational Safety and Health Administration (OSHA) is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910, which include preparation of Health and Safety Plans (HASPs). HASPs identify potential hazards associated with a proposed land use and may provide appropriate mitigation measures as required.

Title 29 CFR Section 1910.120(e) requires all employees working on-site exposed to hazardous substances, health hazards, or safety hazards and their supervisors and management responsible for the site to receive training before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards.

National Fire Protection Association

The National Fire Protection Association (NFPA) provides codes and standards, research, training, and education for fire protection. The NFPA publishes more than 300 codes and standards intended to minimize the possibility and effects of fire and other risks. The NFPA standards are recommended guidelines and nationally accepted good practices in fire protection. Specific codes of the NFPA are typically implemented through the California Fire Code (CFC) or at the local level through the respective county or city.

Title 40 CFR Part 273 – Standards for Universal Waste Management

The federal universal waste regulations are found in Title 40 CFR Part 273 and apply to five types of universal waste including batteries, pesticides, mercury-containing equipment, lamps, and aerosol cans. There are also four types of regulated participants in the universal waste system including small quantity handlers of universal waste (accumulates less than 5,000 kilograms [kg] of universal waste), large quantity handlers of universal waste (accumulates 5,000 kg or more of universal waste), universal waste transporters, and universal waste destination facilities.

In general, materials managed as universal waste can be stored for a year and are not required to be shipped with a manifest or by a hazardous waste transporter. In addition, once subject to the universal waste regulations, universal wastes do not need to be counted toward a generator's category (i.e., very small quantity generator, small quantity generator, or large quantity generator). The universal waste regulations do require that the materials be managed in a way that prevents releases to the environment. The requirements are tailored to each specific type of universal waste and differ for small quantity handlers and large quantity handlers. Finally, the standards also include a labeling requirement, a requirement to respond to releases, and a requirement for universal waste to ultimately

be managed at a facility that is permitted or otherwise designated for receiving hazardous waste, like a hazardous waste recycler (USEPA 2024).

3.8.2.2 State

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) was created in 1991 by Governor's Executive Order. The six boards, departments, and office were placed under the CalEPA "umbrella" to create a cabinet-level voice for the protection of human health and the environment and to ensure the coordinated deployment of State resources. CalEPA and the SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State and local laws include the following:

- Public Safety/Fire Regulations/Building Codes,
- Hazardous Waste Control Law,
- Hazardous Substances Information and Training Act,
- Air Toxics Hot Spots and Emissions Inventory Law,
- Underground Storage of Hazardous Substances Act, and
- Porter-Cologne Water Quality Control Act.

Also, as required by Government Code Section 65962.5, CalEPA develops an annual update to the Hazardous Waste and Substances Sites (Cortese) List. The DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous materials release information for the list.

California Fire Code

The CFC, which is updated every 3 years, is included in Title 24 CCR Chapter 9 and was created by the California Building Standards Commission. Based on the International Fire Code, the CFC serves as the primary means for authorizing and enforcing procedures and methods to ensure the safe handling and storage of hazardous substances that pose potential public health and safety hazards. The code regulates the use, handling, and storage requirements for hazardous materials at certain facilities. The CFC and the California Building Code apply a classification system in identifying appropriate protective measures relative to fire protection and public safety. Such measures may include identification and use of proper construction standards, setbacks from property lines, and/or installation of specialized equipment.

Chapter 12 of the 2022 CFC also includes requirements for battery energy storage systems greater than 20 kilowatt-hours, which includes the proposed energy storage facilities. Chapter 12 includes requirements for vehicle impact protection, location, spacing between batteries, egress, security, seismic and structural design, and fire suppression systems. Chapter 12 also sets maximum allowable battery quantities and specific battery type requirements for battery technologies including lead acid, nickel cadmium, lithium, sodium, etc. Design and installation requirements are also outlined in Chapter 12.

California Building Code, Section 322

Section 322 of the 2022 California Building Code includes requirements for the storage of lithium-ion and lithium metal batteries. Section 322 includes structural design requirements for energy storage systems utilizing lithium-ion and lithium metal batteries, in addition to fire protection requirements for both indoor and outdoor storage systems. Section 322 also requires development of a fire safety plan.

Strategic Fire Plan for California

Developed by CAL FIRE, the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE's overall policy direction and vision. The 2019 Strategic Fire Plan goals revolve around fire prevention, natural resource management, and fire suppression efforts, as broadly construed (CAL FIRE 2019).

California Occupational Safety and Health Administration

California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings, and health and safety plans (8 CCR 5192).

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs (Health and Safety Code, Division 20, Chapter 6.95, Article 1). Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

A Hazardous Materials Business Plan (HMBP) must be submitted to the local Certified Unified Program Agency (CUPA) (i.e., the San Bernardino County Fire Protection District [SBC Fire]) if the facility handles, uses, or stores a hazardous material or mixture containing a hazardous material that has a quantity equal to or greater than 55 gallons of liquid, 500 pounds of a solid substance, 200 cubic feet of compressed gas, a hazardous compressed gas in any amount, or hazardous waste in any amount. An HMBP must include the following:

- Inventory of hazardous materials at a facility;
- Emergency response plans and procedures in the event of a reportable release or threatened release of a hazardous material; and
- Training for all new employees and annual training for all employees in safety procedures in the event of a release or threatened release of a hazardous material.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Its mission is to protect public health and safety, restore and enhance environmental quality, and sustain economic vitality through effective and efficient implementation of the six programs under one agency, a CUPA. The Unified Program takes its fundamental enforcement structure from the implementing statutes of the six unified program elements, which include Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs (“Tiered Permitting”); Aboveground Petroleum Storage Tank Spill Prevention, Control, and Countermeasures; Hazardous Materials Release Response Plans and Inventory Program (Hazardous Materials Disclosure or “Community-Right-To-Know”); California Accidental Release Prevention Program; Underground Storage Tank (UST) Program; and Uniform Fire Code Plans and Inventory Requirements.

The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program requires CalEPA to certify the local CUPA to implement all the required environmental programs within their jurisdiction. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more program elements in coordination with the CUPA. The CUPA designated for San Bernardino County is the Hazardous Materials Division of SBC Fire.

Hazardous Waste Control Act

The Hazardous Waste Control Act created the State hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The act is implemented by regulations contained in Title 26 of the CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from the generator, then to the transporter, and then to the ultimate disposal location. Copies of the manifest must be filed with the DTSC.

Department of Toxic Substances and Control

The DTSC, a department of CalEPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. The DTSC regulates hazardous waste primarily under the authority of the RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Government Code Section 65962.5, commonly referred to as the Cortese List, includes the DTSC's hazardous waste sites and the Site Cleanup List. The Cortese List also includes the Department of Health Services' list of contaminated drinking water wells, sites listed by the SWRCB as having LUSTs or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Emergency Services Act, Government Code 8550–8692

Government Code Section 8550–8692 provides for the assignment of functions to be performed by various agencies during an emergency so that the most effective use may be made of all manpower, resources, and facilities for dealing with any emergency that may occur. The coordination of all emergency services is recognized by the State to mitigate the effects of natural, man-made, or war-caused emergencies that result in conditions of disaster or extreme peril to life, property, and the resources of the State, and generally, to protect the health and safety and preserve the lives and property of the people of the State.

Title 8, California Code of Regulations, Section 2700 et seq., “High Voltage Safety Orders”

Title 8 of the CCR specifies requirements and minimum standards for safety when installing, operating, working around, and maintaining electrical installations and equipment.

Title 14, California Code of Regulations, Sections 1250-1258, “Fire Prevention Standards for Electric Utilities”

Title 14 of the CCR provides specific exemptions from fires that may occur from electric pole and tower hazardous instances. Title 14 also provides conductor clearance standards and specifies when and where standards apply. These standards address hazards that could be caused by sparks from conductors of overhead lines, or that could result from direct contact between the line and combustible objects.

3.8.2.3 Local**San Bernardino County Fire Protection District**

SBC Fire, Hazardous Materials Division, is the CUPA for the County. It issues permits to and conducts inspections of businesses that use, store, or handle substantial quantities of hazardous materials and/or waste. The CUPA is charged with the responsibility of conducting compliance inspections for over 7,000 regulated facilities in the County. These facilities handle hazardous materials, generate or treat hazardous waste, and/or operate an underground storage tank. The CUPA employs a

comprehensive environmental management approach to resolve environmental issues and uses education and enforcement procedures to minimize the potential risk to human health and the environment while promoting fair business practices. As a CUPA, SBC Fire manages six hazardous material and hazardous waste programs. The CUPA program is designed to consolidate, coordinate, and uniformly and consistently administer permits, inspection activities, and enforcement activities throughout the County.

San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan

The latest San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) was most recently updated in 2022. The MJHMP addresses both natural and human-caused hazards being faced by the County, SBC Fire, the San Bernardino County Flood Control District, and the County Board of Supervisors-governed Special Districts administered by the San Bernardino County Special Districts Department. The MJHMP identifies goals, objectives, and actions pertaining to mitigating impacts from identified hazards, including geologic, wildfire, flood, drought, terrorism, and climate change hazards. The Federal Emergency Management Agency (FEMA) realizes the importance of mitigation planning and offers incentives to communities that develop one. By following FEMA guidelines for approval of this plan, the County can be eligible for grant funding intended for mitigation projects (San Bernardino County 2022a).

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022b).

Hazards Element

GOAL HZ-1 **Natural Environmental Hazards.** Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

Policy HZ-1.2 **New Development in Environmental Hazard Areas.** We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to

high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)

- Fire: high or very high fire hazard severity zone

Policy HZ-1.12 **Local Hazard Mitigation Plan Implementation.** We require adherence to the goals, objectives and actions in the Multi-jurisdictional Hazard Mitigation Plan and subsequent amendments to reduce and mitigate damages from hazards in the county.

Policy HZ-1.13 **Fire Protection Planning.** We require that all new development in County-designated Fire Safety Overlay and/or CAL FIRE-designated Very High Fire Hazard Severity Zones meet the requirements of the California Fire Code and the California Building Code as amended by the County Fire Protection District, including Title 14 of the California Code of Regulations fire safety requirements for any new development within State Responsibility Areas, as well as provide and maintain a Fire Protection Plan or Defensible Space/Fuel Modification Plan and other pre-planning measures in accordance with the County Code of Ordinances.

Policy HZ-1.14 **Long-Term Fire Hazard Reduction and Abatement.** We require proactive vegetation management/hazard abatement to reduce fire hazards on existing private properties, along roadsides of evacuation routes out of wildfire prone areas, and other private/public land where applicable, and we require new development to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel modification, and roadside fuel reduction in the Fire Safety Overlay and/or Very High Fire Hazard Severity Zones.

GOAL HZ-2 **Human-Generated Hazards.** People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

Policy HZ-2.1 **Hazardous Waste Facilities.** We regulate and buffer hazardous waste facilities to protect public health and avoid impacts on the natural environment.

Policy HZ-2.2 **Database of Hazardous Materials.** We maintain up-to-date databases of the storage, use, and production of hazardous materials, based on federally- and state-required disclosure and notification, to appropriately respond to potential emergencies.

Policy HZ-2.3 **Safer Alternatives.** We minimize the use of hazardous materials by choosing and by encouraging others to use non-toxic alternatives that do not pose a threat to the environment.

Policy HZ-2.4 **Truck Routes for Hazardous Materials.** We designate truck routes for the transportation of hazardous materials through unincorporated areas and prohibit routes that pass through residential neighborhoods to the maximum extent feasible.

Policy HZ-2.5 **Community Education.** We engage with residents and businesses to promote safe practices related to the use, storage, transportation, and disposal of hazardous materials.

Personal and Property Protection Element

GOAL PP-1 **Fire and Emergency Medical.** Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

Policy PP-3.9 **Street and Premise Signage.** We require adequate street signage and premise identification be provided and maintained to ensure emergency services can quickly and efficiently respond.

Transportation and Mobility Element

Policy TM-6.4 **Airport Land Use Compatibility.** We require proposed development in unincorporated areas to be consistent with applicable airport master plans, airport safety review areas, and military air installation compatible use zones. We may support proposed development in the influence area of County airports only when they are consistent with applicable airport master plans.

Renewable Energy and Conservation Element

Policy RE-4.6 Require all recyclable electronic and/or toxic materials to be recycled in accordance with the requirements of the Basel Convention or comparable standard.

San Bernardino County Development Code

Title 2, Division 3, Fire Protection and Explosives and Hazardous Materials

Chapter 6, *Permits, Inspections and Hearing Procedures for Hazardous Materials*, prohibits any person or business subject to the requirements of the CUPA Permit Program Elements from generating, producing, storing, treating, or other handling of hazardous materials or hazardous waste without getting the proper operation permitting and paying the appropriate fees.

Chapter 7, *CUPA Permit Elements for Hazardous Materials*, defines the types of facilities, activities, and operations that are subject to these fees and permit requirements.

Title 8, Division 4, Chapter 84.29, Renewable Energy Generation Facilities

Section 84.29.070 of the San Bernardino County Development Code includes the County's decommissioning requirements for renewable energy generation facilities. Included therein is the requirement to develop a Closure Plan. In accordance with these requirements, the project owner shall prepare a Closure, Revegetation, and Rehabilitation Plan and submit it to the Planning Division for review prior to building permit issuance. Under this plan, all aboveground structures and facilities shall be removed to a depth of 3 feet below grade, and removed off-site for recycling or disposal. Concrete, piping, and other materials existing below 3 feet in depth may be left in place. Areas that had been graded shall be restored to original contours unless it can be shown that there is a community benefit

for the grading to remain as altered. Succulent plant species native to the area shall be salvaged prior to construction, transplanted into windrows, and maintained for later transplanting following decommissioning. Shrubs and other plant species shall be revegetated by the collection of seeds and re-seeding following decommissioning. The project owner shall perform site closure activities to meet federal, State, and local requirements for the rehabilitation and revegetation of the project site after decommissioning.

San Bernardino County Fire Protection District Fire Code (Ordinance No. FPD 23-01)

The latest SBC Fire Code was adopted on March 1, 2023. The current SBC Fire Code adopts by reference the 2022 CFC, along with certain changes, modifications, amendments, additions, deletions, and exceptions. These additional requirements and standards are established in the SBC Fire Code to reasonably address the local climatic, geological, and topographical conditions of the County. Such local conditions include, but are not limited to, the “Santa Ana Winds,” earthquake potential, unstable slopes, contaminated water, and the overall diverse topographical nature of the County ranging from mountainous to desert regions (SBC Fire 2023).

Furthermore, the SBC Fire Code includes Section 105.5.4A, which requires an operational permit for battery energy storage systems in addition to the provisions of Section 1207, *Electrical Energy Storage Systems*, of the 2022 CFC (SBC Fire 2023).

3.8.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to hazards and hazardous materials if it would do any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- 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 or excessive noise for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

3.8.4 Project Impacts and Mitigation

Impact 3.8-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts would be less than significant.

Construction

Construction of the project (solar facilities, energy storage, grid interconnection, and supporting infrastructure) would not involve the routine transport, use, or disposal of significant quantities of hazardous materials. Most of the hazardous materials used and hazardous waste generated by the project would occur during the temporary construction period. Hazardous materials may include small quantities of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliative, herbicides, and welding materials/supplies. Some solid hazardous waste, such as welding materials and dried paint, may also be generated during construction. Hazardous materials would be transported to the project site and gen-tie corridor during construction.

The use, storage, and disposal of hazardous materials and wastes associated with project construction could result in potential adverse health and environmental impacts if these materials were to be used, stored, or disposed of improperly, causing accidents and spills. Incidents of this nature could release hazardous substances into the environment and could cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated.

An HMBP would be provided to the County Environmental Health Services Division that includes a complete list of all materials used on-site and information regarding how the materials are safely stored and transported and in what form they are used. This information would be recorded to maintain safety and prevent possible environmental contamination or worker exposure. During construction of the project, Material Safety Data Sheets for all applicable hazardous materials present at the project site and/or gen-tie corridor would also be made readily available to on-site personnel and emergency responders. Furthermore, the project would require implementation of BMPs as part of a Stormwater Pollution Prevention Plan (SWPPP), which is required as part of compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (see Section 3.9, Hydrology and Water Quality, of this EIR). Implementation of the SWPPP and associated BMPs would reduce the potential for stormwater pollution, including from any on-site hazardous materials during construction. Finally, workers would be trained to properly identify and handle all hazardous materials and the project proponent would implement a site-specific HASP in accordance with OSHA requirements.

Any hazardous wastes produced as a result of project construction would be collected and transported away from the project in accordance with federal, State, and local regulations, as well as best management practices (BMP). Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste shipped off-site for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location. Any non-hazardous debris generated during project construction would be disposed of in local landfills (see Section 3.13, Utilities and Service Systems, of this EIR). Sanitary waste

would be managed using portable restrooms located on-site during construction and would be disposed of at an approved facility.

Batteries would be delivered to the project site in U.S. Department of Transportation (DOT)-certified vehicles and in compliance with all applicable requirements of the DOT, CHP, and California Department of Motor Vehicles. Lithium-ion batteries are classified as a Class 9 hazardous material, and therefore must meet DOT Hazardous Material Regulations (49 CFR 171-180). In addition, under UN3536 “Lithium batteries installed in cargo transport units” (United Nations 2019) the batteries must be securely attached to the interior structure of the cargo unit (e.g., Conex-type shipping container), the batteries must pass UN38.3 tests that prevent overcharge and over discharge between batteries, and no additional hazardous cargo is allowed that is not directly related to the transport of the batteries. UN38.3 compliance allows certification for safe transport in air, land, or sea. According to the study “Comparative Risks of Hazardous Materials and Non-Hazardous Materials Truck Shipment Accidents/Incidents” by Battelle (Battelle 2001), the hazardous material accident/incident rate per mile (road miles only) for all Class 9 hazardous materials is 1.09 in 1 million. This statistic includes en route incidents, and encompasses all Class 9 hazardous materials, including lithium-ion batteries. This indicates the worst-case probability of an accident occurring during lithium battery transportation to the project site would be approximately 1 accident per million miles traveled. There would be a one-time transport of batteries to the project site, followed by very infrequent transport of batteries for occasional replacement throughout the lifetime of the project. Thus, the infrequent and containerized shipping, low probability of accident/incident, and multiple regulations that control the shipping of lithium-ion batteries would make impacts associated with routine transport and foreseeable upset or accidents involving the release of hazardous materials less than significant.

Finally, as described above under Section 3.8.1.1, Current and Historic Uses, two areas of illegal dumping waste were observed on the project site during the site reconnaissance conducted as part of the Phase I ESA (**Appendix H**). At least one rusted 55-gallon drum was identified. The drum was mostly buried but did not appear to contain a substance. No evidence of significant spills, ground staining, unusual odors, or potential contamination was observed on or adjoining the project site during the site reconnaissance. While the Phase I ESA did not identify these occurrences of illegal dumping as RECs, any remaining debris that exists on the project site at the time of construction would be removed and disposed of in accordance with all applicable State and federal disposal requirements for the materials found on-site.

Overall, project construction activities would occur in accordance with all applicable local standards set forth by the County, as well as State and federal health and safety requirements that are intended to minimize hazardous materials risk to the public, such as Cal/OSHA requirements, the Hazardous Waste Control Act, the California Accidental Release Protection Program, and the California Health and Safety Code. All hazardous materials associated with project construction would be used in accordance with applicable regulations. The construction contractor would be required to implement such regulations relative to the transport, handling, and disposal of any hazardous materials, including the use of standard construction controls and safety procedures that would avoid or minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required

by local and State laws. Due to the relatively limited use and small quantities of hazardous materials, and the required compliance with applicable regulations for the transportation and handling of hazardous materials, impacts during construction would be less than significant.

Operations

Operations and maintenance activities associated with PV solar facilities are relatively minor when compared to conventional power plants or even other industrial land uses and would require very limited use of hazardous materials and generation of hazardous waste. Primary operations and maintenance activities that would occur on the project site would primarily consist of periodic panel washing but would also include occasional equipment repair or replacement and vegetation control. The project would be operated remotely and would not require any full-time, on-site employees. Heavy equipment would not be used during normal operation but may be required for certain activities associated with equipment repair. Operational vehicles would primarily include light-duty trucks (e.g., flatbed pickup) and other light equipment for general maintenance and PV module washing. Long-term maintenance and equipment replacement would be scheduled in accordance with manufacturer recommendations. Moving parts, such as motors and tracking module drive equipment, motorized circuit breakers and disconnects, and inverter ventilation equipment, would be serviced on a regular basis, with unscheduled maintenance conducted as necessary.

Hazardous materials in quantities that would create a significant risk to the public or environment generally are not stored on-site during operations except for the on-site batteries, which would be stored in compliance with the CFC and SBC Fire Code requirements. The battery energy storage system (BESS) would also be equipped with heating, ventilation, and air conditioning (HVAC) systems for thermal management of the batteries. Limited amounts of hazardous materials would be used on the site during operations, which includes diesel fuel, gasoline, and motor oil for vehicles, as well as mineral oil to be sealed within the transformers. All transformers would be equipped with spill containment areas and battery storage would be in compliance with OSHA requirements, such as the inclusion of ventilation, acid-resistant materials, and spill response supplies.

During project operation, lithium-ion battery cells may occasionally be replaced due to defects or loss of efficiencies. Similar to project construction, any ongoing replacement of lithium-ion batteries during project operation would also be delivered to the project site in DOT-certified vehicles and in compliance with all applicable requirements of the DOT, CHP, and California Department of Motor Vehicles. Used lithium-ion batteries would be disposed of in accordance with the applicable hazardous waste requirements. Used lithium-ion batteries are generally not considered hazardous waste by the USEPA; at present, there are optional USEPA guidelines (USEPA's Universal Waste Regulations) that address the responsible disposal and recycling of these batteries. However, depending on the end state of the battery, some lithium-ion batteries may be considered hazardous, in which case such batteries would be disposed of in accordance with federal "universal waste" regulations in 40 CFR Part 273 (USEPA 2023). Ultimately, there are many options to properly manage the disposal of used lithium-ion batteries, including reclamation by battery manufacturers, and batteries would not be disposed of in municipal landfills.

Transformers would contain dielectric insulating fluid in the form of vegetable or mineral oil and would not be routinely handled by operations and maintenance staff. Dust palliatives and herbicides may also be transported to the project if they are used during project operation for vegetation control. These materials would be stored in appropriate containers to prevent accidental release.

All hazardous materials would be disposed of in accordance with RCRA and State Hazardous Waste Management Program requirements. Although the project would introduce a renewable energy use, batteries, and a substation to the site, resulting in an increased use of commercially available potentially hazardous materials, the use of these substances is subject to all applicable federal, State, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials. These regulations establish a comprehensive regulatory system for handling, using, and transporting hazardous materials in a manner that protects human health and the environment. As such, both accidental and reasonably foreseeable hazardous materials releases would be expected to occur infrequently and result in minimal hazard to the public or to the environment. Due to the relatively limited use and small quantities of hazardous materials, and the required compliance with applicable regulations for the transportation and handling of hazardous materials, impacts during operation would be less than significant.

Decommissioning

During the decommissioning and disposal process, it is anticipated that project facilities would be fully removed from the ground. Equipment would be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment off-site to be recycled or disposed of at an appropriately licensed disposal facility. Removal of the solar modules would include removing the racks on which the solar panels are attached and placing them in secure transport crates and a trailer for storage until transportation to another facility, a recycling, or disposal facility can take place. The project would include BMPs to ensure the collection and recycling of modules and to avoid the potential for modules to be disposed of as municipal waste.

Once the PV modules have been removed, the racks would be disassembled, and the structures supporting the racks would be removed. All other associated site infrastructure would be removed, including fences, concrete pads that may support the inverters, transformers and related equipment, and concrete posts to grade level. The fence and gates would be removed, and all materials would be recycled to the extent feasible. Project roads would be restored to their preconstruction condition unless the landowner elects to retain the improved roads for access throughout that landowner's property. The area would be thoroughly cleaned and all debris removed. As discussed above, most panel materials would be recycled, with minimal disposal to occur in landfills in compliance with all applicable laws. A collection and recycling program would be executed to promote recycling of project components and minimize disposal in landfills. PV modules, along with all project materials, would be transported in accordance with applicable waste and recycling transport regulations for hazardous and non-hazardous materials at the time of decommissioning.

The PV module manufacturer would likely provide module collection and recycling services. In any case, current PV modules pass federal leaching criteria for non-hazardous waste, due in part to the low solubility of PV panel materials, which means they would not pose a significant risk for leaching if they

reached a landfill. Several peer-reviewed studies, including *CdTe PV: Real and Perceived EHS Risks* (Fthenakis and Zweibel 2003), have evaluated the environmental, health, and safety aspects of PV modules. Disposal risks of end-of-life PV modules are minimized because of the low solubility of PV panel materials and because the modules can be effectively recycled at the end of their approximately 30-year lifespan. Studies indicate that unless the PV module is purposefully ground to a fine dust, use of PV modules do not generate any emissions (Fthenakis and Zweibel 2003). These studies have consistently concluded that use of PV modules does not present an environmental risk.

As discussed above under the operational analysis, batteries may be considered hazardous waste in California when they are discarded. As batteries are removed, they would be discharged, hauled off-site, and recycled or disposed of at an appropriate location in accordance with all applicable hazardous waste requirements. Depending on the end state of the battery, some lithium-ion batteries may be considered hazardous, in which case such batteries would be disposed of in accordance with federal “universal waste” regulations in 40 CFR Part 273 (USEPA 2023). Ultimately, there are many options to properly manage the disposal of used lithium-ion batteries, including reclamation by battery manufacturers whereby batteries would not be disposed of in municipal landfills.

Upon removal of the project components, the site would be restored in accordance with an approved Closure Plan for decommissioning in accordance with San Bernardino County Development Code Section 84.29.070. Since decommissioning activities would involve exposure and disturbance of soils, measures for erosion and sediment control would be implemented in accordance with a separate SWPPP that would be required for decommissioning. Compliance with County decommissioning requirements, as well as federal, State, and local health and safety laws and regulations, would minimize health risk to the public associated with the transportation, use, and disposal of hazardous materials. Therefore, impacts during decommissioning would be less than significant.

Due to the limited quantities of hazardous materials required for use in the construction, operation, and decommissioning of the proposed project, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.8-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant.

Construction

Potential impacts that may result from upset or accidents during construction of the project include the accidental release of materials, such as gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliative, herbicides, and welding materials/supplies. Generally, the quantities of these hazardous materials would be relatively limited and handled in accordance with manufacturer’s guidelines. As described under Impact 3.8-1 above, the project would include an HMBP that would contain a complete list of all materials used on-site and information

regarding how the materials would be safely stored and transported and in what form they would be used. Material Safety Data Sheets would also be provided for all applicable hazardous materials present at the project site and gen-tie corridor. In addition, implementation of the BMPs required by the NPDES Construction General Permit would include containment and spill response measures, which would reduce the potential impact from upset and accident conditions related to hazardous materials used during project construction to a less than significant level.

Additionally, as discussed in Section 3.8.1.1, Current and Historic Uses, above, there are no LUSTs or Cleanup Program sites documented on the project site or within the gen-tie corridor. The closest listed sites are located approximately 0.5 mile north of the project site, and both cases have been closed as cleanup has been completed. Therefore, encountering aboveground and/or subsurface contamination is not anticipated during construction. Furthermore, the project site and gen-tie corridor are not located on or in the vicinity of any hazardous waste sites according to the DTSC EnviroStor Database (DTSC 2023) or SWRCB GeoTracker Database (SWRCB 2023). Finally, although two areas of illegal dumping waste were observed on the project site during the site reconnaissance conducted as part of the Phase I ESA, no evidence of significant spills, ground staining, unusual odors, or potential contamination was observed and no RECs were identified (**Appendix H**). Any remaining debris that exists on the project site at the time of construction would be removed and disposed of in accordance with all applicable State and federal disposal requirements for the materials found on-site. Therefore, potential impacts related to the risk of upset and accident conditions related to contamination on the project site would be less than significant.

Operation

Operation and maintenance of the project would use minimal hazardous materials and generate little hazardous waste, as discussed above under Impact 3.8-1. Hazardous materials stored or used on the project during operations would include diesel fuel, gasoline, and motor oil for vehicles, mineral or vegetable oil to be sealed within the transformers, and liquid materials within lithium-ion batteries. Electrical equipment used by the project, such as each enclosed transformer, would include an insulating fluid, such as vegetable or mineral oil, but upsets or accidents would be controlled via the secondary containment provided in accordance with applicable federal, State, and local laws and regulations. The insulating oil contained in each transformer does not normally require replacement, minimizing the potential for upsets or accidents involving its use. Further, the project would include a HMBP that would contain a complete list of all materials used on-site and information regarding how the materials would be safely stored and transported and in what form they would be used. The HMBP would also include an emergency response plan to train project staff in emergency response, further minimizing hazards associated with on-site storage of hazardous materials.

The project would also use lithium-ion batteries, which contain flammable and corrosive liquid materials. However, under normal operations, energy storage facilities do not store or generate hazardous materials in quantities that would represent a risk to off-site receptors and no reportable quantities of acutely or extremely hazardous materials would be transported, stored, or used at the site. The potential for hazardous materials to be released during an accidental breakage of the batteries does exist. However, batteries would be housed in an enclosure and contained according to

specifications that follow applicable federal, State, and local requirements, including the inclusion of appropriate ventilation, acid resistant materials, and presence of spill protection supplies. The BESS enclosure would also be equipped with HVAC systems for thermal management of the batteries. Enclosures used to store hazardous materials would also be inspected regularly for any signs of failure or leakage.

Because battery facilities do store energy, a battery thermal runaway can occur if a cell, or area within a cell, achieves elevated temperatures due to thermal failure, mechanical failure, internal/external short circuiting, and electrochemical abuse. In this event, state-of-the-art fire and safety systems would manage the thermal runaway event. The facility would be designed and equipped with Underwriters Laboratories (UL)-compliant operation energy and safety management equipment, and integrated fire protection systems designed to manage and prevent fire risk or thermal runaway events.

Specifically, the BESS enclosure would conform with CFC requirements, NFPA standards, County standards, and thermal runaway management per UL 9540A. The project would utilize pre-engineered battery storage systems designed and tested to receive UL 9540 and UL 9540A listing. UL 9540 contains safety standards for the system's construction (e.g., frame and enclosure, including mounting, supporting materials, barriers and more); the insulation, wiring, switches, transformers, spacing and grounding; safety standards for performance of over 20 different elements, such as tests for temperature, volatility, impact, overload of switches, and an impact drop test; and standards for manufacturing, ratings, markings, and instruction manuals. In addition to the many individual standards referenced, CFC compliance requires a Failure Mode and Effects Analysis to be performed, and also requires a test to ensure safe compatibility of the system's parts. This includes the UL 1973 standard, in which a battery manufacturer must prove that a failed cell inside will not cause a fire outside the system. The project would comply with the CFC, UL 9540/9540A requirements, and industry standards for adequate separations, cascading protections, and suppression systems to limit failure to a single cell or module. In the unlikely event of thermal runaway, the project's preventative measures and fire and safety systems are designed to limit the event to a single battery enclosure as well as reduce the duration and intensity of an event, if it occurs.

Overall, adherence to regulations and standard protocols during the storage, transportation, and usage of any hazardous materials would minimize and avoid the potential for reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Impacts would be less than significant during project operation.

Decommissioning

The decommissioning and disposal process is described under Impact 3.8-1, above. Most panel materials would be recycled to the extent feasible, with minimal disposal to occur in landfills in compliance with all applicable laws. The PV module manufacturer provides module collection and recycling services. In any case, current PV modules pass federal leaching criteria for non-hazardous waste, due in part to the low solubility of PV modules, which means they would not pose a significant risk for leaching if they reached a landfill. Batteries within the BESS would also be recycled to the extent feasible, with minimal landfill disposal.

As previously described, batteries may be considered hazardous waste in California when they are discarded, in which case such batteries would be disposed of in accordance with federal “universal waste” regulations in 40 CFR Part 273 (USEPA 2023). As batteries are removed, they would be discharged, hauled off-site, and recycled or disposed of at an appropriate location in accordance with all applicable hazardous waste requirements. Ultimately, there are many options to properly manage the disposal of used lithium-ion batteries, including reclamation by battery manufacturers, and batteries would not be disposed of in municipal landfills. Therefore, potential impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials during project decommissioning would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.8-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

As described in Section 3.8.1, Environmental Setting, above, the closest schools to the project are all located more than 15 miles from the site. Therefore, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impacts would result from the proposed project.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.8-4: The project would not 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, it would not create significant hazard to the public or the environment. No impact would occur.

The project is not located on a site included on a list of hazardous materials sites pursuant to Government Code Section 65962.5. As determined in the Phase I ESA prepared for the project, the project site was not identified in any relevant databases, including those pursuant to Government Code Section 65962.5 (**Appendix H**). According to the Phase I ESA and the SWRCB GeoTracker Database, and as described under Impact 3.8-2 above, there are two LUST sites located approximately 0.5 mile north of the project site within the existing Lockhart PV I Solar Facility (SWRCB 2023). However, cleanup was completed and both sites are listed as “Completed–Case Closed.” There are no other listed sites located within 1 mile of the project site.

The project site is also not located on a site included in the DTSC EnviroStor Database of hazardous waste sites. The closest EnviroStor site or facility to the project site as listed in this database is a Military Evaluation Cleanup Site located approximately 3 miles to the east within Harper Lake, a dry lakebed (DTSC 2023). This site is listed as “Inactive – Needs Evaluation” as of July 1, 2005. However, due to the distance between this cleanup site and the project site, this site has not impacted the environmental condition of the project site.

Finally, both the SWRCB GeoTracker Database and DTSC EnviroStor Database were reviewed for the gen-tie corridor. The gen-tie corridor is located approximately 1.5 miles south of the two SWRCB GeoTracker LUST sites identified above (1 mile farther than the project site), and is located approximately 2 miles west of the EnviroStor Military Evaluation Cleanup Site (1 mile closer than the project site). Accordingly, the gen-tie corridor is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Overall, neither the project site nor the gen-tie corridor are located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, there would be no impact.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.8-5: The project is not located within an airport land use plan or within 2 miles of a public airport or public use airport and would not result in a safety hazard or excessive noise for people residing or working in the project area. No impact would occur.

As described in Section 3.8.1.2, Phase I Environmental Site Assessment Results, above, the closest airport to the project is the Edwards Air Force Base, located approximately 29 miles west of the site. The project is not located within the Airport Influence Area of any nearby airport and is not included in any Airport Land Use Compatibility Plan. Overall, due to the distance between the project and nearby airports, the project would not interfere with airport operations or result in a safety hazard or excessive noise for people residing or working in the area. No impact would occur.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.8-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

The project would not impair or physically interfere with an adopted emergency response or evacuation plan. The County most recently amended their MJHMP in 2022, which addresses the County's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The objective of the MJHMP is to incorporate and coordinate all the facilities and personnel of the County into an efficient organization capable of responding to any emergency. The MJHMP provides a process for emergency management and response with the County. The MJHMP identifies the organizational structure and responsibilities of agencies in the event of an emergency or disaster. No revisions to the MJHMP would be required as a result of the project.

The project is located in a sparsely populated rural area and the project would not impair any of the existing road networks. However, the project would include the development and implementation of a Congestion Management Plan (CMP), which would be required by the County as a Condition of Approval of the project. The CMP would be prepared in accordance with both the Caltrans (2014) California

Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook for review and approval by the County (see Section 3.12, Transportation and Traffic, for additional information). Implementation of the CMP would further reduce the potential for construction-related traffic to interfere with emergency response or evacuation in the project area.

During project operation, primary access to all major roads would be maintained and would not interfere with emergency access into or out of the project site or gen-tie corridor. Access roads within the project site would also be constructed in accordance with SBC FIRE requirements. Finally, traffic generated during project operation would be minimal and primarily associated with occasional panel washing or general facility maintenance. Activities associated with the project would not impede the free movement of emergency response vehicles. Thus, operational traffic would not interfere with emergency response or evacuation in the area. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

Overall, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.8-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

The project is not located in or near any SRAs for fire protection, or within lands classified as Very High FHSZ as designated by CAL FIRE (CAL FIRE 2023). The project is within a LRA and a majority of the project site is classified as LRA Moderate, which is the lowest classification. A small portion of the project site, and the gen-tie corridor, are in an Unzoned area of the LRA FHSZ map (refer to Section 3.14, Wildfire, for additional information).

Although the project is not located within an area with significant wildfire risk, any new development in previously undeveloped areas generally increases the potential for occurrence of wildfires. The project would introduce potential ignition sources that have the potential to increase fire hazards, such as batteries, transformers, inverters, electric transmission lines (including the gen-tie line), construction and maintenance vehicles, and gas/electric-powered machinery.

The project would be designed, operated, and maintained in compliance with federal, State, and local worker safety and fire protection codes and regulations, which would minimize the potential for the occurrence of fire. The BESS would be required to comply with Chapter 12 of the CFC, which applies to stationary electric energy storage systems and addresses development standards for the design, installation, commission, operation, maintenance, and decommissioning of these systems. Specifically, the project's fire protection design would comply with CFC Section 1207, *Electrical Energy Storage Systems*, which adopts the National Fire Protection Association's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). The BESS enclosure would also be equipped to house required HVAC and fire protection/suppression systems.

The lithium-ion battery technology for the project would also comply with the equipment and system fire testing standards in accordance with the nationally adopted UL standards. These requirements include stringent standards for commissioning, operation and maintenance, ongoing inspection and testing, decommissioning, seismic and structural design, signage, security installations, fire detection and suppression systems, vegetation control and minimum setbacks from lot lines, roads, and adjacent buildings. The project would also comply with UL 9540A testing, which is performed by the battery manufacturer/vendor to prevent thermal runaway and mitigate fire risk. Compliance with these advanced, nationally adopted standards is designed to ensure the site installation and operation of the battery storage system are safe for operators, first responders, and neighboring communities.

Furthermore, the project would require preparation of a fire safety plan in accordance with California Building Code Section 322, which regulates the storage of lithium-ion batteries. The fire safety plan would address fire hazards of the different components of the project, including the energy storage facility, and would include BMPs to reduce the potential for fire and extinguishment techniques if a fire were to occur.

Fires at BESS facilities are rare. In the rare instances where fires have occurred, the safety features and protocols built into today's BESS are designed to prevent harm to operators, first responders, and neighbors. Most fires in the desert are caused by lightning or vehicles. The use of construction and ongoing maintenance vehicles can increase fire risk due to driving heated mufflers over vegetated areas. However, the project is not located within a High or Very High FHSZ. In construction areas, the vegetation would also be cleared as needed or as required; and the project would result in a minimal increase in fire risks that could result in temporary or ongoing impacts to the environment. The proposed transformers, inverters, solar panels, and gen-tie line may also represent a potential ignition source; however, the potential for fire risk for these components is considered low as the project would be designed in accordance with all applicable federal, State, and local regulations for fire protection including compliance with applicable vegetation clearance requirements.

Finally, water would be used during construction for dust suppression purposes, which would secondarily reduce fire risk during construction due to the dampened soils on-site. The project would also include operational water supply for fire suppression, which would be contained within an on-site water tank. Project water demand would be supplied by the existing wells at the adjacent Mojave Solar Facility. As discussed in Section 3.13, Utilities and Service Systems, of this EIR, there is sufficient water available to meet the future water demands of the project during normal, single dry, and multiple dry years through 2045, including for fire suppression purposes.

Although the closest people or structures are residences located along Harper Lake Road, approximately 1 mile east of the project site and 0.3-mile south of the gen-tie corridor, the project is not expected to expose these residences, or any other people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.8-8: The project would not result in cumulative impacts related to hazards and hazardous materials. Impacts would be less than significant.

Similar to other potential impacts, such as those related to geology and soils, risks related to hazards and hazardous materials are typically localized in nature because they tend to be related to on-site existing hazardous conditions and/or hazards caused by the project's construction or operation. The geographic scope when considering cumulative impacts from hazards and hazardous materials includes renewable energy projects in the County, as SBC Fire is the CUPA for the entire County, and specific projects are listed in **Table 3-1, Cumulative Projects**, in Section 3.0, Introduction to the Environmental Analysis, of this EIR lists the projects considered for this cumulative impact analysis. Out of the eight projects considered, all are solar projects and there are five projects located within 3 miles of the proposed project: Harper Lake Solar, Desert Breeze Solar, Jazmin Solar, Lockhart PV I Solar, and Lockhart PV II Solar.

As with this proposed project, these cumulative projects would also be required to avoid and/or mitigate impacts due to hazards and hazardous materials. The proposed project and other solar projects involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction, operation, and decommissioning activities. Impacts from these activities are anticipated to be less than significant, because similar solar projects would also comply with federal, State, and local regulations and policies. Compliance with these regulation and policies would involve measures such as secondary containment of hazardous waste and proper disposal to minimize spills and leaks. Additionally, these projects would implement safety measures and precautions necessary to minimize any potential disturbance of hazardous materials and prevent the creation of additional hazards that cannot be mitigated or contained properly. Lastly, if any of these solar projects would include battery storage facilities, such facilities would also be required to comply with the same standards and regulations as the project and would be equipped with secondary containment and fire suppressant technology to lessen the impacts of potential battery fires.

A project could also result in a cumulatively considerable impact related to hazardous emissions within one-quarter mile of a school if cumulative projects would release hazardous emissions within one-quarter mile of the same school. However, neither the project nor any cumulative projects are located within 0.25 mile of a school. Thus, no cumulative impacts would occur.

Similarly, impacts with regard to safety hazards and excessive noise within an airport land use planning area could be compounded by cumulative projects. However, the project site is not located within an airport land use plan and thus no cumulative impact will occur.

Cumulative impacts with regard to a project's location on a hazardous materials site pursuant to Government Code Section 65962.5 would also not occur as the project site is not located on such a site.

Impairing implementation of or physically interfering with an adopted emergency plan could be cumulatively considerable if cumulative projects were to impact the same plan or physical alter similar areas, such as the same road network. As the project was determined to have a less than significant impact to adopted emergency plans, no cumulative impacts will occur.

Finally, cumulative impacts with regard to the exposure of people or structures to significant risk of loss, injury, or death involving wildland fires could be compounded, resulting in a cumulative impact if the same people or structures would be affected by the project and cumulative projects in a manner that would further increase the risk of wildfires beyond that of the project alone. While construction and operation of the project will introduce ignition sources on the project site and along the gen-tie corridor, the project will be designed in compliance with federal, State, and local worker safety and fire protection codes and regulations, which will minimize the potential for the occurrence of fire. However, cumulative projects will also be required to comply with SBC Fire, CFC, and California Building Code requirements to minimize the potential for the occurrence of fires. Upon compliance with applicable federal, State, and local fire protection regulations, the potential for the project and cumulative projects to expose people or structures to wildland fires will be reduced to the point where impacts will not be cumulatively considerable.

Therefore, in combination with other reasonably foreseeable development projects in the County's Desert Region, the project is not anticipated to result in a considerable contribution to a significant cumulative impact. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.9 Hydrology and Water Quality

This section evaluates the potential hydrology and water quality resources impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to hydrology and water quality resources and includes mitigation measures required to reduce or avoid these impacts, as applicable. A site-specific Stormwater Drainage Report was prepared for the project and is provided as **Appendix I**. A site-specific Water Supply Assessment (WSA) was also conducted for the project and is provided as **Appendix J**. Information from these reports has been incorporated into this discussion. San Bernardino County (County) received comments from the Lahontan Regional Water Quality Control Board and the Desert Tortoise Council during the scoping period (these comment letters are included in **Appendix A**), and those comments have been incorporated into this section.

3.9.1 Environmental Setting

The project site is located in northwestern San Bernardino County, about 30 miles east of Edwards Air Force Base and almost 20 miles west-northwest of Barstow. The site is located in the Mojave Desert, also referred to as the “high desert” of southern California due to its general base elevation (excluding hills and mountains) of around 2,000 feet above mean sea level. Harper (Dry) Lake is approximately 2 miles northeast of the project site.

The project parcel is bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped Bureau of Land Management (BLM) lands and other vacant lands to the south and west. The Mojave Solar Facility to the east consists of the Alpha and Sandlot Substations, the gen-tie lines, hot water to electric generators, myriad arrays of solar thermal panels, heat recovery equipment, evaporation ponds, and hot water storage.

3.9.1.1 Regional Setting and Climate

The project site, the generation interconnect (gen-tie) line, and the region surrounding it are in the Mojave Desert Geomorphic Province, which is an area of interior drainage like the adjacent Basin and Range Geomorphic Province to the north and east. Runoff from this area has no outlet to the sea. The project site and gen-tie line are within the Coyote-Cuddeback Lakes subbasin (#18090206), an 1,820 square mile area within the larger (23,600 square mile) Northern Mojave basin (#180902) of the National Watershed Boundary Dataset (NWBD). The NWBD identifies distinct drainage areas using a hierarchical number known as a Hydrologic Unit Code (HUC), with the number of digits of the code signifying its level. The Northern Mojave is a HUC-6, or “basin” level area while the Coyote-Cuddeback Lakes is an HUC-8, or “subbasin” level, area located within the larger HUC-6 area (USGS and NRCS 2013). The Coyote-Cuddeback Lakes subbasin is adjacent to the Mojave subbasin (#18090208) which drains a 4,580 square mile area of the desert from the San Bernardino Mountains to eastern California (see **Figure 3.9-1, Water Resources Setting**). These two surface-water subbasins overlap the Harper Valley groundwater basin (6-047), as defined by the State (DWR 2003).

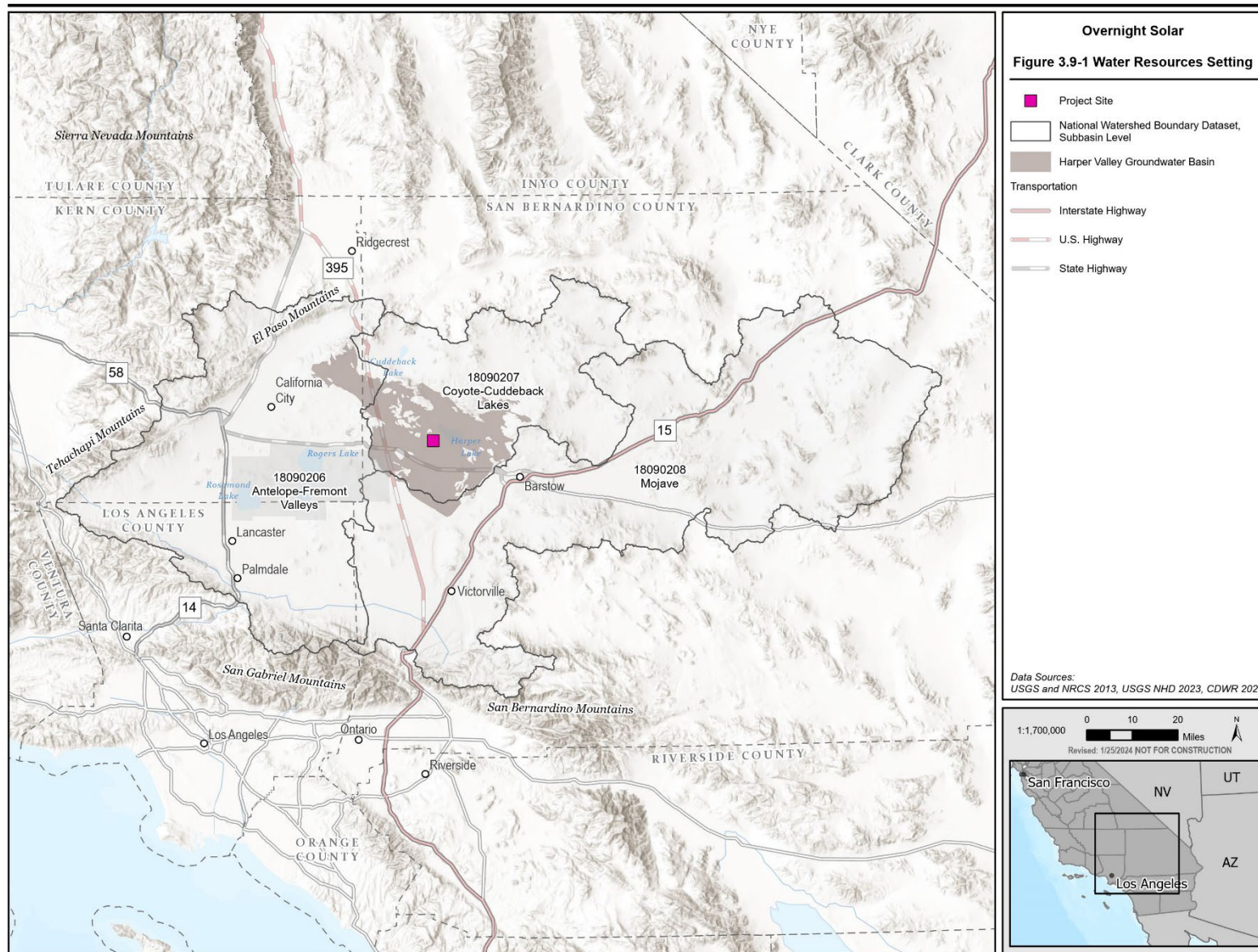


Figure 3.9-1. Water Resources Setting

The topography of the area is a generally flat, sloping alluvial fan or bajada surface extending from local (isolated) mountains or hills within the desert region. In the immediate vicinity of the project the surface slope is a consistent 1 to 2 percent from the southwest to the northeast. The lowest point in the area, Harper Lake, a dry lakebed, is approximately at elevation 2,020 feet above mean sea level (amsl) and the highest point on the project site is in the southwest corner where the elevation is about 2,150 feet amsl (USGS 1986).

The climate in the project vicinity is arid, with annual rainfall totals generally less than 10 inches per year, mostly falling in winter months (December through March). Climate records for Barstow are representative of the local climate. The average maximum temperature varies from a low of 58 degrees Fahrenheit in December to a high of 101 degrees Fahrenheit in July. The average minimum temperature ranges from a winter low of 34 degrees Fahrenheit (January) to a summer high of 70 degrees Fahrenheit (July). Rain-producing storms that occur over the project site generally come from the west, deriving their moisture from the Pacific, before passing over the Los Angeles Basin and the San Gabriel mountains. Average annual precipitation at locations west of the project site, but still in the desert (Lancaster, 7.65 inches), tend to be greater than those to the east (Barstow, 5.27 inches). However, average annual precipitation southwest of the San Gabriel or west of the Santa Ynez Mountains (i.e., Coastal Ranges) is considerably greater than desert locations (e.g., Los Angeles, 18.67 inches; WorldClimate 2024).

3.9.1.2 Surface Water Hydrology

The project site is located mostly within the HUC-12 (subwatershed) level Schweitzer Well-Harper Lake (180902071110) area (**Figure 3.9-2, Surface Water Features**). Two other HUC-12/subwatershed areas, the Town of Jimgrey (180902070702) and the Town of Kramer Hills (180902071102), intersect the northwest and southeast corners of the project parcel and discharge surface water runoff into the Schweitzer Well-Harper Lake area. Aside from the concentrated flows of the latter two subwatershed areas, the bulk of drainage from the project parcel is overland flow toward the northeast. An existing berm along the western edge of the project parcel diverts some run-on from the watershed around the site. The Schweitzer Well-Harper Lake subwatershed covers an area of 1,232 square miles, with the project site (approximately 596 acres, about 0.93 square mile) constituting a fraction of the total area of the subwatershed. Surface water flow reaching Harper (Dry) Lake can go no farther, as this is a closed basin with no outlet to another downgradient watershed. The entire drainage area contributing surface water runoff to Harper (Dry) Lake covers 1,820 square miles, which is also the HUC-8 Coyote-Cuddeback Lakes (#18090207) subbasin area. The Harper Hydrologic Sub Area (HSA #628.42) designated in the Basin Plan for the Lahontan Regional Water Quality Control Board (LRWQCB) presents part of the area within the HUC-12 Coyote-Cuddeback Lakes subbasin area (LRWQCB 2021).

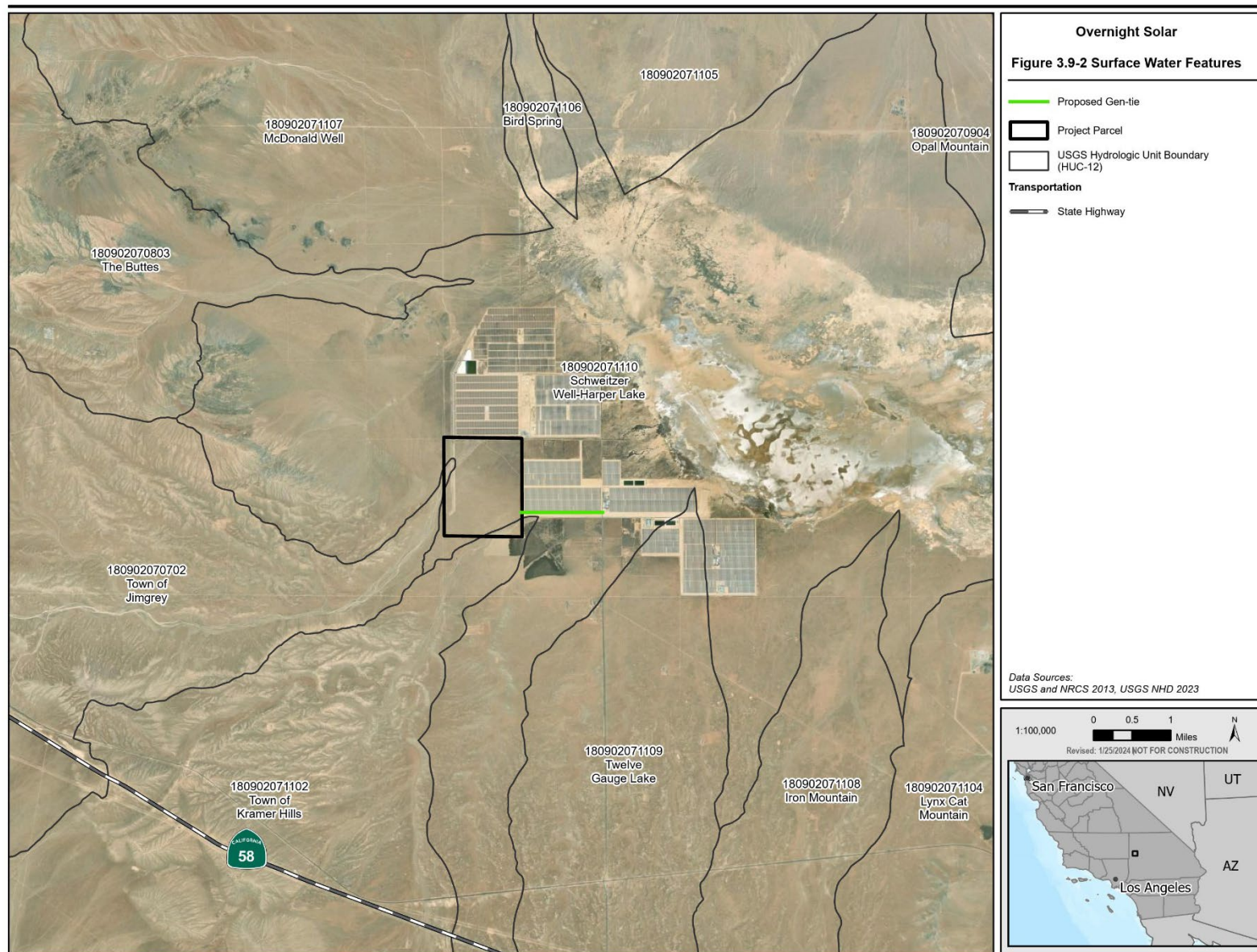


Figure 3.9-2. Surface Water Features

A site-specific Stormwater Drainage Report (**Appendix I**) was prepared for the project to evaluate current and projected surface water runoff conditions for the 100-year return period, 24-hour storm event. The Stormwater Drainage Report describes the drainage pattern within the proposed development area footprint as following natural contours. Runoff derived on the parcel moves from the southwest corner towards low-lying areas in the northeast corner. A channel and associated berm control stormwater from the upstream watershed to the west and direct it to the north, around the parcel, and thus reducing flood risk from the west. Upstream stormwater from the south can enter the property in the southeast corner. From there it is routed through a braided channel network across the parcel into a trapezoidal flood control channel to the east.

3.9.1.3 Groundwater

The project site is in the Harper Valley Groundwater Basin (6-47), a well-defined basin within the larger South Lahontan Region. The Harper Valley Basin covers an area of 640 square miles that is mostly within northwestern San Bernardino County and partly within eastern Kern County (**Figure 3.9-3, Groundwater Features**). In addition to surface water infiltration within Harper Valley, groundwater inflow also occurs from the Middle Mojave River Valley Groundwater Basin (6-041) located to the south, and the Cuddeback Valley Groundwater Basin (6-050) located to the north. The quality of groundwater in the western part of the Harper Valley Groundwater basin is characterized as sodium chloride in nature, with total dissolved solids ranging from 1,350 mg/L to 1,650 mg/L, and high concentrations of fluoride, boron, and sulfate (DWR 2003).

The Water Supply Assessment for the project (**Appendix J**) identified a large number of wells within a 15-mile radius of the project. The highest concentration of these wells is within the southeastern quadrant of the area, nearest to the Barstow metropolitan area. A total of eight water supply wells were identified along, or near to, the project's northern and eastern boundaries (**Appendix J**); however, only four of these wells will be used for water supply. These wells are owned by companies affiliated with the applicant who have agreed to provide water to the project.

In 2014, the State passed the Sustainable Groundwater Management Act (SGMA) to help provide a management framework for protecting the State's groundwater resources from overuse and to establish sustainability goals for discrete groundwater basins. Four priority levels were established, high, medium, low, and very low to establish the level of concern and need for action. The Harper Lake Groundwater Basin is considered a very low priority basin for groundwater management according to the California Department of Water Resources. As a result, a groundwater sustainability plan (GSP) has not been required for the basin, nor has one been prepared. This was, in part, based on the small population residing in the basin (1,634 persons in 2010), the projected population decline (expected to be 1,220 persons in 2030), population density (less than 50 persons per square mile), and the groundwater use (0.01 acre-feet per basin-acre). A major concern in the basin is the occurrence of land subsidence due to groundwater extraction (DWR 2024).

Table 3.9-1, Groundwater Sources and Recharge, provides the various sources of groundwater recharge for the basin as well as associated recharge rate estimates (**Appendix J**). Refer to **Appendix J** for additional information.

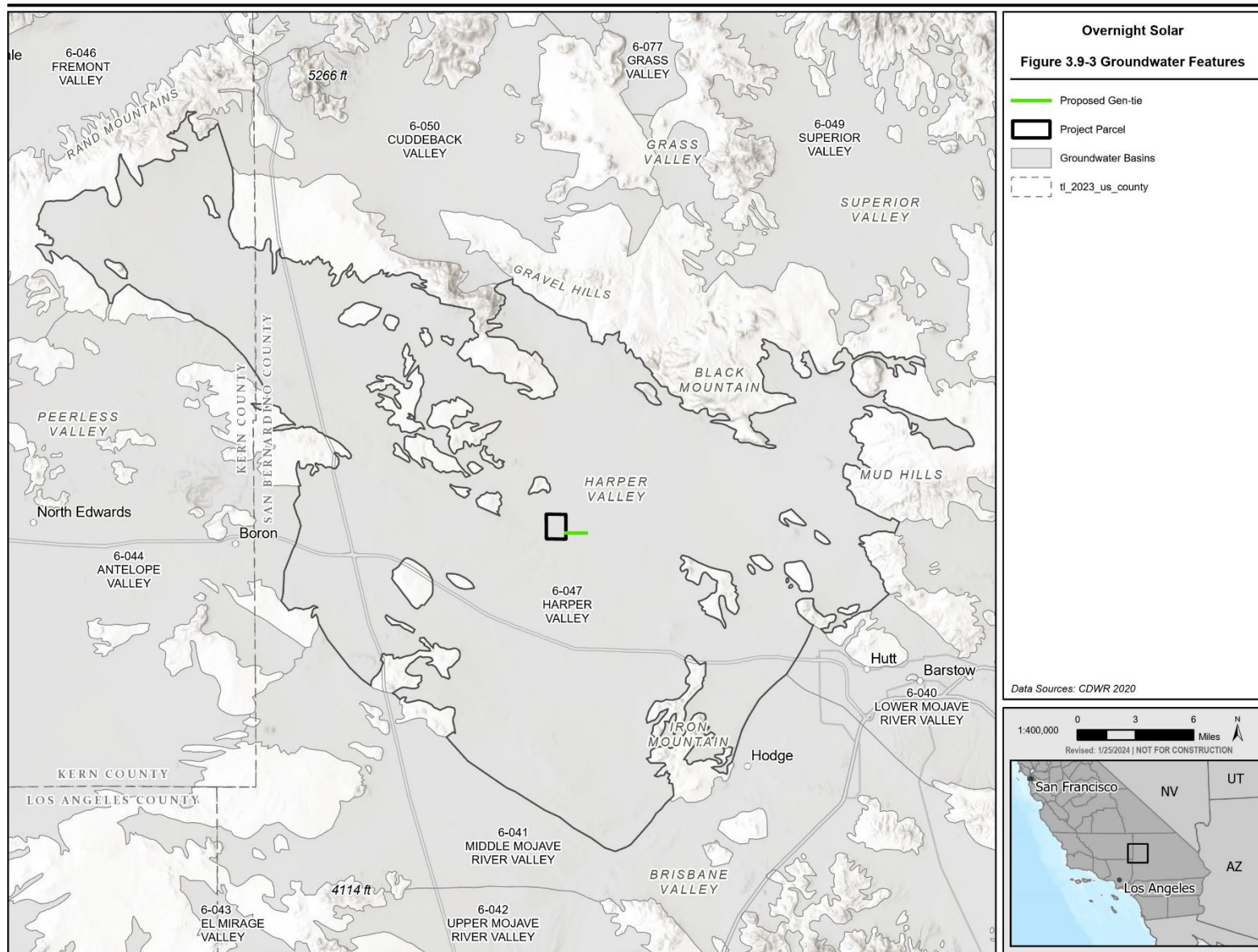


Figure 3.9-3. Groundwater Features

Table 3.9-1. Groundwater Sources and Recharge

Source	Average Recharge Rate
Mojave River	17,231 AFY
Imported Water (State Water Project Enhanced Recharge)	1,635 AFY
Subsurface Inflow	1,566 AFY
Mountain Front Recharge	1,205 AFY
Return Flow (Recirculated Production)	6,018 AFY

Notes: AFY – acre-feet per year

3.9.1.4 Flooding

The Federal Emergency Management Agency (FEMA) is responsible for mapping areas subject to flooding during a 100-year flood event (i.e., 1 percent chance of occurring in a given year). The Flood Insurance Rate Map produced by FEMA for the project area indicates the project site is located in Zone D, where flooding is possible, but the actual flood hazard has not been determined through analysis (**Appendix I**). Lack of flood hazard analysis generally occurs in rural areas where population is very low. Flood insurance for properties is not required at the federal level in Zone D areas. All parcels surrounding the project site are similarly marked as Zone D, and therefore do not require flood insurance at the federal level.

3.9.1.5 Dam Inundation Zones

Due to the limited and ephemeral nature of surface water runoff within the HUC-8 Coyote-Cuddeback Lakes (#18090207) subbasin, reservoirs are not sustainable, and no dams have been built in the area. As a result, no dams are located directly upstream from the project site, and it has no dam-breach inundation zone intersecting it.

3.9.1.6 Water Supply

The project site falls within the service area of the Mojave Water Agency (MWA) which covers most of the Mojave River watershed. The Mojave River is an adjudicated basin, which is a court-sanctioned system to govern water use and equitable water rights within the basin. The MWA was appointed as the “watermaster” or governing entity for the basin. It is organized into five separate management subareas which generally correspond to specific groundwater basins. The Centro subarea of the MWA is very similar to the area covered by the Harper Valley Groundwater Basin. Most of the groundwater recharge that comes into the Harper Lake Groundwater Basin comes from the Mojave River as groundwater inflow.

While the MWA has prepared an Urban Water Management Plan (UWMP) for its service area, it does not provide a detailed assessment of the projected water demand specifically for the Centro subarea (Tully & Young 2021). In addition, the project does not plan to use water supplied by the MWA for either construction or operations requirements (SWCA 2023b).

3.9.2 Regulatory Framework

3.9.2.1 Federal Regulations

Federal Clean Water Act Section 303: Basin Plan – Beneficial Use and Water Quality Objectives

The project site is located within the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB). The LRWQCB is tasked with implementing the adopted Water Quality Control Plan (Basin Plan) for the North and South Lahontan Basins through planning, permitting, and enforcement of established water quality objectives. In accordance with State policy for water quality control, The LRWQCB employs a range of beneficial use definitions for surface waters and groundwaters that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan identifies beneficial uses for the key surface water drainages and groundwater basins throughout its jurisdiction. The identified beneficial uses in the Cuddeback hydrologic unit (surface water) include agricultural and municipal water supply, groundwater recharge, recreation (contact and non-contact), warm and cold freshwater habitat, wildlife habitat, water quality enhancement, and flood control (peak attenuation and storage). The identified beneficial uses in the Harper Valley Groundwater Basin (6-47) include agricultural, industrial, and municipal water supply, and freshwater replenishment (LRWQCB 2021 and 2022).

Federal Clean Water Act Section 402: National Pollutant Discharge Elimination System Program

Under Clean Water Act Section 402, the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program controls water pollution by regulating point sources of pollution to waters of the United States. San Bernardino County administers the NPDES program in the project area and issues grading permits. Because the Project would result in the disturbance of 1.0 acre or more of soil with the potential to discharge to waters of the United States, it would be subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ), commonly referred to as the Construction General Permit. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing, grading, and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and other pollutants from contacting stormwater as well as from moving off-site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program and a chemical monitoring program for non-visible pollutants. Post-construction requirements necessitate that construction sites be restored to pre-project hydrological conditions to ensure that the physical and biological integrity of aquatic ecosystems are sustained in their existing condition.

In addition to stormwater discharges, the Construction General Permit also covers other non-stormwater discharges including irrigation of vegetative erosion control measures, water to control dust, uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by the LRWQCB. The discharge of non-stormwater is authorized under the following conditions:

- The discharge does not cause or contribute to a violation of any water quality standard;
- The discharge does not violate any other provision of the General Permit;
- The discharge is not prohibited by the applicable Basin Plan;
- The discharger has included and implemented specific BMPs required by the General Permit to prevent or reduce the contact of the non-stormwater discharge with construction materials or equipment;
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
- The discharge is monitored and meets the applicable numeric action levels; and
- The discharger reports the sampling information in the SWPPP Annual Report.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) was established by Congress when the National Flood Insurance Act was passed in 1968. Since its inception, the NFIP has been modified and adjusted through additional legislation in 1973, 1994, 2004, 2012, and 2014. The NFIP also undergoes periodic reauthorization by the U.S. Congress. Further, in 1973, Executive Order 11988 (Floodplain Management) strengthened the activity within floodplains under the NFIP and other federal regulations to avoid adverse impacts from occupying and modifying floodplains and, to the extent possible, limit floodplain development. FEMA is the primary federal agency administering the NFIP and mapping floodplains throughout the country. FEMA determines flood elevations and floodplain boundaries and distributes the flood insurance rate maps used in the NFIP. These maps identify the locations of special flood hazard areas, including 100-year floodplains (i.e., areas that would have a 1 percent annual chance of flooding).

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations. Those regulations enable FEMA to require municipalities participating in the National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

3.9.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act gives the State Water Resources Control Board authority over waters of the State and water quality. Individual Regional Water Quality Control Boards (RWQCB) have local and regional authority over specific parts of the State. The area of the project site is under the jurisdiction of the LRWQCB, which prepares and periodically updates the Basin Plan. Pursuant to the Clean Water Act NPDES program, the Porter-Cologne Act also delegates the authority to the RWQCBs to issue NPDES permits. If a proposed project or portion of a proposed project does not require

a federal permit but does involve dredge or fill activities that may result in a discharge to waters of the State, the RWQCB has the option to regulate the dredge and fill activity under its State authority in the form of Waste Discharge Requirements.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (Water Code Section 10723) provides a framework for sustainable management of groundwater resources. In groundwater basins designated by the Department of Water Resources as medium and high priority, local public agencies and locally controlled groundwater sustainability agencies are required to develop and implement GSPs or alternatives to GSPs.

3.9.2.3 Regional

Lahontan Regional Water Quality Control Board, Basin Plan

The Water Quality Control Plan for the Lahontan Region (Basin Plan) establishes water quality standards and control measures for both surface water and groundwater in the Lahontan Region. The Basin Plan designates beneficial uses for specific water bodies within the region. It also establishes water quality objectives, waste discharge prohibitions, and other measures to protect the established uses. The Basin Plan implements the State's water quality standards, its Non-degradation Policy. Measures to control water quality includes setting Total Maximum Daily Loads (TMDLs) for various water bodies within the region.

Urban Water Management Plan

The service area for the Mojave Water Agency (MWA) covers about 4,900 square miles within San Bernardino County. The MWA was formed in 1960 as a special district under the California Water Code to improve water service reliability within the area. In 2020 the MWA issued its final UWMP as required under California's Urban Water Management Planning Act (UWMPA). The UWMP provides a legal and technical framework to manage water supply within the MWA service area under short-term and long-term planning conditions, including challenges from climate change and evolving regulations.

3.9.2.4 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Infrastructure and Utilities Element

GOAL IU-1

Water Supply. Water supply and infrastructure are sufficient for the needs of residents and businesses and are resilient to drought.

<i>Policy IU-1.1</i>	Water Supply. We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.
<i>Policy IU-1.3</i>	Recycled Water. We promote the use of recycled water for landscaping, groundwater recharge, direct potable reuse, and other applicable uses in order to supplement groundwater supplies.
<i>Policy IU-1.7</i>	Areas Vital for Groundwater Recharge. We allow new development on areas vital for groundwater recharge when stormwater management facilities are installed onsite and maintained to infiltrate predevelopment levels of stormwater into the ground.
<i>Policy IU-1.8</i>	Groundwater Management Coordination. We collaborate with water-masters, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other “undesirable results” as defined in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater Management Ordinance.
<i>Policy IU-1.9</i>	Water Conservation. We encourage water conserving site design and the use of water conserving fixtures, and advocate for the adoption and implementation of water conservation strategies by water service agencies. For existing County-owned facilities, we incorporate design elements, building materials, fixtures, and landscaping that reduce water consumption, as funding is available.
GOAL IU-3	Stormwater Drainage. A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.
<i>Policy IU-3.1</i>	Regional Flood Control. We maintain a regional flood control system and regularly evaluate the need for and implement upgrades based on changing land coverage and hydrologic conditions in order to manage and reduce flood risk. We require any public and private projects proposed anywhere in the county to address and mitigate any adverse impacts on the carrying capacity and stormwater velocity of regional stormwater drainage systems.
<i>Policy IU-3.2</i>	Local Flood Control. We require new development to install and maintain stormwater management facilities that maintain predevelopment hydrology and hydraulic conditions.
<i>Policy IU-3.3</i>	Recreational Use. We prefer that stormwater facilities be designed and maintained to allow for regional open space and safe recreation use without compromising the ability to provide flood risk reduction.

- Policy IU-3.4* **Natural Floodways.** We retain existing natural floodways and water-courses on County-controlled floodways, including natural channel bottoms, unless hardening and channelization is the only feasible way to manage flood risk. On floodways not controlled by the County, we encourage the retention of natural floodways and watercourses. Our priority is to reduce flood risk, but we also strive to protect wildlife corridors, prevent loss of critical habitat, and improve the amount and quality of surface water and groundwater resources.
- Policy IU-3.5* **Fair Share Requirements.** We require new development to pay its fair share of capital costs to maintain adequate capacity of the County's regional flood control systems.

Natural Resources Element

- GOAL NR-2** **Water Quality.** Clean and safe water for human consumption and the natural environment.
- Policy NR-2.1* **Coordination on Water Quality.** We collaborate with the State, regional water quality control boards, watermasters, water purveyors, and government agencies at all levels to ensure a safe supply of drinking water and a healthy environment.
- Policy NR-2.2* **Water Management Plans.** We support the development, update, and implementation of ground and surface water quality management plans emphasizing the protection of water quality from point and non-point source pollution.
- Policy NR-2.5* **Stormwater Discharge.** We ensure compliance with the County's Municipal Stormwater NPDES (National Pollutant Discharge Elimination System) Permit by requiring new development and significant redevelopment to protect the quality of water and drainage systems through site design, source controls, stormwater treatment, runoff reduction measures, best management practices, low impact development strategies, and technological advances. For existing development, we monitor businesses and coordinate with municipalities.

Hazards Element

- GOAL HZ-1** **Natural Environmental Hazards.** Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.
- Policy HZ-1.2* **New Development in Environmental Hazard Areas.** We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/ debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

Policy HZ-1.3 **Floodplain Mapping.** We require any new lots or subdivisions partially in, and any new development partially or entirely in 100-year flood zones or 100-year flood awareness areas to provide detail floodplain mapping for 100- and 200-year storm events as part of the development approval process.

Policy HZ-1.4 **500-Year Flood Zone.** We may collaborate with property owners in the Valley region to establish funding and financing mechanisms to mitigate flood hazards in identified 500-year flood zones.

Renewable Energy & Conservation Element

GOAL RE-4 **Environmental Compatibility.** The County will establish a new era of sustainable energy production and consumption in the context of sound resource conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels.

Policy RE-4.2 Ensure that renewable energy facilities do not disrupt, degrade, or alter the local hydrology and hydrogeology.

Policy RE 4.2.1 Require a groundwater impact assessment that evaluates the short and long-term impacts to groundwater usage.

San Bernardino County Development Code

Title 3, Health and Sanitation and Animal Regulations, Division 5, Monitoring, Control and Elimination of Pollutants into the Storm Drainage System

Chapter 1, Pollutant Discharge Elimination System Regulations, of the San Bernardino County Development Code was established to protect the health, safety and welfare of county residents by controlling non-storm water discharges to the storm water conveyance system. Its intent was to reduce pollutants in storm water discharges, including pollutants entrained by overland flowing stormwater to achieve applicable receiving water quality objectives. In addition, it is intended to protect and enhance the quality of receiving waters consistent with applicable federal, State, and local laws, and regulations.

3.9.3 Thresholds for Determination of Significance

The following thresholds of significance are based on California Environmental Quality Act (CEQA) Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may

have a significant adverse impact related to hydrology and water quality if it would do any of the following:

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

3.9.4 Project Impacts and Mitigation

IMPACT 3.9-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant.

Construction

While construction of the project site and gen-tie corridor will require vegetation removal and potentially a small amount of earthwork, it will occur on a generally flat, very gently sloping surface with native plants and planned improvements to the perimeter stormwater controls, including maintenance of a drainage easement to the west of the existing berm; construction of small retention basins throughout the solar panel areas and project site; installation of culverts and drainage channels to facilitate the controlled conveyance of runoff across the project site; and BMPs such as vegetated swales, permeable surfaces, and infiltration trenches to reduce surface runoff. Thus, concerns for water “run-on” from a larger watershed are minimal to non-existent, and the surface area of the project site itself or the gen-tie (to produce runoff) is quite small.

Construction would involve limited use of bulldozers, graders, semi-trucks, and other types of heavy equipment for vegetation removal, grubbing, grading, and installation of roads and other facilities. Construction activities would involve very slight changes to on-site topography, and such activities could potentially loosen existing surface soils and sediments, increasing the possibility that erosion might occur during storm events. Water used for dust suppression would also have the potential to

generate runoff that could transport sediments and dissolved solids. The use of construction equipment on-site may involve the accidental release of fuel, oils, brake dust, lubricants, antifreeze, and other potentially hazardous substances at the project site. These water quality pollutants could enter surface drainage channels during storm events, and/or infiltrate into groundwater and the underlying aquifer, resulting in the degradation of water quality.

As a result of these concerns, the project would be subject to compliance with the NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit would include the development and implementation of a SWPPP. The objectives of a SWPPP are (1) to identify pollutant sources that may be delivered off-site (in the form of runoff) and affect the quality of stormwater discharge; (2) to implement site controls and practices to reduce stormwater pollution; and (3) to protect water quality of receiving waters. The SWPPP would include site-specific BMPs to minimize erosion on-site and reduce or otherwise prevent conditions of erosion and stormwater runoff (such as silt fences, straw wattles, ground cover, etc.).

As described in Section 3.8, Hazards and Hazardous Materials, diesel and gasoline fuels and other hazardous materials such as oils, solvents, hydraulic fluids, and paints commonly associated with facility development and construction equipment would be stored and handled in a manner to prevent accidental release, i.e., consistent with the hazardous materials handling BMPs, Spill Prevention, Control, and Countermeasure Plan, and other measures contained within the required SWPPP.

Compliance with the implementation requirements of the General Construction Permit, which include the preparation and deployment of a SWPPP; Spill Prevention, Control, and Countermeasure Plan; and associated BMPs; the impact on water quality during construction would be temporary and less than significant.

Operations

After project development, runoff from the site would increase significantly, approximately by about 25 acre-feet for the 24-hour storm event that was modeled (**Appendix I**). Therefore, the stormwater management controls described previously, would be implemented during project development. These controls would remain in place after construction is completed.

After the project construction is completed, and final stormwater management facilities are in place, control of runoff would maintain or improve the runoff conditions currently found at the site and gentle prior to construction. The average water use during operation and maintenance of the facility would be minimal, estimated at about 11 acre-feet per year (AFY) and stormwater runoff also limited due to the extremely arid conditions at this location. In addition, all stormwater discharges will be controlled under the Water Quality Management Plan (WQMP) established for the facility.

As noted earlier in Section 3.8, Hazards and Hazardous Materials, the California Hazardous Materials Release Response Plans and Inventory Law requires any business handling hazardous materials at or above specified thresholds to prepare a Hazardous Materials Business Plan. The thresholds include any site that stores hazardous materials in excess of 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet for compressed gas. Any hazardous materials exceeding the established thresholds that would be stored on-site would be contained in designated areas in accordance with a Hazardous Materials

Business Plan, which would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to prevent accidental release.

Based on this assessment, the impacts on water quality during operation and maintenance would be temporary and less than significant.

Decommissioning

After its useful life is completed, estimated to be approximately 30 years, the project will be decommissioned. Decommissioning of the site and gen-tie line would incur potential impacts similar to those described for construction, including the potential for erosion, sedimentation, and the release of pollutants. Decommissioning activities also would be required to comply with the same applicable federal, State, and local water quality regulations. Ground-disturbing activities would require coverage under the Construction General Permit, including the preparation and implementation of a SWPPP. Stormwater management measures also would be required to effectively control erosion and sedimentation and other construction-related pollutants during decommissioning. Therefore, potential impacts on water quality from decommissioning activities would be temporary and less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

IMPACT 3.9-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Impacts would be less than significant.

Current land use at the project site and along the gen-tie is rural and undeveloped, and the parcel is owned by Atlantica North America, LLC (parent company of the applicant). As a result, the parcel has not been used for agricultural purposes in the last 10 years (Google Earth 2023). Groundwater recharge in the desert occurs primarily at the apex of alluvial fans, closer to valley edges where soils and alluvial deposits are coarser and more conducive to infiltration of surface water. The project site is relatively close to the valley bottom (Harper Lake), where soils and underlying materials are much finer in texture. Therefore, the project site location is not a significant groundwater recharge area.

Expected water use by the project would be different during the construction phase (about 89 AFY) and the operations phase (about 11 AFY), and the potential impacts during each phase are discussed below. Current water “outflow” (groundwater use) from the Centro subarea of the MWA service area has averaged about 21,955 AFY for the period from 2010 to 2022 (**Appendix J**).

Construction

As stated above, the project and gen-tie would require a relatively small amount of water. This is only about 0.4 percent of the estimated average annual groundwater use within the MWA Centro subarea of 21,955 AFY. The WSA for the project concludes that the limited water demand from the project will not pose a threat to groundwater resources in the basin. In addition, the requirements of the 1996 adjudication of the Mojave River Basin helps control water use, as demonstrated by the declining

demand for groundwater within the Centro subarea. Furthermore, the Mojave Solar Facility has secured water rights of 2,163 AFY. On average, the Mojave Solar Facility has produced water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. As a result, the accumulated Carry Over Right for the Mojave Solar Facility is 3,144 AF for the 2022–2023 Water Year. Therefore, the projected water demand associated with the project falls within the water rights allocation designated for the Mojave Solar Facility (**Appendix J**).

Although construction activity would disturb pervious surfaces, and slightly reduce the potential for infiltration of surface water, it would not significantly affect groundwater recharge because direct infiltration of rainfall and surface water within the Harper Valley Groundwater Basin is only a minor contributor to groundwater recharge of this basin. The primary contributor is the Mojave River (provided as groundwater inflow from the adjacent groundwater basin). Therefore, loss of pervious surfaces would not significantly reduce local groundwater recharge rates or supplies. The combined impacts to groundwater supply and recharge from this phase of the project are considered less than significant.

Operations

To operate the project, only a small amount of water would be used (11 AFY), primarily as wash water for the solar panels which would run off into long shallow strip retention basins located along each solar array and either percolate on-site or drain off-site by way of these retention basins and existing on-site aquatic features. The project would also include operational water supply for fire suppression, which would be contained within a water tank located next to one of the existing wells within the adjacent Mojave Solar Facility. This represents less than 0.05 percent of the average annual groundwater use within the MWA Centro subarea. The limited water use is not expected to pose a threat to the groundwater resources in the basin even over the long-term planning horizon. The current management requirements in place through the adjudication process has already produced an observable decline in groundwater use within the basin. Furthermore, the Mojave Solar Facility has secured water rights of 2,163 AFY. On average, the Mojave Solar Facility has produced water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. Therefore, the projected water demand associated with the project falls within the water rights allocation designated for the Mojave Solar Facility (**Appendix J**).

Upon buildout of the project, there would be about 13 percent more impervious surface area than currently exists at the site due to the installed solar panels. However, as noted earlier, this location currently provides less than optimum conditions for groundwater recharge. Therefore, loss of pervious surfaces would not significantly change the local potential for groundwater recharge. The combined effects of project water use and a slight loss of infiltration potential during operations would provide a less than significant impact.

Decommissioning

It is anticipated that during the decommissioning process, the level of activity and required equipment would be similar to that experienced during the construction phase of the project. Water demand is also projected to be at the same level as during construction, so roughly at a rate of 89 AFY. Using the rate of 89 AFY puts the water use for the decommissioning period at 0.4 percent of the estimated average

annual groundwater use within the MWA Centro subarea. Furthermore, the wells at the Mojave Solar Facility have produced much less water on average (1,532 AFY) than the secured water rights (2,163 AFY), as previously discussed (**Appendix J**). This would create a less than significant impact to groundwater resources in the Harper Valley Groundwater Basin. The less-than-optimal surface conditions for infiltration and groundwater recharge within the basin would be restored, so this would also be a less than significant impact.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

IMPACT 3.9-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would:

- a) **Result in substantial erosion or siltation on- or off-site.**
- b) **Substantially increase the rate or amount of surface run off in a manner which would result in flooding on- or off-site.**
- c) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**
- d) **Impede or redirect flood flows.**

Impacts would be less than significant.

The project site is generally flat, with a slight slope (1 to 2 percent) in the northeast direction, toward Harper Lake, a dry lakebed. Existing drainage courses along the western and southern sides of the project parcel provide capacity to capture and divert flows from upstream drainage areas around the project site under existing conditions. There are no FEMA designated floodplains on the site, although no official assessment of flooding potential has been performed to date.

Construction

Surfaces within the project site would be disturbed by activities including clearing and grubbing of vegetation, grading, road construction, and trenching. This would produce a more uniformly flat surface with no greater slopes than currently exist and may leave the surface slightly less steep. Surface disturbances would increase the potential for erosion due to runoff from storm events or from water applied for dust suppression. Particles entrained by surface water runoff could carry sediments as well as dissolved solids, either of which could have associated contaminants. However, no increase in surface runoff potential is expected to be caused by construction activities, and there are no stormwater management facilities planned for the project site, or gen-tie, or downstream that could be impacted by site runoff.

As with all new development, the project would be subject to compliance with the NPDES Construction General Permit. The Construction General Permit would require the preparation and implementation

of a SWPPP. The SWPPP is intended to identify pollutant sources that may be delivered off-site (in the form of runoff and associated sediment load) and affect the quality of stormwater discharge; to implement site controls and practices to reduce stormwater pollution; and to protect water quality of receiving waters. As previously discussed under Impact 3.9-1, the SWPPP would include site-specific BMPs to minimize erosion on-site and reduce or otherwise prevent conditions downstream that would exacerbate erosion and stormwater runoff.

Activities during construction would not alter the existing drainage patterns at the project site or vicinity. Steps would be taken to improve perimeter drainage capacity to contain larger storm events in case one should occur during construction or operations, and would be included in the site-specific SWPPP. Construction activities could increase the potential for erosion and sediment transport within the project parcel and downstream, away from the project site, and this in turn could introduce contaminants and other pollutants into downstream drainage courses. However, compliance with the NPDES Construction General Permit, and associated SWPPP and BMPs, would reduce the potential for these impacts to occur.

Neither the project site nor the gen-tie has been evaluated for FEMA flood hazards, and is identified in Zone D (with undetermined flood hazards). However, adherence to the discussed federal and State laws would ensure the impacts are temporary and less than significant. Also, recommendations from the site-specific Drainage Study (**Appendix I**) will be followed to reduce potential for increased runoff and peak flows from the project site. This will include the installation of stormwater retention basins, an engineered drainage system of channels, and implementation of vegetated swales and infiltration trenches. The project applicant will prepare a Grading and Drainage Plan that will specify these designs and will be prepared by a registered professional engineer.

Operations

Because all of the earthwork would occur during the construction phase, the operation and maintenance of the project facilities would not include additional activities that could alter the existing drainage patterns at the project site. The project design configuration would address situations where surface materials could be subject to erosion and subsequent sediment transport. The increase in impervious surface area within the site would be limited through the use of on-site BMPs (adding vegetated swales, retaining and enhancing existing pervious surfaces, and installing infiltration trenches) and adding stormwater retention basins. The stormwater retention basins would be designed to detain runoff during peak storm events such that proposed peak flows would be less than 90% of existing flows for 2-yr, 10-yr, 25-yr, and 100-yr events, thereby reducing the potential for downstream flooding and erosion. The difference in stormwater runoff volume between the development of the proposed project and 90% of existing conditions for a 100-yr rain event is 19 acre-feet. Therefore, the total volume of the stormwater retention basins would be roughly equal to 19 acre-feet. By following these recommendations, the operation and maintenance of the project facilities are not expected to cause substantial erosion on or off site, increase runoff on or off site, produce excessive stormwater runoff, or change flood flows. Thus, potential impacts from altered drainage would be less than significant.

Decommissioning

Decommissioning the project site and gen-tie would include ground-disturbing activities similar to those performed during construction, which may alter the drainage patterns at the project site. The same requirements of the Construction General Permit and other applicable construction mitigation measures would apply to activities during decommissioning. Adherence to such requirements during decommissioning would reduce potential impacts to temporary and less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

IMPACT 3.9-4: The project is not in a flood hazard, tsunami, or seiche zone, nor would it risk release of pollutants due to inundation of the project. No impacts would occur.

The project site and gen-tie are not within a 100-year flood zone nor a dam inundation zone, according to the FEMA Flood Insurance Rate Map (FEMA 2008) and the San Bernardino County General Plan (San Bernardino County 2024). Additionally, the project site is in an inland drainage area with no access to the ocean and no standing bodies of water. Therefore, the project site has no potential for inundation by a tsunami or seiche nor the possibility of impact from the release of pollutants due to such inundation of the project site.

Mitigation Measures: None required.

Level of Significance: No impact.

IMPACT 3.9-5: The project would not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Impacts would be less than significant.

As described earlier, the project is regulated under the Basin Plan for the Lahontan Region (LRWQCB 2021). In addition, by adhering to the conditions stipulated by the NPDES Construction General Permit and the site-specific SWPPP for the project, water quality impacts would not result in violations to, conflicts with, or obstructions of the Basin Plan. There would be no impacts related to this water quality control plan.

The Harper Valley Groundwater Basin (6-47) has been designated as a very low priority basin under SGMA, and therefore no Groundwater Sustainability Agency has been designated, and no GSP is required. Nevertheless, the basin falls under the 1996 adjudication of the extended Mojave River watershed, and as such is governed by a Watermaster, which is the MWA. The MWA monitors groundwater use, provides annual reports of the monitoring results, and is tasked with ensuring that water users in its service area adhere to their water use allotments. The applicant commissioned a WSA report in compliance with the California Water Code to evaluate any potential water supply issues related to this site (**Appendix J**). This WSA concluded that under the requirements of the adjudications process, the MWA has made significant progress in controlling groundwater use in the Centro Subarea of the Mojave River Basin and appears to be on track to reaching management goals under the UWMP. The Centro Subarea is a primary source of inflow to the Harper Valley Groundwater Basin. Furthermore, the Mojave Solar Facility has secured water rights of 2,163 AFY. On average, the Mojave Solar Facility has

produced water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. As a result, the accumulated Carry Over Right for the Mojave Solar Facility is 3,144 AF for the 2022–2023 Water Year (**Appendix J**). Therefore, sufficient water resources are expected to be available in the Harper Valley Groundwater Basin to supply project requirements under normal future conditions within a 30-year planning horizon. The potential does exist for shortages under single year or multiple year drought scenarios. Neither the nature of the project nor the type of development proposed would conflict with the LRWQCB Basin Plan or obstruct implementation of any of its provisions.

No potential conflicts with, or obstructions to, either a water quality management plan or a sustainable groundwater management plan were identified. As a result, potential impacts to water quality and/or water use would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

IMPACT 3.9-6: The project would not result in cumulative impacts related to hydrology and water quality. Impacts would be less than significant.

The potential scope of environmental resources or attributes that could suffer cumulative effects from the current project in conjunction with other projects, includes the same five impacts discussed above, but considered in a larger area and including multiple projects. If there is potential for cumulative impact due to multiple projects and activities related to site clearance, construction, operation and maintenance, and decommissioning, these impact areas would need to be considered. The geographic focus in this document for assessing cumulative impacts on hydrology and water quality includes all known projects within a 20-mile radius of the project site. These projects are identified in **Table 3-1, Cumulative Projects**, and shown on **Figure 3-1, Cumulative Projects Map**, of Section 3, Introduction to Environmental Analysis, and include eight project locations.

Degrade Water Quality. The project has the potential to contribute runoff and discharges that, in combination with other past, present, and future development in the Basin Plan watersheds, could potentially impact water quality. In addition, these development activities would have the potential to infiltrate and affect groundwater quality in the Basin, such that the project could contribute to a potentially significant cumulative impact. However, the project and all other projects in the area would be required to comply with the current (and any future) Basin Plan, applicable NPDES Permit requirements (i.e., BMP's) and ordinances including preparation of and compliance with a SWPPP, and other water quality regulations. Therefore, compliance with these regulatory requirements would reduce the project's and cumulative projects' cumulatively considerable impacts to a less-than-cumulatively considerable level.

Decrease Groundwater Supplies. The project, as well as other projects developed in the area, would require the use of groundwater for construction and decommissioning activities. However, the following considerations, as applied to all projects would help to ameliorate any potential impacts due to this groundwater use.

- Construction of these projects would be temporary and short term.

- Operation and maintenance activities would span longer periods of time than construction, but would require much smaller amounts of groundwater.
- Decommissioning activities for projects would take place after each project's life expectancy (i.e., 30 years in the future) and also would be temporary and short term.

Groundwater pumping would be regulated by the Watermaster, and the volume of water required for construction and decommissioning of the project is a minor percentage of the basin total of groundwater used. Because the population within the basin is decreasing, the long-term water supply needs of the basin are also decreasing.

Alter Drainage Patterns. No significant drainage alteration is planned for this project, and potential upstream runoff reaching the project site (i.e., "run-on") would remain as diverted flow. This would leave the local drainage essentially unchanged. Any increased runoff from the project site due to solar panel imperviousness would be controlled by SWPPP requirements. Similarly, all projects of this type would be addressed by site-specific evaluations and plans (each will have their own SWPPP), which will implement necessary and appropriate controls.

Hazard Zone Encroachment. There is no potential impact with respect to being located in a flood hazard, tsunami, or seiche zone, and this project would not cause or contribute to any potentially significant cumulative impact regarding such hazard considerations. In general, there is no potential for a tsunami or seiche to occur in this region, so similar projects would not create additional flooding hazards from such events. Cumulative hazards due to location a flood zone would be addressed at each site through similar site-specific drainage plans and appropriate management measures.

Conflict with or Obstruct Plans. None of the features of the proposed facility, nor any of its construction or operations requirements, would affect a water quality control plan or sustainable groundwater management plan. Similar projects will create facilities of the same type, and will be required to follow the requirements of the LRWQCB Basin Plan to maintain water quality and the UWMP of the MWA to maintain sustainable water use. Therefore, these projects would not contribute to a cumulative impact on these plans.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

3.10 Land Use and Planning

This section evaluates the potential land use and planning impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to land use and planning, and includes mitigation measures required to reduce or avoid these impacts, as applicable. Information for this section is largely based on the County Code, Title 8, Development Code, Chapter 82.01, Land Use Plan, Land Use Zoning Districts, and Overlays; Chapter 84.29, Solar Energy Development Standards; and the San Bernardino County (County) 2022 Countywide Plan/Policy Plan. The County did not receive any scoping comments related to land use and planning.

3.10.1 Environmental Setting

The project site comprises vacant and undeveloped land, with some unpaved roads and existing drainage features. The generation interconnect (gen-tie) corridor is located within the existing fenceline of the adjacent Mojave Solar Facility, along an existing constructed drainage canal. The project site is generally bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped land to the south and west. The project site is approximately 10 miles northwest of Hinkley, approximately 10 miles east of Kramer Junction, and approximately 6 miles north of the State Route (SR) 58 and Harper Lake Road junction. Several rural residences are located south and east of the project site along Harper Lake Road, the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed gen-tie line. Sparse transportation infrastructure also exists in the project vicinity, including both paved and unpaved roads, and the Burlington Northern Santa Fe (BNSF) Railway located approximately 5 miles south of the project site.

The project is located within the boundaries of the Desert Region of the County. The Desert Region consists of mountain ranges interspersed with long, broad valleys that often contain dry lakes. The project site is located approximately 2 miles southwest of Harper Lake, a dry lake. Refer to **Figure 2-1, Project Location Map**, in Section 2.0, Project Description.

3.10.1.1 San Bernardino Countywide Plan/Policy Plan Land Use Designations and Zoning

The project site and gen-tie corridor are currently zoned as Rural Living (RL) and the project site is also designated as RL in the Countywide Plan/Policy Plan, which serves as the County's General Plan. The gen-tie corridor is designated as Resource/Land Management (RLM) in the Countywide Plan/Policy Plan (refer to **Figure 2-4, Land Use Categories**, and **Figure 2-5, Zoning Districts**, of Chapter 2.0, Project Description). While the County's Development Code Section 82.04.040 determines that renewable energy-generating facilities are allowed on RL-zoned land with a Conditional Use Permit (CUP), the County Board of Supervisors adopted an amendment to the Renewable Energy and Conservation Element (RECE) of the Countywide Plan/Policy Plan on February 28, 2019, to include RE Policy 4.10, prohibiting utility-scale renewable energy development on lands zoned RL or on lands located within the boundary of an existing community plan.

3.10.2 Regulatory Framework

3.10.2.1 Federal

There are no applicable federal regulations for this issue area.

3.10.2.2 State

California Codes

The California Codes are 29 legal codes enacted by the State Legislature, which together form the general statutory law for the State. Unlike the United States Code or other state legal codes, the California Codes have never been consolidated into a single unified code. The official codes are maintained by the California Legislative Counsel for the Legislature.

California Government Code Section 53091(d) states, “Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.”

Furthermore, Section 53091 states, “Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for the production or generation of electrical energy, facilities that are subject to Section 12808.5 of the Public Utilities Code, or electrical substations in an electrical transmission system that receives electricity at less than 100,000 volts. Zoning ordinances of a county or city shall apply to the location or construction of facilities for the storage or transmission of electrical energy by a local agency, if the zoning ordinances make provision for those facilities.”

California Public Utilities Commission

The California Public Utilities Commission’s (CPUC) review of transmission line applications occurs under two concurrent and parallel processes: (1) environmental review pursuant to the California Environmental Quality Act (CEQA); and (2) review of project needs and costs pursuant to Public Utilities Code Section 1001 et seq. and General Order 131-D. Since Southern California Edison would be making modifications to their existing substation to accommodate this project, the CPUC’s regulatory process is described below.

CPUC General Order 131-D, Rules Relating to the Planning and Construction of Electric Generation, Transmission/Power/Distribution Line Facilities, and Substations Located in California, states that no electric public utilities will begin construction in the state of any new electric generating plant, or of the modification, alteration, or addition to an existing electric generating plant, or of electric transmission/power/distribution line facilities, or of new, upgraded, or modified substations, exceeding 50 kilovolts (kV), without first complying with the provisions of the General Order. For the purposes of the General Order, a transmission line is a line designated to operate at or above 200 kV. A power line is a line designated to operate between 50 and 200 kV. A distribution line is a line designated to operate under 50 kV.

3.10.2.3 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Land Use Element

GOAL LU-1 **Fiscally Sustainable Growth.** Growth and development that builds thriving communities, contributes to our Complete County, and is fiscally sustainable.

Policy LU 1.5 **Development Impact Fees.** We require payment of development impact fees to ensure that all new development pays its fair share of public infrastructure.

GOAL LU-2 **Land Use Mix and Compatibility.** An arrangement of land uses that balances the lifestyle of existing residents, the needs of future generations, opportunities for commercial and industrial development, and the value of the natural environment.

Policy LU 2.1 **Compatibility with Existing Uses.** We require that new development is located, scaled, buffered, and designed to minimize negative impacts on existing conforming uses and adjacent neighborhoods. We also require that new residential developments are located, scaled, buffered, and designed so as to not hinder the viability and continuity of existing conforming nonresidential development.

Policy LU-2.6 **Coordination with Adjacent Entities.** We require that new and amended development projects notify and coordinate with adjacent local, state, and federal entities to maximize land use compatibility, inform future planning and implementation, and realize mutually beneficial outcomes.

GOAL LU-4 **Community Design.** Preservation and enhancement of unique community identities and their relationship with the natural environment.

Policy LU-4.1 **Context-Sensitive Design in the Mountain/Desert Regions.** We require new development to employ site and building design techniques and use building materials that reflect the natural mountain or desert environment and preserve scenic resources.

Policy LU-4.7 **Dark Skies.** We minimize light pollution and glare to preserve views of the night sky, particularly in the Mountain and Desert regions where dark skies are fundamentally connected to community identities and local economies. We also promote the preservation of dark skies to assist the military in testing, training, and operations.

Infrastructure and Utilities Element

GOAL IU-1	Water Supply. Water supply and infrastructure are sufficient for the needs of resident and businesses and are resilient to drought.
<i>Policy IU-1.1</i>	Water Supply. We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.
<i>Policy IU-1.7</i>	Areas Vital for Groundwater Recharge. We allow new development on areas vital for groundwater recharge when stormwater management facilities are installed onsite and maintained to infiltrate predevelopment levels of stormwater into the ground.
<i>Policy IU-1.8</i>	Groundwater Management Coordination. We collaborate with watermasters, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other “undesirable results” as defined in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater Management Ordinance.
GOAL IU-3	Stormwater Drainage. A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.
<i>Policy IU-3.1</i>	Regional Flood Control. We maintain a regional flood control system and regularly evaluate the need for and implement upgrades based on changing land coverage and hydrologic conditions in order to manage and reduce flood risk. We require any public and private projects proposed anywhere in the county to address and mitigate any adverse impacts on the carrying capacity and stormwater velocity of regional stormwater drainage systems.
<i>Policy IU-3.2</i>	Local Flood Control. We require new development to install and maintain stormwater management facilities that maintain predevelopment hydrology and hydraulic conditions.
<i>Policy IU-3.4</i>	Natural Floodways. We retain existing natural floodways and watercourses on County-controlled floodways, including natural channel bottoms, unless hardening and channelization is the only feasible way to manage flood risk. On floodways not controlled by the County, we encourage the retention of natural floodways and watercourses. Our priority is to reduce flood risk, but we also strive to protect wildlife corridors, prevent loss of critical habitat, and improve the amount and quality of surface water and groundwater resources.
<i>Policy IU-3.5</i>	Fair Share Requirements. We require new development to pay its fair share of capital costs to maintain adequate capacity of the County’s regional flood control systems.

- GOAL IU-4** **Solid Waste.** Adequate regional landfill capacity that provides for the safe disposal of solid waste, and efficient waste diversion and collection for unincorporated areas.
- GOAL IU-5** **Power and Communications.** Unincorporated area residents and businesses have access to reliable power and communication systems.
- Policy IU-5.3* **Underground Facilities.** We encourage new and relocated power and communication facilities to be located underground when feasible, particularly in the Mountain and Desert regions.
- Policy IU-5.4* **Electric Transmission Lines.** We support the maintenance of existing and development of new electric transmission lines along existing rights-of-way and easements to maintain the stability and capacity of the electric distribution system in southern California.
- Policy IU-5.5* **Energy and Fuel Facilities.** We encourage the development and upgrade of energy and regional fuel facilities in areas that do not pose significant environmental or public health and safety hazards, and in a manner that is compatible with military operations and local community identity.
- Policy IU-5.6* **Dig Once Approach.** We encourage infrastructure, telecommunication, and utility planning and projects to coordinate so that improvements are made concurrently or in such a manner that minimizes disruption to rights-of-way and reduces costs.

Transportation and Mobility Element

- GOAL TM-2** **Road Design Standards.** Roads designed and built to standards in the unincorporated areas that reflect the rural, suburban, and urban context as well as the regional (valley, mountain, and desert) context.
- Policy TM-2.3* **Concurrent Improvements.** We require new development to mitigate project transportation impacts no later than prior to occupancy of the development to ensure transportation improvements are delivered concurrent with future development.
- GOAL TM-5** **Goods Movement.** A road, rail, and air transportation system that supports the logistics industry and minimizes congestion in unincorporated areas.
- Policy TM-5.6* **Unincorporated Truck Routes.** We establish local truck routes in unincorporated areas to efficiently funnel truck traffic to freeways while minimizing impacts on residents. We establish routes where trucks are prohibited in unincorporated environmental justice focus areas and to avoid overlaps or conflicts with safe routes to schools.

Natural Resources Element

- GOAL NR-1** **Air Quality.** Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.

<i>Policy NR-1.1</i>	Land Use. We promote compact and transit-oriented development countywide and regulate the types and locations of development in unincorporated areas to minimize vehicle miles traveled and greenhouse gas emissions.
<i>Policy NR-1.5</i>	Sensitive land uses. We consider recommendations from the California Air Resources Board on the siting of new sensitive land uses and exposure to specific source categories.
<i>Policy NR-1.6</i>	Fugitive dust emissions. We coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions.
<i>Policy NR-1.7</i>	Greenhouse gas reduction targets. We strive to meet the 2040 and 2050 greenhouse gas emission reduction targets in accordance with state law.
GOAL NR-2	Water Quality. Clean and safe water for human consumption and the natural environment.
<i>Policy NR-2.5</i>	Stormwater discharge. We ensure compliance with the County’s Municipal Stormwater NPDES (National Pollutant Discharge Elimination System) Permit by requiring new development and significant redevelopment to protect the quality of water and drainage systems through site design, source controls, stormwater treatment, runoff reduction measures, best management practices, low impact development strategies, and technological advances. For existing development, we monitor businesses and coordinate with municipalities.
GOAL NR-4	Scenic Resources. Scenic resources that highlight the natural environment and reinforce the identity of local communities and the county.
<i>Policy NR-4.1</i>	Preservation of scenic resources. We consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs.
<i>Policy NR-4.3</i>	Off-site signage We prohibit new off-site signage and encourage the removal of existing off-site signage along or within view of County Scenic Routes and State Scenic Highways.
GOAL NR-5	Biological Resources. An interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors.
<i>Policy NR-5.1</i>	Coordinated habitat planning. We participate in landscape-scale habitat conservation planning and coordinate with existing or proposed habitat conservation and natural resource management plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions; and for land development and infrastructure permitting.
<i>Policy NR-5.2</i>	Capacity for resource protection and management. We coordinate with public and nongovernmental agencies to seek funding and other resources to protect,

restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species.

Policy NR-5.5 **Mitigation and future responsibilities.** We require that new development satisfy habitat conservation responsibilities without shifting conservation responsibilities onto military property.

Policy NR-5.7 **Development review, entitlement, and mitigation.** We comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes.

Renewable Energy and Conservation Element

GOAL RE-2 **Renewable Energy Systems.** The County will be home to diverse and innovative renewable energy systems that provide reliable and affordable energy to our unique Valley, Mountain, and Desert regions.

Policy RE-2.1 Support solar energy generation, solar water heating, wind energy and bioenergy systems that are consistent with the orientation, siting and environmental compatibility policies of the General Plan.

Policy RE 2.1.1 Utilize renewable energy development standards in the Development Code to minimize impacts on surrounding properties.

Policy RE-2.2 Promote use of energy storage technologies that are appropriate for the character of the proposed location.

Policy RE 2.2.1 Encourage onsite energy storage with RE generation facilities, consistent with County Development Code requirements.

Policy RE 2.2.2 Encourage and allow energy storage facilities as an accessory component of RE generation facilities.

GOAL RE-4 **Environmental Compatibility.** The County will establish a new era of sustainable energy production and consumption in the context of sound resource conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels.

Policy RE-4.1 Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.

Policy RE 4.1.1 Consult with Native American tribes in the identification, evaluation, and treatment of cultural resources and in the preparation and implementation of measures required to identify, evaluate, protect, and manage cultural resources.

Policy RE 4.1.2 RE development applications shall be subject to thorough environmental review, including consideration of water consumption, before being permitted.

<i>Policy RE-4.2</i>	Ensure that renewable energy facilities do not disrupt, degrade, or alter the local hydrology and hydrogeology.
<i>Policy RE 4.2.1</i>	Require a groundwater impact assessment that evaluates the short and long-term impacts to groundwater usage.
<i>Policy RE-4.3</i>	Require construction and operation of all renewable energy facilities to minimize negative effects and optimize benefits to unincorporated communities.
<i>Policy RE 4.3.1</i>	Define measures required to minimize ground disturbance, soil erosion, flooding, and blowing of sand and dust, with appropriate enforcement mechanisms in the Development Code.
<i>Policy RE 4.3.2</i>	Require operators to track and report energy production and other benefits cited in a project proposal, in addition to tracking efforts to avoid and minimize negative impacts.
<i>Policy RE 4.3.3</i>	Give preference to the utilization of existing infrastructure to minimize the need for additional transmission development.
<i>Policy RE 4.3.4</i>	Establish inspection protocols and programs to ensure that RE facilities are constructed, operated, and eventually decommissioned consistent with the requirements of the San Bernardino County Code, and in a manner that will not be detrimental to the public health, safety, or welfare.
<i>Policy RE-4.4</i>	Encourage siting, construction and screening of RE generation facilities to avoid, minimize or mitigate significant changes to the visual environment including minimizing light and glare.
<i>Policy RE 4.4.1</i>	Reduce visual impacts through a combination of minimized reflective surfaces, context sensitive color treatments, nature-oriented geometry, minimized vegetation clearing under and around arrays, conservation of pre-existing native plants, replanting of native plants as appropriate, maintenance of natural landscapes around the edges of facility complexes, and lighting design to minimize night-sky impacts, including attraction of and impact to nocturnal migratory birds.
<i>Policy RE-4.5</i>	Require RE generation facility developers to provide and implement a decommissioning plan that provides for reclamation of the site to a condition at least as good as that which existed before the lands were disturbed or another appropriate end use that is stable (i.e. with interim vegetative cover), prevents nuisance, and is readily adaptable for alternative land uses. Decommissioning plans shall:
<i>Policy RE 4.5.1</i>	Include a cost estimate of the decommissioning and site restoration work for the purpose of providing a bond to guarantee completion of decommissioning.
<i>Policy RE 4.5.2</i>	Provide for an inspection after all decommissioning and site restoration work to ensure that the work has been completed to the standards required by the County, prior to release of the decommissioning bond.

<i>Policy RE 4.5.3</i>	Require any structures created during construction to be decommissioned and all material recycled to the greatest extent possible.
<i>Policy RE 4.5.4</i>	Require all material recovered during decommissioning and site restoration work of a renewable energy facility, including the renewable energy technology itself, to be reused or recycled to the greatest extent possible.
<i>Policy RE-4.6</i>	Require all recyclable electronic and/or toxic materials to be recycled in accordance with the requirements of the Basel Convention or comparable standard.
<i>Policy RE-4.7</i>	RE project site selection and site design shall be guided by the following priorities relative to habitat conservation and mitigation: 1. Avoid sensitive habitat, including wildlife corridors, during site selection and project design. 2. Where necessary and feasible, conduct mitigation on-site. 3. When on-site habitat mitigation is not possible or adequate, establish mitigation off-site in an area designated for habitat conservation.
<i>Policy RE-4.8</i>	Encourage mitigation for RE generation facility projects to locate habitat conservation offsets on public lands where suitable habitat is available.
<i>Policy RE 4.8.1</i>	Collaborate with appropriate state and federal agencies to facilitate mitigation/habitat conservation activities on public lands
<i>Policy RE-4.9</i>	Encourage RE facility developers to design projects in ways that provide sanctuary (i.e., a safe place to nest, breed and/or feed) for native bees, butterflies and birds where feasible and appropriate, according to expert recommendations.
<i>Policy RE-4.10</i>	Prohibit utility-oriented RE project development on sites that would create adverse impacts on the quality of life or economic development opportunities in existing unincorporated communities.
<i>Policy RE 4.10.1</i>	Prohibit development of utility-oriented RE projects in the Rural Living land use districts throughout the County.
<i>Policy RE 4.10.2</i>	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.
<i>Policy RE 4.10.3</i>	Establish exclusion areas in the Development Code regulations for renewable energy development, beginning with the prohibitions in Policies 4.10.1 and 4.10.2 and provide for additional exclusion areas, such as new community plan areas, to be designated by amendment to the Development Code.

GOAL RE-5	Siting. Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.
<i>Policy RE-5.1</i>	Encourage the siting of RE generation facilities on disturbed or degraded sites in proximity to necessary transmission infrastructure.
<i>Policy RE 5.1.1</i>	Community-oriented RE generation facility sites may be less disturbed or degraded, but should contribute direct benefits to the communities they are intended to serve.
<i>Policy RE 5.1.2</i>	Siting of community-oriented and utility-oriented RE generation facilities will conform to applicable standards set forth in the Development Code.
<i>Policy RE 5.1.3</i>	Encourage new subdivision applications to set aside an area of land capable of supporting neighborhood-oriented renewable energy generation.
<i>Policy RE 5.1.4</i>	Encourage micro-grids supported by energy storage and innovative technologies for incorporation into neighborhood- and community-scale renewable energy projects.
<i>Policy RE-5.2</i>	Utility-oriented RE generation projects on private land in the unincorporated County will be limited to the site-type below, in addition to meeting criteria established herein and in the Development Code: i. Private lands adjacent to the federal Development Focus Areas supported by the Board of Supervisors that meet siting criteria and development standards ii. Waste Disposal Sites iii. Mining Sites (operating and reclaimed) iv. Fallow, degraded and unviable agricultural lands v. Airports (existing and abandoned or adaptively re-used) vi. Brownfields vii. California Department of Toxic Substance Control Cleanup Program Sites viii. Resource Conservation and Recovery Act Sites ix. Sites within or adjacent to electric transmission and utility distribution corridors x. Existing energy generation sites xi. Industrial zones proven to not conflict with economic development needs xii. Other sites proven by a detailed suitability analysis to reflect the significantly disturbed nature or conditions of those listed above
<i>Policy RE-5.3</i>	Collaborate with utilities and RE generation facility developers to encourage collocation of transmission and intertie facilities.

<i>Policy RE-5.4</i>	Utility-oriented RE generation facilities will be required to meet a higher standard of evaluation for appropriate site selection due to its size and distance from population centers.
<i>Policy RE 5.4.1</i>	Establish a two-step application process for utility-oriented RE generation that evaluates site selection early in the planning process.
<i>Policy RE 5.4.2</i>	Encourage utility-oriented RE generation to occur in the five DRECP Development Focus Areas (DFAs) that were supported by the Board of Supervisors on February 17, 2016, Resolution No. 2016-20 and on adjacent private lands.
<i>Policy RE 5.4.3</i>	Direct utility-oriented RE generation facilities that may require transmission upgrades to seek sites within existing transmission corridors.
<i>Policy RE-5.5</i>	Coordinate with the Department of Defense on the siting of RE generation facilities in a manner that will not significantly impact military operations in the unincorporated county.
<i>Policy RE-5.6</i>	Consult Native American tribes early in the site selection process, with joint evaluation of a Phase 1 Cultural Resources Analysis prior to approval of a site for utility-oriented RE generation.
<i>Policy RE-5.7</i>	Support renewable energy projects that are compatible with protection of the scenic and recreational assets that define San Bernardino County for its residents and make it a destination for tourists.
<i>Policy RE 5.7.1</i>	Site RE generation facilities in a manner that will avoid, minimize or substantially mitigate adverse impacts to sensitive habitats, cultural resources, surrounding land uses, and scenic viewsheds.
<i>Policy RE-5.8</i>	Discourage conversion of productive or viable prime agricultural lands to RE generation facilities.

Cultural Resources Element

GOAL CR-2	Historic and Paleontological Resources. Historic resources (buildings, structures, or archaeological resources) and paleontological resources that are protected and preserved for their cultural importance to local communities as well as their research and educational potential.
<i>Policy CR-2.3</i>	Paleontological and Archaeological Resources. We strive to protect paleontological and archaeological resources from loss or destruction by requiring that new development include appropriate mitigation to preserve the quality and integrity of these resources. We require new development to avoid paleontological and archeological resources whenever possible. If avoidance is not possible, we require the salvage and preservation of paleontological and archeological resources.

Hazards Element

GOAL HZ-1 **Natural Environmental Hazards.** Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

Policy HZ-1.2 **New Development in Environmental Hazard Areas.** We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

Policy HZ-1.3 **Floodplain Mapping.** We require any new lots or subdivisions partially in, and any new development partially or entirely in 100-year flood zones or 100-year flood awareness areas to provide detail floodplain mapping for 100- and 200-year storm events as part of the development approval process.

Policy HZ-1.7 **Underground Utilities.** We require that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.

Policy HZ-1.8 **Wind Erosion Hazards.** We require new development in medium-high or high wind erosion hazard areas to minimize the effects of wind-blown soil through building and site design features such as fencing, surface treatment or pavement, attenuation or wind barriers, architectural features, building materials, and drought resistant landscaping.

Policy HZ-1.12 **Local Hazard Mitigation Plan Implementation.** We require adherence to the goals, objectives and actions in the Multi-jurisdictional Hazard Mitigation Plan and subsequent amendments to reduce and mitigate damages from hazards in the county.

GOAL HZ-2 **Human-Generated Hazards.** People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

Policy HZ-2.4 **Truck Routes for Hazardous Materials.** We designate truck routes for the transportation of hazardous materials through unincorporated areas and prohibit routes that pass through residential neighborhoods to the maximum extent feasible.

GOAL HZ-3 **Environmental Justice.** For unincorporated environmental justice focus areas, equitable levels of protection from environmental and health hazards; expanded opportunities for physical activity and meaningful civic engagement; and access to healthy food, public facilities, safe and sanitary housing.

Policy HZ-3.1 **Health Risk Assessment.** We require projects processed by the County to provide a health risk assessment when a project could potentially increase the incremental cancer risk by 10 in 1 million or more in unincorporated environmental justice focus areas, and we require such assessments to evaluate impacts of truck traffic from the project to freeways. We establish appropriate mitigation prior to the approval of new construction, rehabilitation, or expansion permits.

Personal and Property Protection Element

GOAL PP-1 **Fire and Emergency Medical.** Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

Policy PP-3.6 **Concurrent Protection Services.** We require that fire department facilities, equipment, and staffing required to serve new development are operating prior to, or in conjunction with new development.

Policy PP-3.9 **Street and Premise Signage.** We require adequate street signage and premise identification be provided and maintained to ensure emergency services can quickly and efficiently respond.

San Bernardino County Development Code

Chapter 84.29, Renewable Energy Generation Facilities

Chapter 84.29, *Renewable Energy Generation Facilities*, of the County Development Code is an ordinance that regulates the construction, operation, and decommissioning of renewable energy generation facilities in the County. Specifically, Section 84.29.040 includes the County's development standards for commercial solar energy generation facilities. These development standards include setbacks of energy-generating equipment and mounting structures from the property line; design features to preclude glare on any residential land use zoning district, residential parcel, or public right of way; as well as night lighting, public safety services impact fees, special use permit, and project notices. Additionally, Section 84.29.070 includes the County's decommissioning requirements for all renewable energy generation facilities.

The ordinance also requires that the County make findings for solar renewable energy projects prior to approving such projects. The findings require that prior to 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. Additionally, the ordinance requires that the Planning Commission 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 in a city or unincorporated territory, or on State or federal land.

3.10.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to land use if it would do any of the following:

- Physically divide an established community.
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.10.4 Project Impacts and Mitigation

Impact 3.10-1: The project would not physically divide an established community. Impacts would be less than significant.

The project site consists of vacant and undeveloped land and contains some unpaved roads and existing drainage features. The project site is generally bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped land to the south and west. The gen-tie corridor is located within the existing fenceline of the adjacent Mojave Solar Facility, along an existing constructed drainage canal. Residential uses in the area are limited, but some rural residences are located along Harper Lake Road, the closest being located approximately 1 mile east of proposed solar facility and 0.3 mile south of the proposed gen-tie line. Some limited transportation infrastructure also exists in the project vicinity, consisting of both paved and unpaved roads. The BNSF Railway is also located approximately 5 miles south of the project site.

Construction vehicles would access the project site from Harper Lake Road via SR-58, which is located approximately 5.6 miles south of the project site. During construction, project components and construction equipment would be staged within the project site boundaries and would not restrict any existing off-site roadways. County Road, an unimproved and unpaved road, runs along the southeastern boundary of the project site and is within the project parcel. However, the project's perimeter fenceline would be constructed north of this road to maintain public access. The project would not remove or limit access along this road.

The project is located in an unincorporated area of the County that is mostly undeveloped with minimal rural residential uses and would be sited adjacent to other utility-scale solar energy generation facilities. The project would maintain all existing access routes in the area. The project would not result in the construction of new access routes or the elimination of existing area roadways that could have the potential to isolate existing uses, including nearby rural residences and existing proximate solar facilities. Operations and maintenance crews would access the project site via existing routes and would access the gen-tie via the existing entrance to the Mojave Solar Facility at the intersection of Lockhart Ranch Road and Harper Lake Road. Accordingly, the project would not create a division between existing local uses and would not physically divide an established community. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.10-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

The project site and gen-tie corridor are currently zoned as RL, and the project site is also designated as RL in the Countywide Plan/Policy Plan. The gen-tie corridor is currently designated as RLM in the Countywide Plan/Policy Plan. Transmission lines are permitted within the RL zoning district and therefore, the gen-tie corridor would not require a zoning amendment.

While the County's Development Code Section 82.04.040 determines that renewable energy-generating facilities are allowed on RL-zoned land with a CUP, the County Board of Supervisors adopted an amendment to the RECE of the Countywide Plan/Policy Plan on February 28, 2019, to include RE Policy 4.10, prohibiting utility-scale renewable energy development on lands zoned RL or on lands located within the boundary of an existing community plan. Accordingly, the project would undergo a Zoning Amendment and Countywide Plan/Policy Plan Amendment as part of the approval process so that it would not conflict with RE Policy 4.10. The project site would be rezoned from RL to Resource Conservation (RC) and redesignated from RL to RLM in the Countywide Plan/Policy Plan. The County's Development Code Section 82.03.040 determines that renewable energy generation facilities are allowed on RC-zoned land with the facilitation of a CUP. Thus, the project would also be subject to the approval of a CUP. With the rezone of the project from RL to RC, and land use designation change from RL to RLM, the project would be consistent with the RECE of the Countywide Plan/Policy Plan. The project would require a variance from the height restrictions pursuant to Development Code Chapters 83.02.040(c)(2)(T) and 85.17. Specifically, the gen-tie poles would be 95 feet tall and the substation electrical equipment would be 65 feet tall at the highest point. Both project components would require a Major Variance. The project would obtain a height variance for both the gen-tie poles and the substation equipment, as these components would exceed the maximum allowable height of 52.5 feet for the RL and RC zoning districts. The height limit for these zoning districts is 35 feet; however, in accordance with County Development Code Section 83.02.040(c)(2)(T), the maximum structure height specified in a land use zoning district may be exceeded by no more than 50 percent for structures including distribution and transmission cables and towers. The substation would be located within the project parcel, and within an RC zoning district upon the approval of the proposed Zoning Amendment. Transmission lines are permitted within the RL zoning district and therefore, the gen-tie corridor would not require a zoning amendment. Although the project would require a height variance, it would be addressed by the County Development Code and is included as part of the project. Furthermore, the project site is located adjacent to the Mojave Solar Facility and Lockhart Solar Facility, which both contain utility infrastructure and several existing transmission lines of varying heights. Thus, the proposed height variance would not be distinctive in this area due to the presence of the existing transmission lines and utility infrastructure adjacent to the project site. With the approval of the variance for on-site substation electrical equipment and the gen-tie pole height, the project would be consistent with zoning and related requirements.

Additionally, the project would be designed in accordance with the Countywide Plan/Policy Plan RECE, which promotes renewable energy development and energy conservation while seeking to reduce impacts to sensitive biological species and habitat, visual resources, cultural resources, and nearby communities. Specifically, the project would be consistent with RE Policy 5.2, which limits utility-oriented renewable energy generation projects on private land in the unincorporated County to specific locations as listed within this policy. Specifically, the project would be consistent with RE Policy 5.2(ix), which permits renewable energy generation projects on sites within or adjacent to electric transmission and utility distribution corridors. The project site is adjacent to both the Mojave Solar Facility and Lockhart PV I Solar Facility, and the proposed gen-tie line would connect to an existing electric transmission line located approximately 1.1 miles east of the project site. Refer to the intertie location in **Figure 2-2, Project Site Map**. Thus, the project site would be located in an area identified as suitable for utility-oriented renewable energy generation projects, consistent with the RECE of the Countywide Plan/Policy Plan.

With regard to the Land Use Element, the project would not conflict with the land use designation and zoning of the project upon approval of the aforementioned Zoning and Policy Plan Amendments. Additionally, the project would comply with the applicable policies of the Land Use Element, including payment of applicable development impact fees, compatible design with the surrounding environment, and minimization of light pollution and glare. See also Section 3.1, Aesthetics and Visual Resources, for additional information on light and glare. Thus, the project would be consistent with the Land Use Element.

The project would also be consistent with the Infrastructure and Utilities Element and would comply with the applicable policies including those related to flood control (see Section 3.9, Hydrology and Water Quality), adequate water supply, stormwater drainage, solid waste disposal, and siting of energy facilities and electrical transmission lines (see Section 3.13, Utilities and Service Systems).

The project would also be consistent with the Hazards Element and would comply with the applicable policies including those related to flood and geologic hazards (see Sections 3.6, Geology and Soils, and 3.9, Hydrology and Water Quality), wildfire hazards (see Section 3.14, Wildfire), hazardous materials (see Section 3.8, Hazards and Hazardous Materials), and health risk (see Section 3.2, Air Quality).

The project would also be consistent with the Natural Resources Element and would comply with the applicable policies including those related to air quality (see Section 3.2, Air Quality), water quality (see Section 3.9, Hydrology and Water Quality), scenic resources (see Section 3.1, Aesthetics), and biological resources (see Section 3.3, Biological Resources).

Finally, the project would be consistent with the Transportation and Mobility Element (see Section 3.12, Transportation and Traffic), the Cultural Resources Element (see Section 3.4, Cultural and Tribal Cultural Resources), and the Personal and Property Protection Element (see Section 3.15.4, Public Services). Ultimately, as demonstrated through the analysis of this EIR, the project would be consistent with the Countywide Plan/Policy Plan upon approval of the proposed Zoning and Policy Plan Amendments. Therefore, the project would not cause a significant environmental impact due to a conflict with the Countywide Plan/Policy Plan.

Furthermore, Section 84.29.040 of the County Development Code contains the County's development standards for solar energy. These development standards include setbacks of energy-generating

equipment and mounting structures from the property line; design features to preclude glare on any residential land use zoning district, residential parcel, or public right of way; as well as night lighting, public safety services impact fees, special use permit, and project notices. The project's design would align with the solar energy development standards by adhering to the physical development standards and submitting to the County Codes' fees, permits, and notices.

At the end of the project's 30-year operational lifespan, decommissioning and removal of the project would be considered. Decommissioning would be determined by the project owner, who would pay the costs for dismantling and having the materials transported off-site to either recyclers or permitted disposal sites. After materials removal, the project site would be restored to its original condition prior to the installation of the photovoltaic plant so the land could be reused for other useful purposes. The decommissioning would be performed by the applicant or at such time by the successor owner of the photovoltaic plant in accordance with the County's RECE Goal RE-4 Environmental Compatibility Policy in general and Policy RE-4.5 in particular, which governs the decommissioning requirements including the development and implementation of a decommissioning plan. A bond would be provided at the outset of construction to cover the agreed-upon costs of decommissioning and would be returned when decommissioning is satisfactorily accomplished. Furthermore, project decommissioning would comply with San Bernardino County Development Code Section 84.29.070, which contains additional County requirements for the decommissioning of renewable energy generation facilities.

Overall, with approval of the zone change from RL to RC, approval of the Countywide Plan/Policy Plan Amendment from RL to RLM, issuance of the CUP, and approval of the height variance for the on-site substation electrical equipment and the gen-tie line, the project would not result in a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.10-3: The project would not result in cumulative impacts related to land use and planning. Impacts would be less than significant.

Cumulative land use and planning impacts may occur when project-specific impacts evaluated in an EIR are combined with the effects of other projects which, when examined individually, may not be considered to be significant. Specifically, cumulative impacts related to land use and planning could occur if multiple projects would together divide an established community. However, all cumulative projects would be required to separately undergo environmental review on a case-by-case basis in accordance with the requirements of CEQA. Each cumulative project would also be required to demonstrate consistency with all applicable planning documents and regulations, and implement mitigation for any significant environmental effects caused by a conflict with applicable land use plans, policies, and regulations.

Cumulative projects are included in **Table 3-1, Cumulative Projects**, and were included in review of the potential for significant cumulative land use impacts. As discussed above, the project would generally be located in an undeveloped and unincorporated area of the County with little residential

development, and would not divide an established community. Cumulative projects have been and would be developed in similarly low-populated and relatively undeveloped areas that are suitable for utility-scale solar development, including four cumulative projects located in the immediate vicinity of the project site. Cumulative projects would be required to maintain access along public roadways, similar to the proposed project. Therefore, the project would not cumulatively result in division of an established community.

Furthermore, because the project would not have any significant impact on land use and planning, and because conflicts with land use plans, policies, or regulations are project specific, the project would not cause or contribute to any cumulative land use and planning impact. If incompatibilities or land use conflicts are identified for any of the cumulative projects, the County would require mitigation to avoid or minimize this type of land use impact. Therefore, no cumulatively considerable land use and planning impacts would occur.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.11 Noise

This section evaluates the potential noise and vibration impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to noise and vibration, and includes mitigation measures required to reduce or avoid these impacts, as applicable. The analysis in this section is based on the Acoustical Analysis Report prepared by Tetra Tech (included as **Appendix K**). San Bernardino County (County) did not receive any scoping comments related to noise.

3.11.1 Environmental Setting

3.11.1.1 Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

A-Weighted Sound Level

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by differentiating among frequencies in a manner approximating the sensitivity of the human ear.

The dBA approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Examples of typical noise from outdoor and indoor activities are listed in **Table 3.11-1, Typical Noise Levels**.

Table 3.11-1. Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawn mower at 3 feet	90	
Diesel truck at 50 feet, at 50 mph	80	Food blender at 3 feet; garbage disposal at 3 feet
Noisy urban area, daytime; gas lawn mower at 100 feet	70	Vacuum cleaner at 10 feet
Commercial area; heavy traffic at 300 feet	60	Normal speech at 3 feet
Quiet urban, daytime	50	Large business office; dishwasher next room
Quiet urban, nighttime	40	Theater; large conference room (background)
Quiet suburban, nighttime	30	Library
Quiet rural, nighttime	20	Bedroom at night; concert hall (background)
	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

dBA – A-weighted decibel

Source: California Department of Transportation (2013)

Addition of Decibels

The decibel scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound and twice as loud as a 60 dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (FTA 2006).

Sound Propagation and Attenuation

Generally, sound spreads (propagates) uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Kurze and Beranek 1988).

Noise

Noise is a subjective reaction to different types of sounds. Noise is typically defined as airborne sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. A typical noise environment consists of a base of steady “background” noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs.

Equivalent Energy Level

The equivalent energy level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same time period.

Community Noise Equivalent Level

The Community Noise Equivalent Level (CNEL) scale represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. The CNEL scale divides the day into three weighted time periods (Day – 7 a.m. to 7 p.m., Evening – 7 p.m. to 10 p.m., and Night – 10 p.m. to 7 a.m.). The CNEL scale

accounts for the increased noise sensitivity during the evening hours (7 p.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.) by adding 5 dBA and 10 dBA, respectively, to the average sound levels occurring during the evening and nighttime hours.

Day-Night Average

The day-night average (L_{dn}) scale represents a logical simplification of CNEL. It divides the day into two weighted time periods (Day – 7 a.m. to 7 p.m., and Night – 10 p.m. to 7 a.m.) rather than the three used in the CNEL measurement, with no significant loss in accuracy.

3.11.1.2 Fundamentals of Environmental Groundborne Vibration

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV is generally used to characterize the potential for building damage, while RMS is best for characterizing the human response to ground vibration. However, to evaluate annoyance to humans, the vibration dB (VdB) notation is commonly used. The decibel notation acts to compress the range of numbers required to describe vibration. The abbreviation VdB is used for vibration decibels to reduce the potential for confusion with sound decibels.

Table 3.11-2, Typical Levels of Groundborne Vibration, displays common vibration sources and the effects on people and buildings. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying.

Table 3.11-2. Typical Levels of Groundborne Vibration

Human/Structural Response	PPV (in/sec)	Velocity Level (VdB)	Typical Sources (50 feet from source)
Threshold, minor cosmetic damage, fragile buildings	0.4	100	Blasting from construction projects
	0.17–0.2	92–94	Heavy tracked construction equipment
Difficulty with tasks, such as reading a computer screen	0.125	90	---
	0.074	85	Commuter rail, upper range
Residential annoyance, infrequent events	0.04	80	Rapid transit, upper range
	0.013	75	Commuter rail, typical
	0.023	72	Bus or truck bump over
Residential annoyance, frequent events	0.013	70	Rapid transit, typical
Approximate threshold of human perception	0.007	65	---
	0.005	62	Bus or truck, typical
	0.0013	50	Typical background vibration levels

PPV – peak particle velocity; VdB – vibration decibel
Source: FTA (2006)

3.11.2 Existing Conditions

3.11.2.1 Existing Ambient Noise Levels

The most significant sources of noise in the vicinity of the project are other adjacent industrial land uses including existing solar operations. Aircraft using the Edwards Air Force Base also contribute to intermittent noise levels. Noise is also generated on individual parcels whether industrial, office, retail, or residential.

In 2022, Kimley-Horn and Associates, Inc., conducted six short-term ambient noise measurements to quantify the existing ambient noise levels for the proposed Desert Breeze Solar (Kimley-Horn and Associates, Inc. 2023). As part of that ambient survey, a measurement was taken along Hoffman Road immediately north of the Project site boundary, and a measurement was taken along Edie Drive, approximately 2,000 feet east of the gen-tie boundary. These ambient measurements will be referred to as NM-1 and NM-2, respectively, within this report and can be seen in **Figure 3.11-1, Project Site Map**. While there has been more development in the area since these measurements were taken, the development would only increase the ambient noise levels and, thus, these measurements would be a conservative representation of the Project area's ambient noise levels. A summary of these measurements is shown below in **Table 3.11-3, Summary of Ambient Noise Measurements**.

Table 3.11-3. Summary of Ambient Noise Measurements

Noise Monitor	Location	L_{eq} , dBA	L_{min} , dBA	L_{max} , dBA	Peak, dBA
NM-1	Along Hoffman Road, immediately north of the Project site boundary.	39	24	59	88
NM-2	Along Edie Drive, approximately 2,000 feet east of the gen-tie boundary.	55	46	64	79

dBA – A-weighted decibel; L_{eq} – equivalent energy level; L_{min} – minimum sound level; L_{max} – maximum sound level

3.11.2.2 Noise Sensitive Areas

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. These locations are referred to as noise sensitive areas (NSAs). Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate, also are NSAs. Commercial and industrial uses are considered the least noise sensitive. As shown in **Figure 3.11-1, Project Site Map**, there are multiple residences near the proposed project and these are considered NSAs. A summary of the NSAs can be seen below in **Table 3.11-4, Summary of NSAs**. As a conservative measure, all NSAs were considered residential and inhabited.

Table 3.11-4. Summary of Noise Sensitive Areas

NSA	UTM Coordinates (meters)		Distance to Project Site (feet)	Distance to Gen Tie (feet)	Representative Ambient Noise Monitoring Location
	Easting	Northing			
NSA-1	465026	3875896	5,900	11,500	NM-1
NSA-2	469812	3873851	5,280	1,585	NM-2
NSA-3	469797	3873641	5,725	2,400	NM-2
NSA-4	469630	3873328	5,725	3,500	NM-2
NSA-5	469804	3873330	6,200	3,400	NM-2
NSA-6	469711	3873237	6,100	3,800	NM-2
NSA-7	469768	3872182	8,700	7,300	NM-2
NSA-8	469783	3872423	8,100	6,500	NM-2
NSA-9	469602	3872472	7,600	6,300	NM-2
NSA-10	469739	3872493	7,825	6,300	NM-2
NSA-11	470542	3874224	7,750	2,500	NM-2
NSA-12	470316	3874008	7,050	1,900	NM-2
NSA-13	470361	3874008	7,225	2,000	NM-2
NSA-14	470539	3873972	7,800	2,500	NM-2
NSA-15	470292	3873489	7,425	3,200	NM-2
NSA-16	470322	3873569	7,375	3,000	NM-2
NSA-17	470287	3873642	7,225	2,700	NM-2
NSA-18	470360	3873574	7,550	3,100	NM-2
NSA-19	470503	3873616	7,950	3,200	NM-2
NSA-20	470484	3873554	7,950	3,400	NM-2
NSA-21	473284	3874244	16,725	11,200	NM-2

NSA – noise sensitive area; UTM – Universal Transverse Mercator

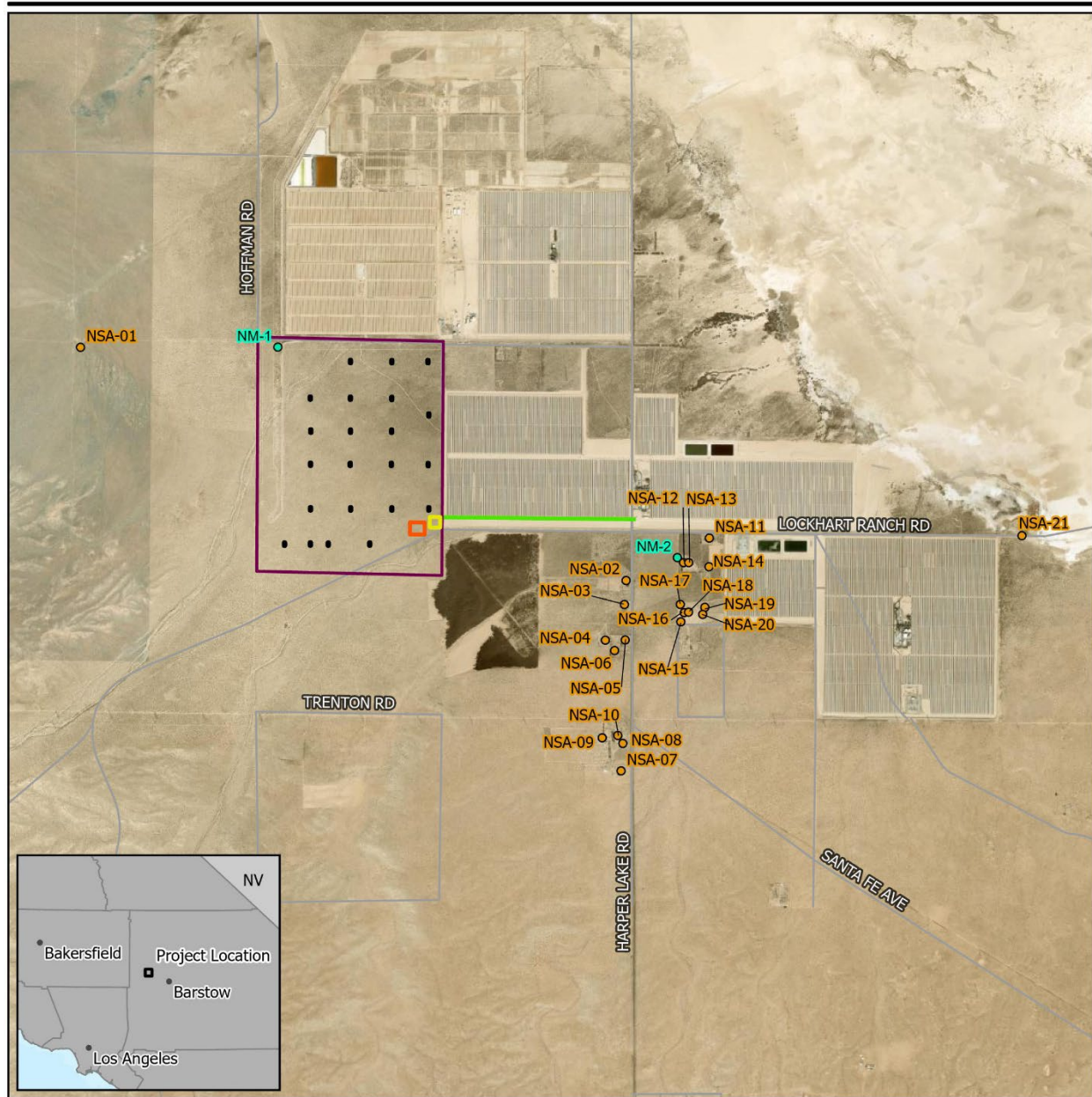


Figure 3.11-1
Project Equipment Layout

Overnight Solar
Overnight Solar, LLC

- Noise Sensitive Area (NSA)
- Noise Monitoring Location
- Proposed Gen-tie
- Project Parcel
- Proposed 230 kV Substation
- AC Storage Option
- Inverter Skid



1:50,000

0 0.5 1 Miles
Revised: 6/12/2024 | NOT FOR CONSTRUCTION



San Bernardino County, CA

Figure 3.11-1. Project Site Map

3.11.3 Regulatory Framework

3.11.3.1 Federal

Occupational Safety and Health Administration

With the Occupational Safety and Health Act of 1970, Congress created the Occupational Safety and Health Administration to ensure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance. The Act requires protection against the effects of noise exposure for employees when sound levels exceed 90 dBA over an eight-hour period. If such controls fail to reduce sound levels within acceptable levels, personal protective equipment is required. Additionally, a Hearing Conservation Program must be instituted by the employers whenever employee noise exposure equals or exceeds an eight-hour time-weighted average sound level of 85 dBA. The Hearing Conservation Program requirements consist of periodic area and personal noise monitoring, performance and evaluation of audiograms, provision of hearing protection, annual employee training, and record keeping.

Federal Transit Administration Construction Noise Guidelines

There are no standardized State or federal regulatory standards developed for assessing construction noise impacts. However, the Federal Transit Administration (FTA) has developed and published a guideline criterion that is considered to be reasonable to assess noise impacts from construction operations. The FTA noise criteria are summarized in **Table 3.11-5, FTA Construction Noise Criteria**, below.

Table 3.11-5. FTA Construction Noise Criteria

Land Use	8-hour (dBA L_{eq})		30- Day Average L_{dn} (dB) or L_{eq} (dBA)
	Day	Night	
Residential	80	70	75 ^{1/}
Commercial	85	85	80 ^{2/}
Industrial	90	90	85 ^{2/}

^{1/} In urban areas with very high ambient noise ($L_{dn}>65$ dB), L_{dn} from construction operations should not exceed existing ambient + 10 dB.

^{2/} Twenty-four hour L_{eq} , not L_{dn} .

dBA – A-weighted decibel; L_{eq} – equivalent energy level; L_{dn} – average day-night sound level

3.11.3.2 State

California Environmental Quality Act

Primary environmental legislation in California is found in the California Environmental Quality Act (CEQA) and its implementing guidelines (CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review, including noise analysis.

California Noise Control Act of 1973

California Health and Safety Code Sections 46000 through 46080, known as the California Noise Control Act, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act also finds that there is a continuous and increasing bombardment of noise in urban, suburban, and rural

areas. The act declares that the State of California has a responsibility to protect the health and welfare of its citizens through the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

State of California 2017 General Plan Guidelines

The California Governor's Office of Planning and Research's noise element guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The guidelines contain a table that describes the compatibility of various land uses with a range of environmental noise levels in terms of CNEL. CNEL is a 24-hour weighted average measure of community noise. The computation of CNEL adds 5 dB to the average hourly noise levels between 7 p.m. and 10 p.m. (evening hours), and 10 dB to the average hourly noise levels between 10 p.m. and 7:00 a.m. nighttime hours). This weighting accounts for the increased human sensitivity to noise in the evening and nighttime hours. It is very similar to the L_{dn} ; however, CNEL is a 24-hour weighted average measure of community noise. **Table 3.11-6, Land Use Compatibility for Community Noise Environments**, presents guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 3.11-6. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	75–85
Residential – Multiple Family	50–65	60–70	70–75	70–85
Transient Lodging – Motel, Hotels	50–65	60–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	80–85
Auditoriums, Concert Halls, Amphitheaters	NA	50–70	NA	65–85
Sports Arenas, Outdoor Spectator Sports	NA	50–75	NA	70–85
Playgrounds, Neighborhood Parks	50–70	NA	65–75	75–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–70	NA	70–80	80–85
Office Buildings, Business Commercial and Professional	50–70	65–75	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	NA

Notes: dBA – A-weighted decibels; NA – not applicable; L_{dn} – average day/night sound level; CNEL – community noise equivalent level

Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable – New construction or development should generally not be undertaken.

Source: California Governor's Office of Planning and Research (2017)

3.11.3.3 Local

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Hazards Element

GOAL HZ-2 **Human-generated Hazards.** People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

Policy HZ-2.7 **Truck delivery areas.** We encourage truck delivery areas to be located away from residential properties and require associated noise impacts to be mitigated.

Policy HZ-2.8 **Proximity to noise generating uses.** We limit or restrict new noise sensitive land uses in proximity to existing conforming noise generating uses and planned industrial areas.

Policy HZ-2.9 **Control sound at the source.** We prioritize noise mitigation measures that control sound at the source before buffers, soundwalls, and other perimeter measures.

San Bernardino County Development Code

Noise Standard

The County's Development Code (Division 3, *Countywide Development Standards*; Chapter 83.01, *General Performance Standards*, Section 83.01.080, *Noise*) sets interior and exterior noise standards for specific land uses by type of noise source. Noise standards for stationary noise sources are summarized in **Table 3.11-7, Noise Standards for Stationary Noise Sources**. As shown, the noise standard for residential properties is not to exceed 55 dBA L_{eq} from 7 a.m. to 10 p.m. and 45 dBA L_{eq} from 10 p.m. to 7 a.m. For industrial properties, the noise standard from stationary noise sources is 70 dBA at any time of the day or night. Areas exposed to noise levels exceeding these standards are considered noise-impacted areas. The County's Development Code exempts noise from construction noise, provided that construction is limited to the hours between 7 a.m. and 7 p.m., except on Sundays or federal holidays, when construction is not allowed.

Table 3.11-7. Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	7 a.m. – 10 p.m. L_{eq}	10 p.m. – 7 a.m. L_{eq}
Residential	55 dBA	45 dBA
Professional Services	55 dBA	55 dBA
Other Commercial	60 dBA	60 dBA
Industrial	70 dBA	70 dBA

Notes:

L_{eq} – equivalent energy level. The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8, or 24 hours.

dBA – A-weighted Sound Pressure Level. The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.

Source: San Bernardino County (2014)

Vibration Standard

Development Code Section 83.01.090, *Vibration*, establishes standards for acceptable vibration levels. The section states that no ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.20) inches per second measured at or beyond the lot line. Temporary construction, maintenance, repair, or demolition activities between 7 a.m. and 7 p.m. are exempt from this vibration limit, except on Sundays and federal holidays, when construction is prohibited.

3.11.4 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this EIR, the project may have a significant adverse impact related to noise and vibration if it would do any of the following:

- Generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.
- Generate excessive groundborne vibration or groundborne noise levels.
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan had not been adopted, within two miles of a public airport or public use airport, the project exposes people residing or working in the project area to excessive noise levels.

3.11.5 Project Impacts and Mitigation

Impact 3.11-1: The project could generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards. Impacts would be less than significant.

Short-Term Construction

Acoustic emission levels for activities associated with project construction were based on typical ranges of energy equivalent noise levels at construction sites, as documented by the U.S. Environmental

Protection Agency (USEPA; 1971) and the USEPA's Construction Noise Control Technology Initiatives (1980). The USEPA methodology distinguishes between type of construction and construction stage.

The basic model assumed spherical wave divergence from a point source located at the closest boundary of the project site and gen-tie to each receptor structure. Furthermore, the model conservatively assumed that all pieces of construction equipment associated with an activity would operate simultaneously for the duration of that activity. An additional level of conservatism was built into the construction noise model by excluding potential shielding effects due to intervening structures and buildings along the propagation path from the site to receiver locations.

The construction processes are anticipated to occur during a period of approximately 26 months and begin in 2024. Project construction would be completed in one phase consisting of three major stages including: 1) site preparation and grading (including mobilization, site preparation, fencing, preparation of laydown areas, and trenching); 2) solar array installation (including the installation of solar array structural components including cables, piles, racking systems, inverters, modules, and panels); and 3) battery energy storage system (BESS) construction (including gen-tie, BESS, commissioning, and testing).

Table 3.11-8, Construction Equipment Noise Levels by Stage (dBA L_{max}), summarizes the proposed equipment to be used for each stage and the associated noise level of the equipment. **Table 3.11-9, Received Construction Equipment Noise Levels by Stage (dBA L_{eq})**, summarizes the received construction noise levels at each NSA.

Table 3.11-8. Construction Equipment Noise Levels by Stage (dBA L_{max})

Construction Stage	Equipment			
	Equipment Type	Quantity	Usage Factor (%)	USEPA Construction Noise Level (50 feet), dBA L _{max}
Site Preparation/Grading (Stage 1)	Tractors/Loaders/Backhoes	1	40	80
	Off-Highway Trucks	1	40	55
	Scrapers	1	40	85
	Graders	2	40	85
	Bull Dozers	1	40	85
Solar Array Construction (Stage 2)	Cranes	1	16	85
	Forklifts	5	40	84
	Trenchers	2	40	85
	Loaders	2	40	80
	Generator Sets	12	50	82
	Bore/Drill Rigs	1	20	84
	Aerial Lifts	2	40	85
	Tractors/Loaders/Backhoes	1	40	84
	Welders	12	40	73
	Pile Driver	1	20	95

Construction Stage	Equipment			
	Equipment Type	Quantity	Usage Factor (%)	USEPA Construction Noise Level (50 feet), dBA L _{max}
BESS Construction (Stage 3)	Cranes	2	16	85
	Forklifts	5	40	84
	Off-Highway Trucks	1	40	55
	Generator Sets	10	50	70
	Bore/Drill Rigs	1	20	84
	Trenchers	2	40	85
	Aerial Lifts	3	20	85
	Loaders	1	40	80
	Tractors/Loaders/Backhoes	3	40	84
	Welders	3	40	73
	Pile Driver	1	20	95

BESS – battery energy storage system; dBA – A-weighted decibel; L_{max} – maximum sound level; USEPA – U.S. Environmental Protection Agency
 Gen-tie construction will occur during the BESS construction stage (Stage 3).

Table 3.11-9. Received Construction Noise Levels by Stage (dBA L_{eq})

NSA	UTM Coordinates (meters)		Stage 1 and 2 Distance to Construction (feet)	Stage 3 Distance to Construction (feet)	Construction Noise Levels		
	Easting	Northing			Stage 1	Stage 2	Stage 3
					L _{eq}	L _{eq}	L _{eq}
NSA-1	465026	3875896	5,900	11,500	46	53	46
NSA-2	469812	3873851	5,280	1,585	47	54	63
NSA-3	469797	3873641	5,725	2,400	46	54	60
NSA-4	469630	3873328	5,725	3,500	46	54	56
NSA-5	469804	3873330	6,200	3,400	46	53	57
NSA-6	469711	3873237	6,100	3,800	46	53	56
NSA-7	469768	3872182	8,700	7,300	43	50	50
NSA-8	469783	3872423	8,100	6,500	43	51	51
NSA-9	469602	3872472	7,600	6,300	44	51	51
NSA-10	469739	3872493	7,825	6,300	43	51	51
NSA-11	470542	3874224	7,750	2,500	44	51	59
NSA-12	470316	3874008	7,050	1,900	44	52	62
NSA-13	470361	3874008	7,225	2,000	44	52	61
NSA-14	470539	3873972	7,800	2,500	44	51	59
NSA-15	470292	3873489	7,425	3,200	44	51	57
NSA-16	470322	3873569	7,375	3,000	44	51	58
NSA-17	470287	3873642	7,225	2,700	44	52	59
NSA-18	470360	3873574	7,550	3,100	44	51	57
NSA-19	470503	3873616	7,950	3,200	43	51	57
NSA-20	470484	3873554	7,950	3,400	43	51	57
NSA-21	473284	3874244	16,725	11,200	37	44	46

L_{eq} – equivalent energy level; NSA – noise sensitive area; UTM – Universal Transverse Mercator

Noise levels resulting from the construction activities would vary significantly depending on several factors such as the type and age of equipment, specific equipment manufacture and model, the operations being performed, and the overall condition of the equipment and exhaust system mufflers. Project construction would occur between 7:00 a.m. and 6:00 p.m. on weekdays. Although the County's ordinance may exempt daytime construction noise from the County's typical noise requirements, construction noise may still be considered an impact under CEQA. Therefore, the FTA has published construction noise impact criteria levels of an 80 dBA 8-hour L_{eq} for the day and a 70 dBA 8-hour L_{eq} for the night for residential land uses.

Table 3.11-9 shows that the highest construction noise levels at a noise sensitive receptor would be 63 dBA L_{eq} at NSA-2 during stage 3 construction. This level is below the FTA guidance level of 80 dBA L_{eq} and would occur during the daytime, which is in compliance with the County's Development Code Section 83.01.080. Due to these circumstances, the temporary increase in noise due to construction is considered to be a less than significant impact.

Construction activities would also cause increased noise along access routes to and from the project site due to the movement of equipment and workers. Construction vehicles would access the project site from Harper Lake Road and SR-58. Traffic generated by construction of the project would occur primarily as a result of construction workers traveling to and from the project's access points. Traffic would also be generated by heavy equipment. However, once the equipment is delivered to the site, they would generally stay on the site. Vehicle traffic would also be generated by construction material deliveries. The peak number of daily truck trips during construction would be 32.

A noise model was generated using the Computer Aided Noise Abatement (CadnaA®) model and the RLS-90 standard to estimate the noise impacts from construction related traffic. Traffic volumes for construction and existing conditions were taken from the Traffic Impact Study in **Appendix L**. A summary of the modeled traffic levels is shown below in **Table 3.11-10, Received Traffic Noise Levels (dBA L_{eq})**.

Table 3.11-10. Received Traffic Noise Levels (dBA L_{eq})

NSA	UTM Coordinates (meters)		Existing Traffic Conditions (dBA, L_{eq})	Construction Traffic Conditions (dBA, L_{eq})
	Easting	Northing		
NSA-1	465026	3875896	11	12
NSA-2	469812	3873851	47	56
NSA-3	469797	3873641	45	55
NSA-4	469630	3873328	39	47
NSA-5	469804	3873330	45	55
NSA-6	469711	3873237	40	50
NSA-7	469768	3872182	42	53
NSA-8	469783	3872423	43	54
NSA-9	469602	3872472	36	47
NSA-10	469739	3872493	41	51
NSA-11	470542	3874224	47	38
NSA-12	470316	3874008	39	42

NSA	UTM Coordinates (meters)		Existing Traffic Conditions (dBA, L _{eq})	Construction Traffic Conditions (dBA, L _{eq})
	Easting	Northing		
NSA-13	470361	3874008	38	42
NSA-14	470539	3873972	36	39
NSA-15	470292	3873489	35	43
NSA-16	470322	3873569	35	43
NSA-17	470287	3873642	36	43
NSA-18	470360	3873574	35	42
NSA-19	470503	3873616	34	40
NSA-20	470484	3873554	34	40
NSA-21	473284	3874244	16	14

L_{eq} – equivalent energy level; NSA – noise sensitive area; UTM – Universal Transverse Mercator

As shown in **Table 3.11-10**, some NSAs will be subject to increased noise levels due to construction traffic, with the greatest increase in noise level being 11 dBA at NSA IDs 7, 8, and 9. However, as indicated previously, construction-related traffic would be limited to 7:00 a.m. to 7:00 p.m. in compliance with the County’s Development Code Section 83.01.080 and would cease upon completion of Project construction, and as such the temporary impacts would be less than significant.

As shown above, the noise generated from the construction of the project would not generate a significant impact. However, since construction machines operate intermittently, and the types of machines in use at the project site change with the stage of construction, noise emitted during construction would be mobile and highly variable. Therefore, to help minimize noise impacts, the project’s construction management protocols would implement the following best practice noise reduction design measures:

- Maintain all construction tools and equipment in good operating order according to manufacturers’ specifications;
- Limit construction activities to daytime hours (7:00 a.m. to 7:00 p.m.);
- Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks;
- For construction devices that utilize internal combustion engines, ensure the engine’s housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers’ guidelines, if possible; and
- Utilize a Complaint Resolution Procedure to address any noise complaints received from residents.

Long-Term Operation

The CadnaA computer noise model was used to calculate sound pressure levels from the operation of the project equipment in the vicinity of the project site. The current International Organization for Standardization (ISO) standard for outdoor sound propagation, ISO 9613 Part 2 – Attenuation of Sound during Propagation Outdoors, was used within CadnaA (ISO 1996). The method described in this standard calculates sound attenuation under weather conditions that are favorable for sound

propagation, such as for downwind propagation or atmospheric inversion, conditions which are typically considered worst-case. Off-site topography was obtained using the publicly available U.S. Geological Survey digital elevation data. A default ground attenuation factor of 0.5 was assumed for sound propagation over acoustically “mixed” ground. The project’s general arrangement was reviewed and directly imported into the acoustic model so that on-site equipment could be easily identified, buildings and structures could be added, and sound emission data could be assigned to sources as appropriate. If final equipment selection should differ from the equipment that has been analyzed, another acoustical evaluation would be done to determine compliance with the applicable regulations.

The primary noise sources during operations are the inverter skids consisting of one inverter and one transformer, the 230-megavolt ampere substation transformer, and the BESS units. It is expected that all equipment would operate in a consistent manner during daytime hours; however, the inverter skids will not operate while the sun is down. Reference sound power levels input to CadnaA were provided by the applicant and equipment manufacturers.

Broadband (dBA) sound pressure levels were calculated for expected project operation assuming that all components identified previously are operating continuously and concurrently at the representative manufacturer-rated sound. The sound energy was then summed to determine the equivalent continuous A-weighted downwind sound pressure level at a point of reception. Sound contour plots displaying broadband (dBA) sound levels presented as color-coded isopleths are provided for full Project operations in **Figure 3.11-2, Project Operation, Received Sound Levels**. The sound contours are graphical representations of the cumulative noise associated with full operation of the equipment and show how operational noise would be distributed over the surrounding area of the project site. The contour lines shown are analogous to elevation contours on a topographic map, i.e., the noise contours are continuous lines of equal noise level around some source(s) of noise.

Table 3.11-11, Operational Acoustic Modeling Results, dBA and **Figure 3.11-2** show the projected exterior sound levels at each NSA. While the inverter skids are not expected to operate while the sun is down, compliance for both daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) regulatory thresholds was assessed assuming full project operations as inverter skids will be operational while the sun is up, which would occur during the morning for the 10:00 p.m. to 7:00 a.m. nighttime period. The results indicate that the Project would comply with the County 55 dBA daytime and 45 dBA nighttime limits. The highest noise level associated with project operations is 34 dBA L_{eq} at NSA-2, NSA-3, and NSA-4. This level is below the ambient level at the closest ambient measurement location (NM-2, 55 dBA) shown in Section 3.11.2, Existing Conditions, and would not raise the ambient level above the current 55 dBA. The project would not increase the ambient noise level and would result in a less than significant impact.

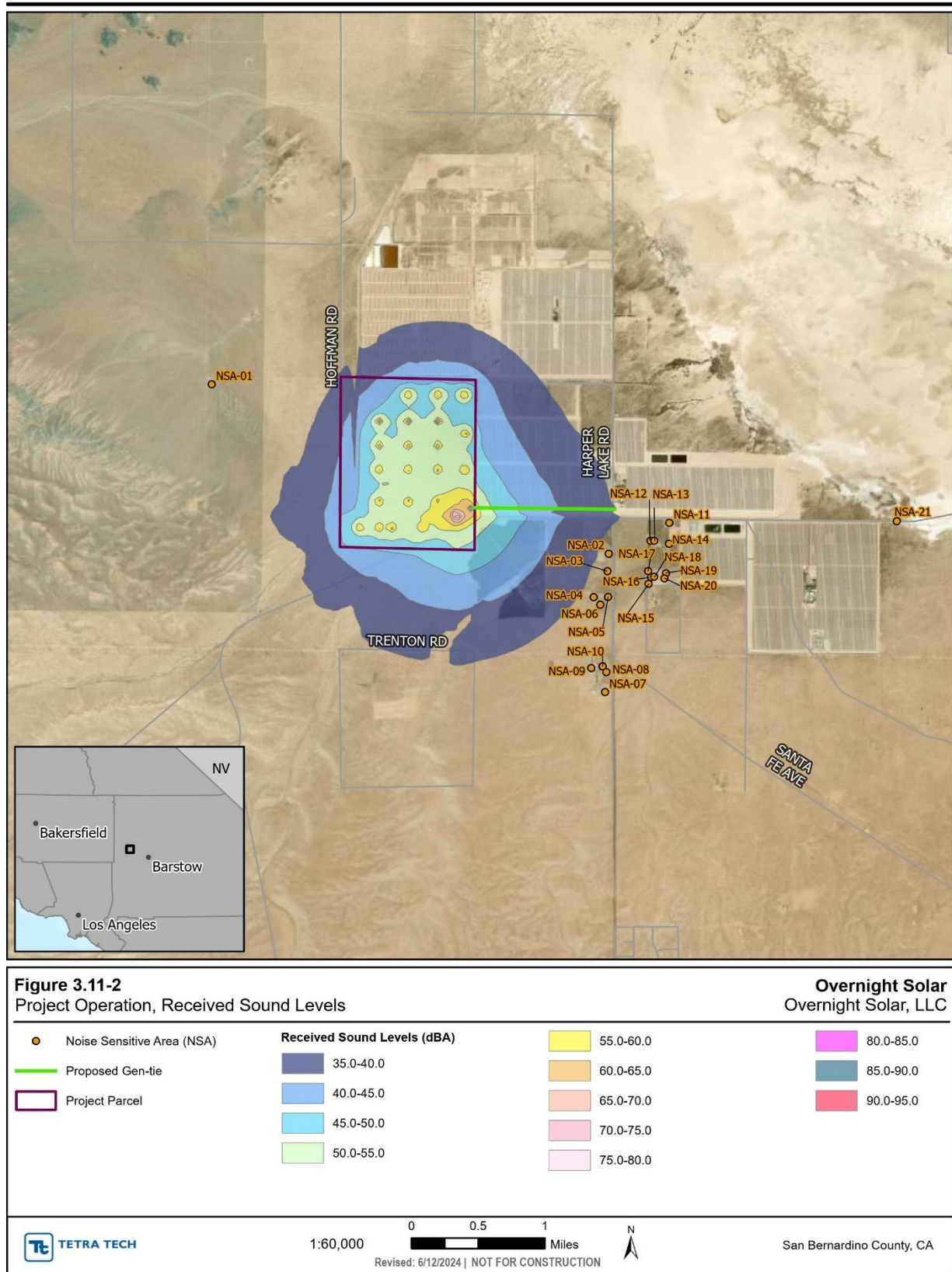


Figure 3.11-2. Project Operation, Received Sound Levels

Table 3.11-11. Operational Acoustic Modeling Results, dBA

NSA	UTM Coordinates (meters)		Modeled Operational L_{eq} , dBA
	Easting	Northing	
NSA-1	465026	3875896	25
NSA-2	469812	3873851	34
NSA-3	469797	3873641	34
NSA-4	469630	3873328	34
NSA-5	469804	3873330	33
NSA-6	469711	3873237	33
NSA-7	469768	3872182	25
NSA-8	469783	3872423	26
NSA-9	469602	3872472	28
NSA-10	469739	3872493	27
NSA-11	470542	3874224	32
NSA-12	470316	3874008	32
NSA-13	470361	3874008	32
NSA-14	470539	3873972	31
NSA-15	470292	3873489	31
NSA-16	470322	3873569	31
NSA-17	470287	3873642	32
NSA-18	470360	3873574	31
NSA-19	470503	3873616	30
NSA-20	470484	3873554	30
NSA-21	473284	3874244	31

Notes: dBA – A-weighted decibel; L_{eq} – equivalent energy level; NSA – noise sensitive area; UTM – Universal Transverse Mercator

Maintenance Activities

Project maintenance activities would include solar panel washing as needed. These activities are expected to occur up to 4 times per year and would not generate a significant amount of traffic or create a substantial increase of vehicular noise in the area. Any increase in traffic would be minimal and sporadic; therefore, impacts from vehicular noise would be less than significant.

Decommissioning Noise

Decommissioning would first involve removing the solar photovoltaic (PV) panels for sale into a secondary solar PV panel market or for recycling. Most of the components of the solar installation are composed of materials that can be easily recycled. If the panels can no longer be used in a solar array, the aluminum can be resold and the glass can be recycled. Other components of the solar installation, such as the solar array structure and mechanical assemblies, can be recycled since they are made from galvanized steel. Equipment such as inverters and switchgears can be reused, or their components recycled. The equipment pads are made from concrete that can be crushed and recycled. Conduit and wire would be removed by uncovering trenches and backfilling when done. The electrical wiring is made from copper and/or aluminum and could also be reused or recycled.

Noise levels from decommissioning would be similar to those during construction. The same types of heavy equipment and vehicles would be used to decommission the site as were used to construct it. Decommissioning activities, like construction, would comply with County construction noise ordinance standards as detailed previously. Therefore, noise impacts from project decommissioning would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.11-2: The project would not result in a generation of excessive groundborne vibration or groundborne noise levels. Impacts would be less than significant.

As discussed under Impact 3.11-1, project construction would be completed in three work stages. This vibration analysis evaluated the worst-case vibration source, which would be the pile driver. Based on vibration propagation calculations, construction vibration levels are predicted to be 0.0030 PPV inch/second, or 58 VdB, at the nearest residential receptor to pile driving activity, which is approximately 1,585 feet from the site. These levels are based on the worst-case vibration-producing equipment and it is expected that other vibration generating equipment proposed for the project construction would result in lower vibration levels. Vibration levels at the nearest non-participating sensitive receptor would be below the minimum vibration level for human perception of 65 VdB.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.11-3: The project would not expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or within 2 miles of a public airport. No impact would occur.

The project is not within 2 miles of a public airport or public use airport or in the vicinity of a private airstrip or an airport land use plan. The closest airport to the project is Edwards Air Force Base, located approximately 29 miles to the west. There would be no impact.

Mitigation Measures: None required.

Level of Significance: No impact.

Impact 3.11-4: The project could result in cumulative impacts related to noise. Impacts would be less than significant.

The cumulative scenario for the analysis of operational noise impacts considers impacts from present or reasonably foreseeable projects, shown in **Table 3-1, Cumulative Projects**. Of these projects, Lockhart PV II Solar and Desert Breeze Solar have prepared a Noise Technical Memorandum. The highest operational noise level received at a noise sensitive receptor is 22 dBA for Lockhart PV II Solar (Michael Baker International 2021) and 26 dBA for Desert Breeze Solar (Kimley-Horn and Associates, Inc. 2023). The cumulative operational noise impacts from the project would not contribute to an exceedance of the County's Development Code Section 83.01.080 nighttime noise limit of 45 dBA L_{eq} . The

other projects shown in **Table 3-1** that do not currently have a Noise Technical Memorandum, but would also have to satisfy the requirements of CEQA and the County's review process, and as such must reduce cumulative noise impacts at noise sensitive receptors. Due to these circumstances, the cumulative increase in noise due to project operations would be considered a less than significant impact.

The project could contribute noise to cumulative conditions from the onset of on-site activities through decommissioning and site restoration. **Table 3.11-7** shows that the highest construction noise levels at a receptor would be 63 dBA L_{eq} . This level is below the FTA guidance level of 80 dBA L_{eq} . This level is low enough that it would not contribute to an exceedance of the 80 dBA L_{eq} FTA guidance level during construction activities associated with other cumulative projects. Due to these circumstances, the temporary increase in noise due to construction would be less than significant.

Cumulative projects in the project vicinity would likely be operational and contribute to the overall ambient noise conditions or be decommissioned prior to project decommissioning activities. Thus, temporary noise impacts from decommissioning activities associated with the project would not likely combine with other cumulative projects in proximity and at the same time. As noted above, the project's construction and operational vibration levels would not exceed any applicable thresholds for groundborne noise or vibration and would result in a less than significant impact. Therefore, vibration impacts would not be cumulatively considerable, and impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.12 Transportation and Traffic

This section evaluates the potential transportation and traffic impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the environmental and regulatory setting, the potential environmental impacts related to transportation and traffic, and includes mitigation measures required to reduce or avoid these impacts, as applicable. The discussion in this section is largely based on the Traffic Impact Study prepared by Linscott, Law, & Greenspan (included as **Appendix L**). San Bernardino County (County) did not receive any scoping comments related to transportation and traffic.

3.12.1 Environmental Setting

The project is located in Lockhart, in unincorporated San Bernardino County. The Burlington Northern Santa Fe Railroad and State Route (SR) 58 are located approximately 5 miles and 5.6 miles south of the project parcel, respectively. Harper Lake Road is located approximately 1 mile east of the project parcel and the proposed generation interconnect (gen-tie) line is approximately 350 feet north of the Harper Lake Road and Lockhart Ranch Road intersection. Interstate 15 is approximately 20 miles southeast of the project parcel. SR-58 and Harper Lake Road provide access to the project. Due to the rural location of the project, there are no public transit, pedestrian, or bicycle facilities that exist along SR-58 and Harper Lake Road or within the vicinity of the project.

3.12.1.1 Area Roadways

A majority of the construction workers would commute to the project site from the surrounding communities including Boron, Barstow, Victorville, Hesperia, and San Bernardino. Construction workers and heavy vehicles would access the project site from Harper Lake Road via SR-58. The following intersections were selected for review because of their proximity to the project:

1. Harper Lake Road/Hoffman Road
2. Harper Lake Road/Lockhart Ranch Road
3. Harper Lake Road/SR-58

Figure 3.12-1, Traffic Study Area, identifies the location of each roadway segment in relation to the project site.

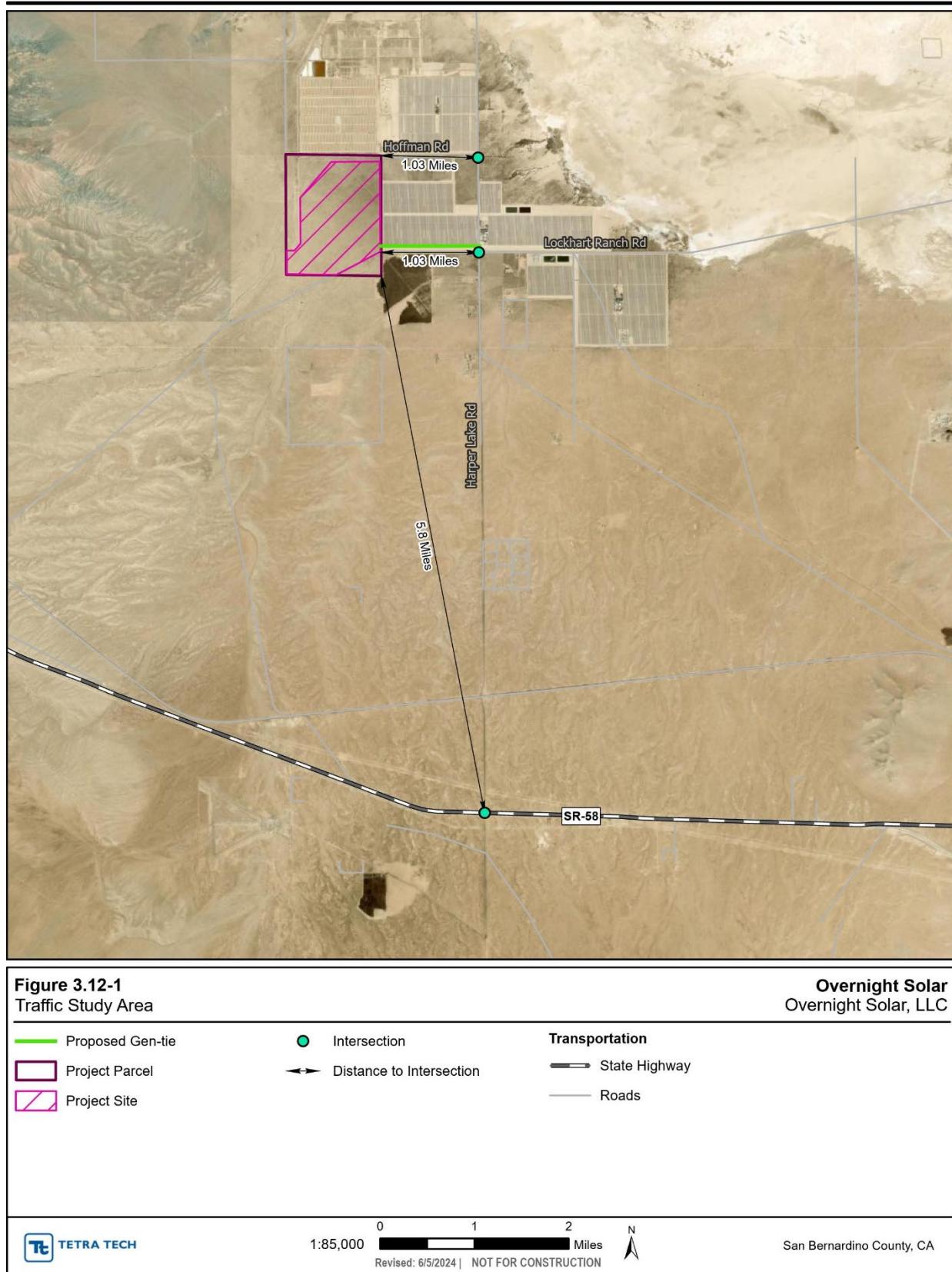


Figure 3.12-1. Traffic Study Area

3.12.2 Regulatory Framework

3.12.2.1 Federal

Federal rules and regulations govern many facets of the County's traffic and circulation system, including transportation planning and programming; funding; and design, construction, and operation of facilities. The County complies with all applicable rules and regulations of the Federal Highway Administration, the Federal Transit Administration, the Federal Railroad Administration, the Federal Aviation Administration, and other federal agencies. In addition, the County coordinates with federal resource agencies where appropriate in the environmental clearance process for transportation facilities.

3.12.2.2 State

As the County complies with federal rules and regulations, the County also complies with applicable State rules and regulations, including those of the California Department of Transportation, and coordinates with State resource agencies.

Senate Bill 743

California Senate Bill (SB) 743, which was signed into law on September 27, 2013, and became effective on January 1, 2014, requires the focus of transportation analyses to shift from driver delay to the reduction of greenhouse gas (GHG) emissions, the creation of multimodal networks, and the promotion of a mix of land uses, as measured by vehicle miles traveled (VMT). California Environmental Quality Act (CEQA) Guidelines Section 15064.3 indicates that "...vehicle miles traveled is the most appropriate measure of transportation impacts." The revised guidelines require that lead agencies remove automobile delay, as described solely by Level of Service (LOS) or similar measures of vehicular capacity or traffic congestion, as a criterion for determining a significant impact on the environment pursuant to CEQA, except in locations specifically identified in the revised guidelines, if any. In accordance with this requirement, CEQA Guidelines Section 15064.3(a), adopted in December 2018, states "a project's effect on automobile delay does not constitute a significant environmental impact." These updates establish VMT as the primary metric for evaluating a project's environmental impacts on the transportation system (OPR 2018).

In addition, CEQA Guidelines Section 15064.3(c) states that the provisions of Section 15064.3 shall apply statewide beginning on July 1, 2020. As noted above, the County issued their *Transportation Impact Study Guidelines* on July 9, 2019, to provide recommendations related to VMT assessment (both thresholds of significance and methodology for identifying VMT-related impacts) and to refine the County's existing Transportation Impact Study Guidelines (TISG) to reflect methodologies for identifying impacts.

3.12.2.3 Regional

San Bernardino County Congestion Management Program

The passage of Proposition 111 in 1990 established a process for each metropolitan county in California to prepare a Congestion Management Plan (CMP). The San Bernardino Associated Governments, now known as the San Bernardino County Transportation Authority (SBCTA), prepared the 2016 San

Bernardino County CMP, in consultation with the County and cities in the County, in an effort to align land use, transportation, and air quality management efforts and promote reasonable growth management programs that effectively use statewide transportation funds, while ensuring that new development pays its fair share of needed transportation improvements. In San Bernardino County, SBCTA is responsible for planning and managing vehicular congestion and coordinating regional transportation policies.

Through the use of traffic impact analysis reports and Comprehensive Transportation Plan model forecasts, the CMP evaluates proposed land use decisions to ensure adequate transportation network improvements that are developed to accommodate future growth in population. If a CMP facility is found to fall below the LOS standard under either existing or future conditions, a deficiency plan must be prepared, adopted, and implemented by local jurisdictions that contribute to such situations.

Annual monitoring activities are a method of accountability for those local jurisdictions required to mitigate a network facility with substandard LOS. While this interjurisdictional approach provides political and technical consistency for future development in the County, the CMP is only a mechanism to be used to guide efforts in a more efficient manner. It is not to be considered a replacement to the Regional Transportation Plan (RTP). The CMP includes goals that are supportive of maintaining and enhancing the multimodal transportation system and also includes, by association, the goals of the Southern California Association of Government's (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2024).

San Bernardino Countywide Transportation Plan

SBCTA developed the County's Countywide Transportation Plan (CTP), which was released in September 2015. The CTP has a horizon year of 2040 and serves as the County's input into the SCAG RTP/SCS. The purpose of the CTP is to lay out strategy for long-term investment and management of the County's transportation system. Key issues addressed by the CTP include transportation funding, congestion relief, economic competitiveness, system preservation and operations, transit system interconnectivity, air quality, sustainability, and GHG emission reductions. The CTP analyzes a Year 2040 baseline scenario with traditional revenue sources and an aggressive scenario that assumes added revenue sources defined in SCAG's RTP/SCS. The CTP has developed a set of strategies to address issues such as air quality, goods movement, sustainability, and active transportation.

Regional Transportation Plan/Sustainable Communities Strategy

As the designated Metropolitan Planning Organization for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties, SCAG is mandated by the federal government to develop a multimodal long-range transportation plan that provides a 20-year vision for investing in the transportation system, and to update it at least once every 4 years. SCAG adopted the Connect SoCal (2020-2045 RTP/SCS) on September 3, 2020. The 2020-2045 RTP/SCS is a long-range visioning plan that balances future mobility and sustainable growth with land use and transportation strategies to reach the region's GHG reduction goals. The 2020-2045 RTP/SCS includes the following specific goals and strategies that are applicable to the project to integrate land use and transportation, such that the region can grow smartly and sustainably:

- Encourage regional economic prosperity and global competitiveness.

- Reduce GHG emissions and improve air quality.
- Adapt to a changing climate and support an integrated regional development pattern and transportation network.

3.12.2.4 Local

San Bernardino County Transportation Impact Study Guidelines

The County's TISG, dated July 9, 2019, provides a guide in assessing a proposed development project's potential transportation impacts. As stated within the TISG, a Traffic Impact Study is required if one or more of the following criteria are met:

- If a project generates 100 or more trips without consideration of pass-by trips during any peak hour.
- If a project is located within 300 feet of:
 - The intersection of two streets designated as Collector or higher in the County's General Plan or the Department's Master Plan, or
 - An impacted intersection as determined by the Traffic Division.
- If a project creates safety or operational concerns.
- If a project has the potential to generate VMT that could result in the transportation impacts as noted in the significance criteria presented within the TISG.
- If a project generates less than 100 trips without consideration of pass-by trips during any peak hour, a study may be required if there are special concerns.

As it relates to VMT, according to the County's TISG, land use projects that meet certain screening criteria are assumed to result in a less than significant transportation impact under CEQA and do not require a detailed quantitative VMT assessment. Consistent with the Office of Planning and Research (OPR) guidance, the County identifies the following project types as appropriate for screening. Projects need only meet one of the listed criteria to be screened from a VMT analysis:

- Local Community Projects. The following list of projects would be screened out:
 - K-12 Schools
 - Local-serving retail less than 50,000 square feet
 - Local parks
 - Day care centers
 - Local serving gas stations
 - Local serving banks
 - Student housing projects
 - Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Trip Generation Threshold. Projects generating less than 110 daily vehicle trips, which generally corresponds to the following "typical" development potentials:

- 11 single-family housing units
- 16 multi-family, condominiums, or townhouse units
- 10,000 square feet of office
- 15,000 square feet of light industrial
- 63,000 square feet of warehouse
- 79,000 square feet of high cube transload and short-term storage warehouse
- 12 hotel rooms
- Transit Priority Area (TPA). Projects located within a TPA as determined in the most recent SCAG RTP/SCS.
- Low VMT Area. Projects located within a low VMT generating area as determined by the analyst based on the County's VMT efficient area maps (<https://www.arcgis.com/apps/webappviewer/index.html?id=779a71bc659041ad995cd48d9ef4052b>).

For a project that does not meet the screening criteria above, it should be considered to have a significant impact if the project VMT per person/employee is greater than 4 percent below the existing baseline VMT per person for the unincorporated County (San Bernardino County 2019).

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

GOAL TM-1	Roadway Capacity. Unincorporated areas served by roads with capacity that is adequate for residents, businesses, tourists, and emergency services.
<i>Policy TM-1.1</i>	Roadway Level of Service (LOS). We require our roadways to be built to achieve the following minimum level of service standards during peak commute periods (typically 7:00-9:00 AM and 4:00-6:00 PM on a weekday): • LOS D in the Valley Region. • LOS D in the Mountain Region. • LOS C in the North and East Desert Regions.
GOAL TM-2	Road Design Standards. Roads designed and built to standards in the unincorporated areas that reflect the rural, suburban, and urban context as well as the regional (valley, mountain, and desert) context.
GOAL TM-3	Vehicle Miles Traveled. A pattern of development and transportation system that minimizes vehicle miles traveled.

Policy TM-3.2 **Trip reduction strategies.** We support the implementation of transportation demand management techniques, mixed use strategies, and the placement of development in proximity to job and activity centers to reduce the number and lengths of vehicular trips.

GOAL TM-4 On and off-street improvements that provide functional alternatives to private car usage and promote active transportation in mobility focus areas.

3.12.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to transportation if it would do any of the following:

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

3.12.4 Project Impacts and Mitigation

Impact 3.12-1: The project could conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Impacts would be less than significant.

San Bernardino County Transportation Impact Study Guidelines

As noted in Section 5, CEQA Assessment – Active Transportation and Public Transit Analysis, of the TISG, in accordance with the CEQA Guidelines, a Traffic Impact Study should examine if a project is inconsistent with adopted policies, plans, or programs regarding active transportation or public transit facilities, or otherwise decreases the performance or safety of such facilities. However, the TISG does not include a list of transportation-related programs, plans, ordinances, and policies that should be consulted to identify the potential for conflicts with a project.

The criteria that would need to be met to require a Traffic Impact Study were previously detailed under Section 3.12.2, Regulatory Framework. The project would not meet the criteria of being located within 300 feet of an intersection of two Collector streets or higher, or any impacted intersections as determined by the Traffic Division; the project would also not meet the criteria of creating any safety or operational concerns, or generating less than 100 trips; however, the project would meet the criteria for trip generation of 100 or more trips, as well as the potential to generate VMT that could result in transportation impacts, therefore, a Traffic Impact Study was conducted. Based on those criteria, and as further detailed in **Appendix L**, operation of the project is expected to generate approximately 24 daily trips associated with solar panel washing and standard maintenance activities approximately 4 times per year. The project is a utility-scale solar and energy storage facility and would not create safety

or operational concerns, as described further below in Impact 3.12-2, the project would not generate VMT that would result in a significant impact.

Congestion Management Plan

Project construction is anticipated to be completed over approximately 26 months. At the peak of construction, it is estimated that up to approximately 300 workers will be on-site; however, as discussed in **Appendix L**, an average of 150 employees was assumed to be on-site during site preparation, grading, and facilities installation. Vehicular access would be provided via SR-58 to Harper Lake Road. The highest volume of construction-related traffic is expected during project grading activities generating approximately 725 daily trips (600 employee trips and 125 truck trips) with 171 a.m. peak hour trips and 171 p.m. peak hour trips, as shown in **Table 3.12-1, Construction Project Trip Generation**. Construction traffic is considered to be temporary (approximately 26 months) and is not expected to negatively affect the current flow of transportation near the project site or result in any meaningful long-term or permanent change in VMT (Refer to Impact 3.12-2). The roadway network in the vicinity is characterized by free-flowing traffic conditions, with limited existing traffic.

Table 3.12-1. Construction Project Trip Generation

Use	Quantity	PCE ^{1/}	Daily Trip Ends (ADT)		AM Peak Hour Volume			PM Peak Hour Volume		
			Rate ^{1/}	Volume	In	Out	Total	In	Out	Total
Construction workers ^{2/}	300	1	2/vehicle	600	150	5	155	5	150	155
Heavy Vehicles (Trucks) ^{3/}	25	2.5	2/vehicle	125	8	8	16	8	8	16
Total				725	158	13	171	13	158	171

Source: Appendix L

1/ Assume PCE factor of 2.5 was applied to heavy vehicle trucks per Highway Capacity Manual

2/ Shifts would likely not coincide with commuter peak hours. To be conservative, half the workers were assumed to arrive/depart during these peak hours.

3/ Heavy vehicle traffic is spread throughout an 8-hour workday.

ADT – Average Daily Traffic; PCE – Passenger Car Equivalent

As a standard condition of approval, the project would be required to provide a CMP to the County Department of Public Works, Traffic Division prior to the issuance of grading permits. The CMP will include the number of trucks, type of trucks (size), the total number of Equivalent Single Axle Loads, and planned truck routes to the project site during construction. The County will also require the project to pave Lockhart Ranch Road beginning at the intersection with Harper Lake Road heading west and ending at the boundary of the on-site substation. Per the County's requirements, paving will be conducted once construction is completed, such that construction vehicles do not destroy or degrade the paving. In addition, project construction traffic control measures, such as those listed below, would be included in the County-required CMP:

- Timing the delivery of heavy equipment and building materials under the contractors' control during non-peak commute hours, to the extent feasible;
- Scheduling construction traffic ingress/egress to not interfere with peak-hour traffic and to minimize traffic obstructions, to the extent feasible;

- Specifying oversize load haul routes;
- Directing construction traffic with a flag person, as needed;
- Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;
- Ensuring access for emergency vehicles to the project site;
- Temporarily closing travel lanes or delaying traffic during materials delivery or any other utility connections, if required; and
- Maintaining access to adjacent properties.

Implementation of the CMP would ensure that project construction would not result in any access or traffic issues on roads surrounding the project site that could pose a conflict with a program, plan, ordinance, or policy addressing the circulation system. Therefore, impacts during project construction would be less than significant.

The project is a utility-scale solar and energy storage facility. The project would be unstaffed and remotely operated. Therefore, the project would not generate additional daily and peak hour vehicle trips on the surrounding roadway network as a result of routine operations and maintenance. Solar panel washing would be required to occur at least once per year and potentially up to four times per year. The panel washing may require up to 12 employees with water trucks and would take approximately 20 days to complete for each panel washing event. Therefore, it was assumed that during operation the project would generate approximately 24 average daily trips up to approximately four times per year associated with solar panel washing activities and regular maintenance. From a daily and peak hour perspective, these trips would be considered nominal and would not be expected to impact the existing road network near the project site including SR-58.

The roadway network in the vicinity is characterized by free-flowing traffic conditions, and vehicles on the roadway generally travel unimpeded by others. Therefore, traffic during project operation would not conflict with the CMP standards.

Countywide Plan/Policy Plan

Goal TM-1: Unincorporated areas served by roads with capacity that is adequate for residents, businesses, tourists, and emergency services.

Consistent. The roadway network in the vicinity is characterized by free-flowing traffic conditions, with limited existing traffic. Project construction and operation vehicles would be considered nominal trips and would not be expected to impact the existing road network near the project site. Additionally, the project Applicant would coordinate with emergency services to ensure the unrestricted access to the site. More information on police and fire protection can be found in Section 3.15, Effects Found Not to Be Significant.

Goal TM-2: Roads designed and built to standards in the unincorporated areas that reflect the rural, suburban, and urban context as well as the regional (valley, mountain, and desert) context.

Consistent. The County will require the project to pave Lockhart Ranch Road beginning at the intersection with Harper Lake Road heading west and ending at the boundary of the on-site substation. Per the County's requirements, paving will be conducted once construction is completed, such that construction vehicles do not destroy or degrade the paving. The road would be designed and built to the County's standards.

Goal TM-3: A pattern of development and transportation system that minimizes vehicle miles traveled.

Consistent. The project site is not located within a mobility focus area and no major public transit stops are located within the vicinity. Improvements to Lockhart Ranch Road would be designed and built to the County's standards and would not impact public transit, pedestrian, or bicycle facilities in the vicinity of the project site.

Goal TM-4: On and off-street improvements that provide functional alternatives to private car usage and promote active transportation in mobility focus areas.

Consistent. The project is not located within a mobility focus area. As previously described, the project would not impact the local transportation network, bike facilities, and pedestrian facilities that serve unincorporated areas. No public transit, pedestrian, or bicycle facilities currently exist on Lockhart Ranch Road, Harper Lake Road or in the vicinity of the project site.

Construction

Construction vehicles would access the project site from Harper Lake Road and SR-58. Traffic generated by construction of the project would occur primarily as a result of construction workers traveling to and from the project's access points. Traffic would also be generated by heavy equipment. However, once the vehicles are delivered to the project site, they would generally stay within the boundaries of the project site during construction activities and would not generate daily trips. Vehicle traffic would also be generated by construction material deliveries.

As discussed in the project-specific trip generation analysis prepared for the project (**Appendix L**), the project would generate a maximum of 725 additional round trips per day for construction workers traveling to and from the project site's access points. The average daily traffic (ADT) counts are for onsite activities that repeat daily, such as construction workers traveling to and from the project site, and repeating material deliveries. Irregular or one-time deliveries to and from the project site, such as heavy equipment, would not have ADT counts. Construction traffic generated by this project has the potential to cause temporary impacts to transportation and traffic in the area. Due to the temporary nature of construction, these impacts would be short-lived.

Table 3.12-1 demonstrates that during construction the project would generate a maximum of 171 additional round trips per day from construction workers traveling to and from the project's access points. The number of maximum average daily trips during construction would be greater compared to operations estimated 24 average daily trips. The modeled construction phasing and ADT counts are included in **Appendix L**. During construction, materials would be placed within the project boundaries adjacent to the then-current phase of construction. To prevent theft and vandalism, materials would be secured within fenced areas. Storage containers may be used to house tools and other construction

equipment. In addition, security guards would regularly monitor the project site and these trips are included in the worker construction trips. Impacts to transportation would be temporary during construction and therefore would be less than significant.

Operation

The project would be remotely operated. Periodic module cleaning and maintenance activities would utilize up to 12 employees over approximately 20 days for each panel washing event, up to approximately 4 times per year. Therefore, operational impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.12-2: The project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b). Impacts would be less than significant.

Construction

As stated in the OPR (2018) Technical Advisory, “‘Vehicle Miles Traveled’ refers to the amount of distance of automobile travel attributable to a project. Here, the term ‘automobile’ refers to on-road passenger vehicles, specifically cars and light trucks.” Therefore, heavy vehicles generated by the construction traffic are not included in the VMT analysis. In addition, since the construction traffic would only be temporary in nature, project VMT impacts are presumed to be less than significant.

Operations

As stated in Section 3.12.2.4, Local, under “San Bernardino County Transportation Impact Study Guidelines,” the TISG determines land use projects which meet certain screening criteria as a less than significant transportation impact under CEQA and does not require a detailed quantitative VMT analysis. In **Table 3.12-2, VMT Screening Criteria and Project Evaluation**, the TISG screening criteria are listed with an evaluation of whether the project would meet the criteria.

Table 3.12-2. VMT Screening Criteria and Project Evaluation

Screening	Screening Criteria	Project Evaluation	Result
Local Community Projects	The following list of projects would be screened out: • K-12 schools • Local-serving retail less than 50,000 square feet (SF) • Local Parks • Day care centers • Local serving gas stations • Local serving banks • Student housing projects • Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS	The project is a solar and energy storage facility. Therefore, it is not considered to be a local community project.	Does Not Meet Criteria

Screening	Screening Criteria	Project Evaluation	Result
Trip Generation Threshold	Projects generating less than 110 daily vehicle trips such as: • 11 single-family housing units • 16 multi-family, condominiums, or townhouse units • 10,000 SF of office • 15,000 SF of light industrial • 63,000 SF of warehouse • 79,000 SF of high cube transload and short-term storage warehouse • 12 hotel rooms	The project would generate 24 daily trips, less than 110 daily vehicle trips, since there would only be 12 workers on the site during operations approximately 4 times per year.	Meets Criteria
Transit Priority Area	Projects located within a Transit Priority Area (TPA) as determined by the most recent SCAG RTP/SCS	The project is not located within a TPA.	Does Not Meet Criteria
Low VMT Area	Projects located within a low VMT generating area as determined by the analyst based on the County's VMT efficient area maps online at: https://www.arcgis.com/apps/webappviewer/index.html?id=779a71bc659041ad995cd48d9ef4052b	The project is not located within a low VMT generating area.	Does Not Meet Criteria

RTP/SCS – Regional Transportation Plan / Sustainable Communities Strategy; SCAG – Southern California Association of Government; VMT – vehicle miles traveled

The project meets the TISG criteria as it would generate less than 110 daily vehicle trips during operations. A traffic study was conducted in compliance with the TISG guidelines and can be found in **Appendix L**.

During operations, the project site would be remotely monitored. However, up to 12 employees would visit the project site up to four times per year for panel washing and regular maintenance, resulting in approximately 24 daily trips approximately four times per year. VMT impacts are anticipated to be less than significant for the project operations since the number of employee vehicle trips are substantially less than the TISG threshold of 110 daily vehicle trips. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.12-3: The project would not 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.

The project would impact SR-58 and Harper Lake Road near the project site as workers travel to and from the project site during project construction and operations. As stated in **Appendix L**, the heaviest use would be during construction activities when, on average, up to 150 workers would travel to and from the site, while during peak construction is it estimated that up to 300 workers may commute to the site with an additional estimate of 25 truck trips during this period. Peak construction may see up to 325 inbound trips per day. Up to 12 workers would continue to access the project four times a year over a period of approximately 20 days for panel washing and routine maintenance.

Off-site improvements would include potential paving and widening of off-site access roads and would be completed as required to the County's standards and in consultation with the County.

Primary access points via SR-58 to Harper Lake Road would be used by construction activities. Those access points would remain in place during operation of the project, and access would be limited to

maintenance, washing, repairs to project equipment, and other activities that would occur infrequently. The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.12-4: The project could result in inadequate emergency access. Impacts would be less than significant.

Due to the short-term nature of the construction activities, the project's construction activities would not require a new, or significantly interfere with an existing, risk management, emergency response, or evacuation plan. It is anticipated that the County would require Conditions of Approval, which would include implementation of safety measures in a CMP such as directing construction traffic with a flag person (as needed to maintain safety adjacent to existing roadways), placing temporary traffic control signage along access routes to indicate the presence of heavy vehicles and construction traffic, ensuring access for emergency vehicles to the project, and other measures.

The project would not develop new public roads or introduce new hazards to roads leading to the project site and gen-tie. Vehicular access to the project would be provided via primary and secondary access points described under Impact 3.12-1. Access to the gen-tie line would be provided via the existing entrance to the Mojave Solar Facility at the intersection of Lockhart Ranch Road and Harper Lake Road. All emergency access would be provided via these two access points. All access roads interior to the project site would be constructed consistent with County Fire code. The project would not result in inadequate emergency access during operation, and impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant.

Impact 3.12-5: The project could result in a cumulative impact related to transportation. Impacts would be less than significant.

Cumulative projects that would have the potential to be considered in a cumulative context with the projects' incremental contribution, and that are included in the analysis of cumulative impacts relative to transportation, are identified in **Table 3-1, Cumulative Projects**, in Section 3.0, Introduction to Environmental Analysis, of this EIR.

Of the projects identified in **Table 3-1**, five would access their sites from SR-58 and Harper Lake Road: Harper Lake Solar PV, Desert Breeze Solar, Jazmin Solar Energy, and Lockhart PV II Solar. Lockhart PV I Solar was commissioned in 2023, and therefore, would not contribute to additional construction ADT on SR-58 or Harper Lake Road. It is anticipated that the project construction schedule could at least partially overlap with Desert Breeze Solar and Lockhart PV II Solar, such that construction of these

projects could each generate temporary traffic volumes associated with construction workers commuting to the project locations.

As a standard condition of approval, the project, Desert Breeze Solar, and Lockhart PV II Solar would be required to provide a CMP to the County Department of Public Works, Traffic Division prior to the issuance of grading permits. Each CMP would require scheduling construction traffic ingress/egress, including coordination with nearby projects, to minimize traffic obstructions and avoid impacts to local roadways.

Similar to the project, any cumulative project that would be subject to environmental review would be required to evaluate VMT on a project-by-project basis. If the cumulative project were determined to have potentially significant VMT impacts, it would be required to include the appropriate mitigation measures to reduce VMT impacts to a less-than-significant level. As the project would result in a less-than-significant impact on VMT, the project would similarly result in a less-than-significant impact on VMT in cumulative conditions, and any further analysis is not necessary.

Traffic generated by the project would occur primarily as a result of construction workers traveling to and from the project while operations traffic impacts would be considered minimal given the small number of employees, approximately 300 construction employees compared to the approximately 12 operation employees. Construction vehicles would access the project from Harper Lake Road and SR-58. Regarding geometric hazards, the project would not result in a significant impact due to a design feature. Each cumulative project would be reviewed by the County to ensure compliance with applicable County requirements that would allow for safe access for vehicles, pedestrian, and bicyclists.

Furthermore, since modifications to access and circulation plans are largely confined to a project site and immediate surrounding area, a combination of impacts with other cumulative projects that could potentially lead to cumulative impacts is not anticipated. Therefore, there would neither be a significant cumulative impact regarding geometric hazards nor would the project's potential contribution to cumulative impacts associated with hazardous design conditions be significant.

With regard to emergency access, the project would not result in a significant impact. The project site and the surrounding area are developed with existing roadway networks, and with existing routes for emergency vehicles and evacuation. Similar to the project, cumulative projects would be required to implement a similar CMP to include construction traffic measures to ensure adequate emergency access is maintained in and around the cumulative project sites throughout construction activities. Coordination of these plans would ensure that construction activities of concurrent cumulative projects and any associated hauling activities are managed in collaboration with one another and with the project. Therefore, there would neither be a significant cumulative impact regarding emergency access nor would the project's potential contribution to cumulative impacts associated with emergency access be considerable.

Mitigation Measures: None required.

Level of Significance: Less than significant.

3.13 Utilities and Service Systems

This section evaluates the potential utilities and service systems impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the affected environment and regulatory setting for utilities and service systems, discusses potential impacts related to utilities and service systems, and includes mitigation measures required to reduce or avoid these impacts, if applicable.

Information in this section is largely based on project-specific technical reports including the Stormwater Drainage Report (included as **Appendix I**), prepared by SWCA Environmental Consultants. Specific information regarding groundwater resources and water supply was obtained from the Water Supply Assessment, also prepared by SWCA Environmental Consultants (included as **Appendix J**). Information regarding existing aquatic features within the project site was obtained from the Biological Resources Technical Report prepared by Corvus Ecological Consulting (included as **Appendix D**). San Bernardino County (County) received comments from the Lahontan Regional Water Quality Control Board during the scoping period (the comment letter is included in **Appendix A**), and those comments have been incorporated into this section.

3.13.1 Environmental Setting

The project site comprises vacant and undeveloped lands, with the exception of a few unpaved roads. Additionally, several transmission lines transect the northernmost portion of the project parcel from east to west; however, these are located north of the proposed project footprint. The generation interconnect (gen-tie) corridor is located within the existing fenceline of the adjacent Mojave Solar Facility, along an existing constructed drainage canal. Land uses in the project vicinity primarily consist of utility-scale solar facilities including the Lockhart PVI Solar Facility to the north and the Mojave Solar Facility to the east, and additional vacant and undeveloped lands to the west and south. Additionally, several rural residences exist in the project vicinity along Harper Lake Road, the closest being approximately 1 mile east of the proposed solar facility and 0.3 mile south of the proposed gen-tie line.

3.13.1.1 Water

The project lies within the Centro Subarea of the Harper Valley Groundwater Basin, which is a subbasin of the Mojave Groundwater Basin, within the boundary of the Mojave Water Agency (MWA) service area. Groundwater is the primary source of water supply within the MWA service area. Groundwater sources within the basin primarily consist of recharge from the Mojave River, imported water from the State Water Project (SWP), subsurface flows from the Centro Subarea, and return flow from urban runoff and from irrigation activities (e.g., percolation through the ground surface). The project is not connected to a public water system and there are no public water systems that can serve the project. Rather, the project site lies within an adjudicated water basin and groundwater is actively managed to achieve sustainability. Four existing, operational groundwater wells present within the adjacent Mojave Solar Facility would provide water supply for the project. The adjacent Mojave Solar Facility has secured water rights of 2,163 acre-feet per year (AFY). On average, the Mojave Solar Facility has produced water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. As a result, the accumulated Carry Over Right for the Mojave Solar Facility is 3,144 AF for the 2022–2023 Water Year (**Appendix J**).

As discussed in **Appendix J**, a Stipulated Judgment was issued by the Superior Court in January of 1996 (Superior Court, Judgment after Trial for City of Barstow, et al. vs. City of Adelanto, et al., Case No. 208568, January 10, 1996) to address water supply shortages in the Mojave Basin where the proposed project is located. The adjudication of the Mojave Basin was the legal process that allocated the right to produce water from the natural water supply. As mandated in the Judgment, the MWA was appointed as the Basin Watermaster and tasked with the responsibility of sustainably managing water supplies in the Mojave Basin.

The Judgment determines water rights for each major producer (defined as a person or entity using 10 AFY or more) based on their historical production. These rights are referred to as Base Annual Production (BAP). Specifically, BAP rights were assigned per court Judgment to each major producer. The BAP represents the highest possible production for a given producer. Due to historic overdraft, the intention of the BAP was to provide a mechanism for incrementally reducing the annual production, or pumping, within the basin subareas. As part of the mechanism for incrementally reducing annual production, each of the producers is assigned a Free Production Allowance (FPA). The FPA is a percentage of the BAP and varies based on factors such as climate trends, river flows, purpose of water use, specific location within the basin, and other variables. The FPA has been consistently reduced since the adjudication for most subareas, and it is reassessed annually for the continued reduction of production so that sustainable groundwater levels are attained within the subareas. Producers are limited to pumping a varying percentage of their BAP, and sometimes a small percentage, as a result. A Production Safe Yield (PSY) is reached once a subarea has attained a balance between water sources that add water to the groundwater and water extractions. For subareas that have attained PSY, the long-term trend for the FPA should stabilize as a flat line. The FPA is lowered for subareas that have not attained a PSY. As a result of these regulations, annual pumping has steadily decreased within the Centro Subarea from 25,859 AFY in 1994 to 15,452 AFY in 2022. According to the latest annual report for the Mojave Basin Area Watermaster, the PSY for the Centro Subarea is 21,088 acre-feet (AF), with an FPA of 31,260 AF and a BAP of 51,030 AF. This indicates that for the Centro Subarea, the PSY departs from the FPA by 10,172 AF, which is 19.9 percent of the BAP (**Appendix J**). The adjudication of the affected subbasin provides for a number of goals, such as 1) protecting and allocating the rights of water producers, and 2) protecting the water supply and ensuring its sustainability and availability in the future. It accomplishes these goals by first assigning rights to the producers and then by controlling the amount of water that can be produced by those rights to ultimately bring groundwater levels into balance (i.e., the inflow to the basin matches the outflow) and then maintain that balance. The adjudication considers changes to the needs of production and allows for flexibility to accommodate those changes. Additionally, the adjudication created an ongoing process where groundwater reports are provided to the court on a regular basis to ensure long-term stability of basin water supplies.

The MWA also implements its Urban Water Management Plan (UWMP), which was last updated in 2020. The UWMP evaluates the water source reliability over a 45-year planning period and is prepared by urban water suppliers once every five years. MWA's 2020 UWMP, adopted on May 27, 2021, evaluates trends in population, water use, and water supplies within the MWA service area for a 45-year planning period through 2065 (MWA 2021). While the UWMP covers the MWA service area, it does not provide a detailed assessment of the projected water demand specifically for the Centro subarea (Tully & Young

2021). In addition, the project does not plan to use water supplied by the MWA for either construction or operations requirements (SWCA 2023b).

3.13.1.2 Wastewater

The majority of residential properties located within the County's Desert Region (in which the project is located) are served by on-site private sewage treatment systems (septic tanks). The existing Mojave Solar Facility septic systems each hold approximately 2,000 gallons and are pumped once per year. The adjacent and existing Lockhart PV I Solar Facility includes an existing operations and maintenance building, warehouse, employee building, and water and septic systems. These facilities would also be shared by the approved Lockhart PV II Solar Facility and Desert Breeze Solar Facility once operational. The adjacent Mojave Solar Facility also includes two existing operations and maintenance buildings with water and septic systems, which the project would utilize. The project is not currently served by a public wastewater treatment service provider and does not contain any private septic systems.

3.13.1.3 Stormwater

Under current conditions, on-site drainage within the project site is conveyed as natural overland flow from southwest to northeast. Two distinct aquatic features exist within the project parcel: one that crosses the northwest portion of the project parcel (herein referred to as the northern watercourse), and one that crosses the southeast portion of the project parcel (herein referred to as the southern watercourse). Both the northern and southern watercourses cross the project parcel but are outside of the project site and development footprint (**Appendix D**).

The southern watercourse flows into an existing, constructed drainage canal that runs along the southern boundary of the Mojave Solar Facility. The northern watercourse crosses the northwest corner of the project parcel; however, an existing drainage berm exists within the western portion of the project parcel, running from north to south, which redirects off-site drainage flows to the north into a large, human-made channel located outside of the project site. This drainage berm borders the project site to the west and gently slopes downwards from east to west, away from the proposed solar array. Thus, flows coming from southwest to northeast along the northern watercourse are redirected to the north by this existing drainage berm before crossing the project parcel. The project would not impact this existing drainage berm. Off-site drainage from both the west and south would ultimately have a confluence approximately 2 miles northeast of the project site within Harper Lake, a dry lakebed.

3.13.1.4 Electric Power

The project site is not currently served by any existing electric power facilities. However, existing electric power facilities exist in the project vicinity, including the adjacent Mojave Solar Facility and the Lockhart PV I Solar Facility. Additionally, electrical transmission lines and substations are also in the project vicinity associated with these existing solar facilities. There are also existing electric power distribution lines along Harper Lake Road.

3.13.1.5 Telecommunications

The project site is not currently served by any existing telecommunications facilities. However, some existing telecommunications facilities also exist in the project vicinity, associated with the adjacent solar facilities.

3.13.1.6 Natural Gas

The project site is not currently served by any existing natural gas facilities.

3.13.1.7 Solid Waste

San Bernardino County Solid Waste Management Division is responsible for operation and management of the County's solid waste disposal system. The system consists of five regional landfills and nine transfer stations (San Bernardino County 2023). The regional landfill closest to the project is the Barstow Sanitary Landfill, located approximately 22 miles to the southeast. The Barstow Sanitary Landfill has a maximum permitted capacity of 80,354,500 cubic yards (cy) with a remaining capacity of 71,481,660 cy as of December 31, 2014, and a cease operations date of May 1, 2071 (CalRecycle 2023).

3.13.2 Regulatory Framework

3.13.2.1 Federal

Safe Drinking Water Act

Passed in 1974 and amended in 1986 and 1996, the Safe Drinking Water Act grants the U.S. Environmental Protection Agency (USEPA) the authority to set drinking water standards. Drinking water standards apply to public water systems that provide water for human consumption through at least 15 service connections or regularly serve at least 25 individuals. There are two categories of drinking water standards: the National Primary Drinking Water Regulations and the National Secondary Drinking Water Regulations. The National Primary Drinking Water Regulations are legally enforceable standards that apply to public water systems. These standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water. The National Secondary Drinking Water Regulations are nonmandatory guidelines for certain substances that do not present a risk to public health.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), which amends the Solid Waste Disposal Act of 1965, was enacted in 1976 to address municipal and industrial solid waste generated nationwide. The act gives the USEPA the authority to control hazardous waste from "cradle to grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The federal Hazardous and Solid Waste Amendments to the RCRA were adopted in 1984 and were aimed at waste minimization and phasing out land disposal of hazardous waste, as well as providing guidance for corrective action of releases. The amendments also allowed for increased enforcement authority for the USEPA, more stringent hazardous waste management standards and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 further enabled the USEPA to address environmental hazards relative to underground tank storage of petroleum and other hazardous substances.

3.13.2.2 State

Safe Water Drinking Act

Similar to the federal act, California implements the State's Safe Drinking Water Act (Health and Safety Code Section 116270 et seq.) to ensure public health and safety relative to clean drinking water. Under

this act, the California Department of Public Health has the authority to protect public drinking water by adopting contaminant levels not to be exceeded in potable water supplies. Such thresholds are equal to or more stringent than established at the federal level under the USEPA.

National Pollutant Discharge Elimination System Construction General Permit

Construction activities disturbing 1 acre or more of land, as proposed for the project site, are subject to the permitting requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit and must apply for Construction General Permit coverage. For all new projects, applicants must electronically file permit registration documents using the Stormwater Multiple Applications and Report Tracking Systems, and must include a Notice of Intent, risk assessment, site map, and a Stormwater Pollution Prevention Plan (SWPPP) to be covered by the Construction General Permit prior to beginning construction. The risk assessment and SWPPP must be prepared by a State-qualified SWPPP Developer.

California Water Plan

Water Code Sections 10004 through 10013 describe the components and characteristics of the California Water Plan prepared by the California Department of Water Resources. The plan addresses the coordinated control, protection, conservation, development, and utilization of the State's water resources. Updated every 5 years, the most recent water plan is the California Water Plan Update 2023, which was adopted in December 2023.

The California Water Code requires that a water supply assessment (WSA) address the following questions:

- Is there a public water system that will service the project?
- Is there a current UWMP that accounts for the project demand?
- Is groundwater a component of the supplies for the project?
- Are there sufficient supplies to serve the project over the next 20 years?

Senate Bill 610

Senate Bill (SB) 610 amended Water Code Sections 10910 and 10912 to create a direct relationship between water supply and land use. SB 610 requires water suppliers to prepare a WSA for inclusion in the California Environmental Quality Act (CEQA) process for new development. Section 15155 of the CEQA Guidelines details the types of projects that require a WSA per SB 610. A WSA is required if (among other conditions):

- A project would result in the construction of more than 500 residential units and/or require a water demand equivalent to, or greater than, a 500-dwelling-unit project;
- A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial office building that would employ more than 1,000 persons or have more than 250,000 square feet of floor space;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house

more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;

- A project would include a hotel or motel, or both, having more than 500 rooms;
- A mixed-use project that includes one or more of the projects specified above;
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project; and/or
- For public water systems with fewer than 5,000 service connections, a project that meets the following criteria:
 1. A proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of a public water system's existing service connections; or
 2. A mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

Because the proposed project is an industrial facility occupying more than 40 acres of land, a WSA has been prepared for the project and is included in **Appendix J** of this Environmental Impact Report (EIR).

California Integrated Waste Management Act (AB 939)

Assembly Bill (AB) 939 established the California Integrated Waste Management Act (IWM Act) of 1989 (Public Resources Code [PRC] Sections 42900–42927), which required all California cities and counties to reduce the volume of solid waste deposited in landfills by 50 percent by the year 2000. It also requires that cities and counties continue to remain at 50 percent or higher for each subsequent year. The act is intended to reduce, recycle, and reuse solid waste generated to the maximum extent feasible.

The act requires each California city and county to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the act's mandated diversion goals. Each jurisdiction's SRRE must include specific components as defined in Public Resources Code Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated in the jurisdiction consistent with the following hierarchy: (1) source reduction; (2) recycling and composting; and (3) environmentally safe transformation and land disposal. The SRRE is required to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste to be disposed of by transformation and land disposal (PRC Sections 40051, 41002, and 41302). As landfills reach their capacities and new landfill sites become increasingly difficult to establish, the need to reduce solid waste generation is significant. AB 939 currently requires that local jurisdictions divert at least 50 percent of their solid waste from landfills through recycling, conservation and composting. San Bernardino County is required to comply with State regulations.

Title 24, Part 11 of the California Code of Regulations, California Green Building Standards

The California Green Building Standards (CALGreen) requires a minimum of 65 percent of nonhazardous construction and demolition debris be recycled or salvaged for reuse. CALGreen applies to most new residential and non-residential construction and demolition projects, and certain additions and alteration projects. The requirement went into effect on January 1, 2017, after being amended from a 50 percent diversion rate in 2011. In accordance with CALGreen requirements, the County requires a Construction Waste Management Plan to be submitted prior to the start of a project. The purpose of this plan is to provide an estimation of how much construction debris will be generated from a project and to describe how it will be managed.

Title 22 of the California Code of Regulations Division 4.5

Title 22 of the California Code of Regulations discusses an array of requirements with respect to the disposal and recycling of hazardous and universal wastes. Specific standards and requirements are included for the identification, collection, transportation, disposal, and recycling of hazardous wastes. Additional standards are included for the collection, transportation, disposal, and recycling of universal wastes, where universal wastes are defined as those wastes identified in Section 66273.9 of Title 22 of the California Code of Regulations, including batteries, electronic devices, mercury-containing equipment, lamps, cathode ray tubes, and aerosol cans. Requirements include recycling, recovery, returning spent items to the manufacturer, or disposal at an appropriately permitted facility. Division 4.5 of Title 22 also provides restrictions and standards relevant to waste destination facilities and provides authorization requirements for various waste handlers. Title 22 includes California's Universal Waste Rule, as well as other additional waste handling and disposal requirements.

California Solid Waste Reuse and Recycling Access Act of 1991 or Senate Bill 1327

The California Solid Waste Reuse and Recycling Access Act of 1991 (PRC Chapter 18) identified a lack of adequate areas for collecting and loading recyclable materials, resulting in a significant impediment to diverting solid waste. This act requires State and local agencies to address access to solid waste for source reduction, recycling, and composting activities. Each local agency must adopt an ordinance related to adequate areas for collecting and loading recyclable materials for development projects.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA) created a framework to promote the sustainable management of groundwater resources by local agencies. It creates requirements applicable to groundwater basins that have been designated as high- or medium-priority by DWR under California Water Code Section 10933. The SGMA addresses the depletion of groundwater resources by mandating the formation of groundwater sustainability agencies tasked with developing and implementing groundwater sustainability plans tailored to local basins. These plans outline strategies, such as recharge and demand management, to achieve sustainability within 20 years, guided by set goals and criteria. The framework outlined by the SGMA does not apply to the project because the project is underlain by the Harper Valley Groundwater Basin, a subbasin designated very low priority by the DWR (DWR 2014).

California Water Action Plan

The California Water Action Plan (WAP), released in January 2014, was developed to move California toward more sustainable water management. The WAP includes three objectives: 1) more reliable water supplies; 2) restoration of important species and habitat; and 3) a more resilient sustainable managed water resources system. The WAP also includes 10 actions to move California towards more sustainable water management by providing a more reliable water supply, restoring important wildlife habitat and species, and helping the State's water systems and environment become more resilient. The WAP is intended to complement and leverage local efforts through collaboration between State, federal, and local governments, regional agencies, tribal governments, and the public and private sectors (USEPA et al. 2014).

3.13.2.3 Regional

Urban Water Management Plan

Public water systems are required by the California Water Code to prepare UWMPs to carry out "long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water" (Water Code Section 10610.2). UWMPs are prepared using input from multiple water systems operating in a region and include assessment of the reliability of water supply over a 20-year period and account for known and projected water demands during that time, including during normal, single-dry, and multiple-dry water years.

The MWA maintains a UWMP for the entire service area, which was last updated in 2020. MWA extended the planning horizon in 2020 UWMP from the statutorily required 20-year period to a 45-year period through 2065. The project site lies within an adjudicated water basin, and therefore, groundwater within the Mojave Basin is actively managed to achieve sustainability. As part of the UWMP, an analysis was performed to determine if MWA has adequate water supplies to meet demands during average, single-dry and multiple-dry years over the next 45 years. The report concluded that there would be adequate water supplies for such conditions over the time period considered (MWA 2021).

3.13.2.4 Local

Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan (CIWMP) was developed in response to the Statewide Integrated Waste Management (IWM) Act of 1989. The IWM Act outlines responsibilities of local governments regarding waste management practices and programs and the CIWMP addresses those requirements for the County. The CIWMP is updated every 5 years and includes four elements and a Summary Plan. As part of the CIWMP, the County is required to demonstrate that there is at least 15 years of remaining disposal capacity to serve all jurisdictions within the County. The Summary Plan contains the goals and policies as well as a summary of integrated waste management issues facing the County. It also summarizes waste management programs and the steps needed to cooperatively implement programs among the County's jurisdictions to meet the 25 percent and 50 percent diversion mandates. The most recent CIWMP was updated in April 2018 (San Bernardino County 2018).

San Bernardino County Development Code

Title 8, Division 4, Chapter 84.29, Renewable Energy Generation Facilities

Section 84.29.070 of the San Bernardino County Development Code includes the County's decommissioning requirements for renewable energy generation facilities. Included therein is the requirement to develop a Closure Plan. In accordance with these requirements, the project owner shall prepare a Closure, Revegetation, and Rehabilitation Plan and submit it to the Planning Division for review prior to building permit issuance. Under this plan, all aboveground structures and facilities shall be removed to a depth of 3 feet below grade, and removed offsite for recycling or disposal. Concrete, piping, and other materials existing below 3 feet in depth may be left in place. Areas that had been graded shall be restored to original contours unless it can be shown that there is a community benefit for the grading to remain as altered. Succulent plant species native to the area shall be salvaged prior to construction, transplanted into windrows, and maintained for later transplanting following decommissioning. Shrubs and other plant species shall be revegetated by the collection of seeds and re-seeding following decommissioning. The project owner shall perform site closure activities to meet federal, State, and local requirements for the rehabilitation and revegetation of the project site after decommissioning.

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County's General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022).

Infrastructure and Utilities Element

GOAL IU-1	Water Supply. Water supply and infrastructure are sufficient for the needs of residents and businesses and are resilient to drought.
<i>Policy IU-1.1</i>	Water Supply. We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.
<i>Policy IU-1.7</i>	Areas Vital for Groundwater Recharge. We allow new development on areas vital for groundwater recharge when stormwater management facilities are installed onsite and maintained to infiltrate predevelopment levels of stormwater into the ground.
<i>Policy IU-1.8</i>	Groundwater Management Coordination. We collaborate with watermasters, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other "undesirable results" as defined

in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater Management Ordinance.

GOAL IU-3

Stormwater Drainage. A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.

Policy IU-3.1

Regional Flood Control. We maintain a regional flood control system and regularly evaluate the need for and implement upgrades based on changing land coverage and hydrologic conditions in order to manage and reduce flood risk. We require any public and private projects proposed anywhere in the county to address and mitigate any adverse impacts on the carrying capacity and stormwater velocity of regional stormwater drainage systems.

Policy IU-3.2

Local Flood Control. We require new development to install and maintain stormwater management facilities that maintain predevelopment hydrology and hydraulic conditions.

Policy IU-3.4

Natural Floodways. We retain existing natural floodways and watercourses on County-controlled floodways, including natural channel bottoms, unless hardening and channelization is the only feasible way to manage flood risk. On floodways not controlled by the County, we encourage the retention of natural floodways and watercourses. Our priority is to reduce flood risk, but we also strive to protect wildlife corridors, prevent loss of critical habitat, and improve the amount and quality of surface water and groundwater resources.

Policy IU-3.5

Fair Share Requirements. We require new development to pay its fair share of capital costs to maintain adequate capacity of the County's regional flood control systems.

GOAL IU-4

Solid Waste. Adequate regional landfill capacity that provides for the safe disposal of solid waste, and efficient waste diversion and collection for unincorporated areas.

GOAL IU-5

Power and Communications. Unincorporated area residents and businesses have access to reliable power and communication systems.

Policy IU-5.3

Underground Facilities. We encourage new and relocated power and communication facilities to be located underground when feasible, particularly in the Mountain and Desert regions.

Policy IU-5.4

Electric Transmission Lines. We support the maintenance of existing and development of new electric transmission lines along existing rights-of-way and easements to maintain the stability and capacity of the electric distribution system in southern California.

Policy IU-5.5

Energy and Fuel Facilities. We encourage the development and upgrade of energy and regional fuel facilities in areas that do not pose significant

environmental or public health and safety hazards, and in a manner that is compatible with military operations and local community identity.

Policy IU-5.6

Dig Once Approach. We encourage infrastructure, telecommunication, and utility planning and projects to coordinate so that improvements are made concurrently or in such a manner that minimizes disruption to rights-of-way and reduces costs.

Natural Resources Element

GOAL NR-2

Water Quality. Clean and safe water for human consumption and the natural environment.

Policy NR-2.4

Wastewater Discharge. We apply federal and state water quality standards for wastewater discharge requirements in the review of development proposals that relate to type, location, and size of the proposed project in order to safeguard public health and shared water resources.

Policy NR-2.5

Stormwater Discharge. We ensure compliance with the County's Municipal Stormwater NPDES (National Pollutant Discharge Elimination System) Permit by requiring new development and significant redevelopment to protect the quality of water and drainage systems through site design, source controls, stormwater treatment, runoff reduction measures, best management practices, low impact development strategies, and technological advances. For existing development, we monitor businesses and coordinate with municipalities.

Renewable Energy and Conservation Element

GOAL RE-2

Renewable Energy Systems. The County will be home to diverse and innovative renewable energy systems that provide reliable and affordable energy to our unique Valley, Mountain, and Desert regions.

Policy RE-2.1

Support solar energy generation, solar water heating, wind energy and bioenergy systems that are consistent with the orientation, siting and environmental compatibility policies of the General Plan.

Policy RE-2.1.1

Utilize renewable energy development standards in the Development Code to minimize impacts on surrounding properties.

Policy RE-2.2

Promote use of energy storage technologies that are appropriate for the character of the proposed location.

Policy RE-2.2.1

Encourage onsite energy storage with RE generation facilities, consistent with County Development Code requirements.

Policy RE-2.2.2

Encourage and allow energy storage facilities as an accessory component of RE generation facilities.

GOAL RE-4

Environmental Compatibility. The County will establish a new era of sustainable energy production and consumption in the context of sound resource

	conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels.
<i>Policy RE-4.1</i>	Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.
<i>Policy RE-4.1.2</i>	RE development applications shall be subject to thorough environmental review, including consideration of water consumption, before being permitted.
<i>Policy RE-4.2</i>	Ensure that renewable energy facilities do not disrupt, degrade, or alter the local hydrology and hydrogeology.
<i>Policy RE-4.2.1</i>	Require a groundwater impact assessment that evaluates the short and long-term impacts to groundwater usage.
<i>Policy RE-4.3.3</i>	Give preference to the utilization of existing infrastructure to minimize the need for additional transmission development.
<i>Policy RE-4.6</i>	Require all recyclable electronic and/or toxic materials to be recycled in accordance with the requirements of the Basel Convention or comparable standard.
GOAL RE-5	Siting. Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.
<i>Policy RE-5.1</i>	Encourage the siting of RE generation facilities on disturbed or degraded sites in proximity to necessary transmission infrastructure.
<i>Policy RE-5.1.2</i>	Siting of community-oriented and utility-oriented RE generation facilities will conform to applicable standards set forth in the Development Code.
<i>Policy RE-5.3</i>	Collaborate with utilities and RE generation facility developers to encourage collocation of transmission and intertie facilities.
<i>Policy RE-5.4.3</i>	Direct utility-oriented RE generation facilities that may require transmission upgrades to seek sites within existing transmission corridors.

3.13.3 Thresholds for Determination of Significance

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this EIR, the project may have a significant adverse impact related to utilities and service systems if it would do any of the following:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future

development during normal, dry and multiple dry years.

- 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.
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

3.13.4 Project Impacts and Mitigation

Impact 3.13-1: The project would not require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, which could cause significant environmental effects. Impacts would be less than significant.

Construction

Water

The project would require an estimated 200 AF of water during the approximately 26-month construction period. Annual water demand during construction is estimated to be approximately 89 AFY for the first two years and approximately 30 AF for the final two months, used for common construction-related purposes, including dust control (**Appendix J**). Water required during construction would be supplied from four existing, active groundwater wells located within the adjacent Mojave Solar Facility. The Mojave Solar Facility has secured water rights of 2,163 AFY. On average, the Mojave Solar Facility has produced water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. As a result, the accumulated Carry Over Right for the Mojave Solar Facility is 3,144 AF for the 2022–2023 Water Year. Therefore, the projected water demand associated with the project, totaling 200 AF during construction and 11 AFY during operation, falls within the water rights allocation designated for the Mojave Solar Facility. Moreover, carryover water rights are expected to continue, even with the inclusion of the project's water demand because Mojave Solar Facility's water usage consistently falls below its annual allocation. The resulting accumulation of FPA by the Mojave Solar Facility indicates that the water supplies required to meet Mojave Solar Facility water demand, along with those of the project and reasonably foreseeable development, are accounted for by water supplies from the four wells (**Appendix J**). No new wells would be constructed as part of the project. For these reasons, the project would not require or result in the construction of new water facilities, which could cause significant environmental effects. Thus, impacts during construction would be less than significant.

Wastewater Treatment

Construction of the project would generate a minimal volume of wastewater. During construction activity, wastewater would be contained within portable toilet facilities and disposed of at an approved disposal site. The San Bernardino County Environmental Health Services Department is responsible for

monitoring the use of portable toilet facilities, and a condition of approval would require the project applicant to provide documentation of a portable toilet pumping contract. No off-site sewage or disposal connections to a municipal sewer system exist or are proposed; thus, impacts during construction would be less than significant.

Stormwater Drainage

Water used during construction would run off into the aquatic features on the project parcel, which, as previously mentioned, are within the northwestern and southeastern portions of the project parcel. As a result, surface run-off events would generally be brief and infrequent, with rapid infiltration into the sandy substrate, and/or shallow ponding in low-lying areas quickly followed by high evaporation. All stormwater flows from the project site and in the project area ultimately flow into Harper Lake, a dry lakebed located approximately 3 miles east of the project site. As described in Section 3.9, Hydrology and Water Quality, of this EIR, the project would prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) during construction and decommissioning, which would include best management practices (BMP) designed to prevent the occurrence of soil erosion and discharge of other construction-related pollutants that could contaminate water quality. Preparation and implementation of a SWPPP would be required because the project would disturb more than 1 acre of land during construction and during eventual decommissioning.

There is one existing drainage berm within the western portion of the project site, running from north to south, and the project would not impact this existing feature. There are no other constructed stormwater drainage systems present on-site and stormwater on the project site either percolates on-site or drains off-site by way of existing aquatic features. As discussed in Section 3.9, Hydrology and Water Quality, all stormwater flows from the project site would be sufficiently managed through maintenance of a drainage easement to the west of the existing berm; construction of small retention basins throughout the solar panel areas and project site; installation of culverts and drainage channels to facilitate the controlled conveyance of runoff across the project site; and BMPs such as vegetated swales, permeable surfaces, and infiltration trenches to reduce surface runoff (**Appendix I**). Implementation of these stormwater drainage features would ensure the project would not result in significant impacts related to stormwater drainage. Ultimately, no off-site connections to a municipal stormwater facility exist or are proposed, and the project would not relocate any existing stormwater facilities. Although the project would include new stormwater management features on the project site, all improvements during construction would be made within areas of the project site, and potential impacts from this work are discussed within the respective sections of this EIR. Thus, impacts during construction would be less than significant.

Electric Power

Power required for project construction activities, such as for the temporary construction trailers, would be provided via portable generators or temporary local distribution. Southern California Edison (SCE) operates distribution circuits in the project area. The project applicant would coordinate with SCE to obtain access to a nearby distribution circuit, if needed. The project also includes the construction of a gen-tie line that would transmit electricity to the existing SCE Kramer Junction Substation, via connection with an existing gen-tie line south of the existing Alpha Substation, which is owned by

Mojave Solar, LLC, located approximately 1.1 miles east of the project site. From there, the existing gen-tie line connects to the existing Sandlot Substation, which then connects with the SCE Kramer-Coolwater Transmission Line, which connects in turn with the Kramer Junction Substation. All improvements during construction would be made within areas of the project site and gen-tie corridor, and potential impacts from this work are discussed within the respective sections of this EIR. Thus, impacts during construction would be less than significant.

Natural Gas

Natural gas would not be required to support construction activities. No off-site natural gas connections are proposed during construction; thus, impacts during construction would be less than significant.

Telecommunications Facilities

Telecommunications equipment, such as fiber-optic lines, would be installed throughout the project site. Telecommunications equipment would be connected to the project from existing telecommunications infrastructure in the project vicinity and may be co-located on aboveground structures, such as transmission lines. Trenching could be required to install some of the telecommunications equipment. All improvements during construction would be made within areas of the project site and gen-tie corridor, and potential impacts from this work are discussed within the respective sections of this EIR. Thus, impacts during construction would be less than significant.

Operation

Water

The project would require an estimated 330 AF of water during the approximately 30-year lifespan of the project. Therefore, the yearly water demand for the project is assumed to be 11 AFY (330 AF/30 years), for panel washing and fire suppression (**Appendix J**). Water required during operation would be supplied from existing, active groundwater wells located within the adjacent Mojave Solar Facility. No new wells would be constructed as part of the project. For these reasons, the project would not require or result in the construction of new water facilities, which could cause significant environmental effects. Thus, impacts during operation would be less than significant.

Wastewater Treatment

The project would not require or result in the relocation or construction of new or expanded municipal wastewater facilities, and no connection to a public wastewater system would be required or proposed. During operation, the project would be operated remotely and would not require the presence of full-time, on-site employees. Panel washing would be required at least once per year and potentially up to four times per year. Panel washing may require up to 12 employees with water trucks and would take approximately 20 days to complete, per occurrence. During project operation, wastewater generated by panel washing employees would be minimal. Temporary operations and maintenance employees would use the existing operations and maintenance facilities at the adjacent Mojave Solar Facility for domestic water and toilet facilities. Therefore, impacts related to wastewater treatment would be less than significant during operation.

Stormwater Drainage

As previously mentioned, there is an existing drainage berm running north to south along the western boundary of the project site, which slopes downwards from east to west directing stormwater flows away from the project site and north into a large human-made channel. The project would retain this existing drainage berm. There are no other constructed stormwater drainage systems present on-site. As discussed in Section 3.9, Hydrology and Water Quality, all stormwater flows from the project site would be sufficiently managed through maintenance of a drainage easement to the west of the existing berm; construction of small retention basins throughout the solar panel areas and project site; installation of culverts and drainage channels to facilitate the controlled conveyance of runoff across the project site; and BMPs such as vegetated swales, permeable surfaces, and infiltration trenches to reduce surface runoff (**Appendix I**). Implementation of these stormwater drainage features would ensure the project would not result in significant impacts related to stormwater drainage during operation. Furthermore, with implementation of these on-site features, operation of the project would not require the construction or relocation of any off-site stormwater drainage features. Thus, impacts during operations and maintenance would be less than significant.

Electric Power

Any power required for operational and maintenance activities would be provided by the proposed project's electrical generation or supplied by the local power provider. SCE operates distribution circuits in the project area. The project applicant would coordinate with SCE to obtain access to a nearby distribution circuit, if needed. Operation of the proposed project would not require or result in the construction of new electrical facilities, which could cause significant environmental effects; thus, impacts during operation and maintenance would be less than significant.

Natural Gas

No natural gas is anticipated to be required for operation and maintenance of the project. The project would not require or result in the construction of new gas facilities, which could cause significant environmental effects; thus, impacts during operation and maintenance would be less than significant.

Telecommunication Facilities

As previously discussed, telecommunications equipment, such as fiber-optic lines, would be installed throughout the project site during construction to support project operation. Telecommunications equipment would be brought to the project from existing telecommunications infrastructure in the project vicinity. The proposed project would use local exchange carrier services for telecommunication to support remote monitoring requirements. Telecommunications would be supported by fiber optic lines either co-located on aboveground structures, such as transmission lines, or installed underground within the footprint of the proposed project to connect the supervisory control and data acquisition equipment within the project substation to local telecommunication lines within the project area. No off-site telecommunication connections are proposed during operation and maintenance located beyond the development footprint; thus, impacts during operation and maintenance would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.13-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

A WSA was prepared by SWCA Environmental Consultants to evaluate anticipated water supply and demand for the project's construction and operational phases (**Appendix J**). As described in the WSA prepared for the project, historic over-pumping in the Centro Subarea resulted in the Adjudication of the basin by the Mojave Water Agency in 1996. As a result, groundwater pumping has steadily decreased over time due to regulatory ramp downs by the Watermaster. In 1996, the Adjudication established a decreasing FPA to producers within the Centro Subarea which is subject to reevaluation every 5 years. If producers exceed their share of the FPA, they are required to provide replacement water, which can be purchased directly from the MWA-appointed Watermaster. As a result of these regulations, annual pumping has steadily decreased from 25,859 AFY in 1994 to 15,452 AFY in 2022 (**Appendix J**). Refer also to Section 3.9, Hydrology and Water Quality, for additional discussion of potential project effects on groundwater supplies.

The project would require an estimated 200 AF of water during the approximately 26-month construction period. Annual water demand during construction is estimated to be approximately 89 AFY for the first 2 years and approximately 30 AF for the final 2 months. The Mojave Solar Facility has secured water rights of 2,163 AFY. On average, the Mojave Solar Facility has produced water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. As a result, the accumulated Carry Over Right for the Mojave Solar Facility is 3,144 AF for the 2022–2023 Water Year. Therefore, the projected water demand associated with the project falls within the water rights allocation designated for the Mojave Solar Facility (**Appendix J**).

Water for project construction would be used for purposes of dust control and earthwork. It is anticipated that water trucks would be filled using existing and active groundwater wells located within the adjacent Mojave Solar Facility. Water would be spread on-site during construction to reduce potential visible fugitive dust from vehicular travel and wind erosion. Potable water for use by construction employees would be provided in bulk by the construction contractor through deliveries to the project site.

The project would require an estimated 330 AF of water during the approximately 30-year lifespan of the project, resulting in an annual water demand of 11 AFY. Water for project operation would be used for panel washing, general maintenance, and fire suppression purposes (**Appendix J**). The frequency of panel washing would be determined based on soiling of the photovoltaic (PV) panels and expected benefit from cleaning. However, panel washing would be required at least once per year and potentially up to 4 times per year. The project would also include operational water supply for fire suppression, which would be contained within a water tank located next to one of the existing wells within the adjacent Mojave Solar Facility.

Below is an analysis of projected water supplies in the Centro Subarea during normal, dry, and multiple dry years as compared to project water demand.

Normal (Average) Year

For normal year conditions, historical water inflow and outflow data were analyzed to create a projected future water budget for the Centro Subarea. While water inflow into the Centro Subarea comes from multiple sources, a majority of the water inflow comes from Mojave River recharge. Normal year estimates for future water inflow were based in part on the Mojave River's long-term average recharge rate (20-year average). Additionally, average annual precipitation for the most recent 40-year period of record (1983-2022) was used to project future rainfall recharge under normal year conditions. Based on historical conditions, average normal year groundwater inflow for the Centro Subarea was calculated to be 27,654.0 AFY, while average normal year water outflow was calculated to be 23,415.7 AFY (**Appendix J**). Thus, under normal year conditions, the Centro Subarea would have a surplus of 4,238.3 AFY. Moreover, the Mojave Solar Facility has secured water rights of 2,163 AFY while producing water at a rate of 1,532 AFY to meet Mojave Solar Facility water demands. Accordingly, the projected water demand associated with the project falls within the water rights allocation designated for the Mojave Solar Facility (**Appendix J**). Therefore, as project water demand would be 208 AF during construction and 11 AFY during operation, sufficient water supplies would exist to support the project during normal year conditions and impacts would be less than significant.

Single Dry Year

A probability-based estimate was used to determine water availability during a single dry year. Single dry year rainfall was estimated as a year with a 10 percent probability of occurrence, meaning that 10 percent of the years would be drier (**Appendix J**). During a single dry year, water outflow was calculated to exceed water inflow, resulting in overdraft. Specifically, the future single dry year deficit was calculated to be 4,662.75 AF. However, as described in the WSA, a single dry year would not affect the safe yield of the Centro Subarea and the aquifer would be expected to rebound following a single dry year (**Appendix J**). Moreover, the Mojave Solar Facility has secured water rights and the projected water demand associated with the project falls within the water rights allocation designated for the Mojave Solar Facility, as previously discussed. Due to the relatively low water demand of the project, expected rebound following a single dry year, and available water supply at the Mojave Solar Facility, sufficient water supplies would exist to support the project during single year conditions and impacts would be less than significant.

Multiple Dry Years

Multiple dry years were estimated using historical precipitation analysis. Rainfall was estimated for the driest 3-year period on record (2007–2009) and the average annual rainfall from this period was used to calculate future projected multiple dry year water supply. During this period, precipitation was 49.6 percent of the estimated normal-year conditions. Specifically, Year 1, Year 2, and Year 3 precipitation values represent 36 percent, 81 percent, and 36 percent of average annual rainfall, respectively. Under a future event of multiple dry years based on this period, the Centro Subarea would be in overdraft by 6,198.08 AF. Specifically, Year 1 would be in overdraft by 4,678.5 AF, Year 2 would be in surplus by 3,237.69 AF, and Year 3 would be in overdraft by 4,757.27 AF. However, the overdraft resulting from multiple dry years is notably less severe than under historical pumping conditions,

reflecting the cumulative impact of decreasing pumping on the Centro Subarea's water balance over the long term (**Appendix J**).

The approach herein represents a scenario based on the long-term 20-year recharge rate from the Centro Subarea, which captures less frequent surplus recharge events, and continued ramp downs on pumping until the basin's inflow is consistently greater than the historical average year, as required by the Adjudication. A recharge deficit would likely occur during a single dry year and over the course of multiple dry years; however, recharge deficits are likely regardless of regulatory ramp downs by the MWA or the project's water demand. The accrued groundwater deficit by the Centro Subarea drought conditions is offset by sporadic years with surplus recharge events such as 2011, when the groundwater recharge from the Mojave River totaled 103,021 AF, which is nearly six times greater than the 20-year average Mojave River recharge to the Centro Subarea (**Appendix J**).

Under this scenario, the Centro Subarea would remain in balance for the duration of project activities, including the initial construction phase and the remaining lifespan of the project. In general, the groundwater supply from the Centro Subarea is increasingly stable, principally due to regulatory ramp down on pumping, and would further recover over the next two decades. Moreover, the Mojave Solar Facility has secured water rights and the projected water demand associated with the project falls within the water rights allocation designated for the Mojave Solar Facility, as previously discussed. Therefore, the Centro Subarea's water supply, and the Mojave Solar Facility's water rights allocation, would account for the relatively low project demands of 208 AF for project construction and 330 AF for project operation during normal, dry, and multiple dry years, and impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.13-3: The 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. Impacts would be less than significant.

Refer to Impact 3.13-1, above. The project site is not currently served by public wastewater treatment service facilities and no off-site sewage or disposal connections to a municipal sewer system are proposed. During project construction, wastewater disposal needs would be provided on-site via portable toilet facilities. Disposal of such wastewater would occur at an approved disposal site. Employees conducting intermittent operations and maintenance activities associated with occasional panel washing events and maintenance work would use the existing operations and maintenance facilities at the adjacent Mojave Solar Facility for domestic water and toilet facilities. Although use of these existing facilities by employees conducting intermittent operations and maintenance activities would slightly increase the demand on the existing septic system, the increase would be negligible due to the limited operational work that is required for the project. No new public wastewater treatment services would be required. The project would not result in a determination by the wastewater treatment provider that serves the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.13-4: The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Impacts would be less than significant.

Construction

The County implements its Countywide Integrated Waste Management Plan to ensure the proper management and disposal of waste materials. The County's Solid Waste Management Division is responsible for the operation and management of the County's solid waste disposal system. It is anticipated the project would not generate substantial amounts of nonrecyclable waste during construction. Currently, the project site is vacant and contains no development; therefore, there would be no demolition or removal of large debris. However, as identified during preparation of the Phase I Environmental Site Assessment (**Appendix H**) conducted for the project, there are two areas of large amounts of illegal dumping waste on the project parcel, one near the center of the eastern side of the project parcel and the other near the southeast corner of the project parcel. At least one rusted 55-gallon drum was identified. The drum was mostly buried but did not appear to contain a substance. Ultimately, no evidence of significant spills, ground staining, unusual odors, or potential contamination was observed on the project parcel during site reconnaissance conducted as part of the Phase I Environmental Site Assessment (**Appendix H**), and any existing solid waste illegally dumped within the project site would be removed and disposed of at a licensed off-site landfill or at a recycling facility prior to project construction, as applicable.

Materials brought to the project site would be used to construct project facilities, and few residual materials are expected. Solar modules would be delivered to the project site via shipping containers packaged using wood and cardboard materials. The shipping containers materials for module deliveries would be recycled and are not anticipated to generate nonrecyclable waste. Common construction waste may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty nonhazardous containers, and vegetation wastes. Any hazardous waste generated during construction would be disposed of at an approved location.

Nonhazardous construction refuse and solid waste would either be collected and recycled or disposed of at a local landfill. The Barstow Sanitary Landfill, located approximately 22 miles to the southeast, is the closest landfill to the project and would most likely receive solid waste generated during project construction. As a Class III landfill, the Barstow Sanitary Landfill accept wastes from construction and demolition as well as industrial sources, but do not accept hazardous waste, hot ashes, and liquids of any kind. The Barstow Sanitary Landfill has a maximum permitted capacity of 80,354,500 cy with a remaining capacity of 71,481,660 cy as of December 31, 2014, and a cease operations date of May 1, 2071 (CalRecycle 2023). Accordingly, the Barstow Sanitary Landfill has sufficient permitted capacity remaining to accommodate solid waste generated by project construction. Therefore, construction impacts of the project related to landfill capacity are anticipated to be less than significant, and the project would not generate solid waste in excess of State or local standards or impair the attainment of solid waste reduction goals.

Operation

Due to the nature of the proposed land use, minimal solid waste would be generated during project operation as the project would be monitored remotely and there would be no permanent on-site employees. The project would be operated remotely and would not include any full-time, on-site employees. Operations and maintenance activities would primarily include panel washing, which would occur at least once per year and potentially up to four times per year. Panel washing may require up to 12 employees with water trucks and would take approximately 20 days to complete, per occurrence. The project would also produce a small amount of waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning modules, electrical materials, empty containers, and other miscellaneous solid waste, including the typical refuse generated by workers. Most of these materials would be collected and delivered back to the manufacturer or to recyclers. The Barstow Sanitary Landfill would continue to operate through 2071 and is expected to continue to serve the project throughout the rest of its operation. Therefore, operational impacts of the project as related to landfill capacity are anticipated to be less than significant, and the project would not generate solid waste in excess of State or local standards or impair the attainment of solid waste reduction goals.

Decommissioning

The project has an anticipated operational life of up to approximately 30 years, after which the land could be converted to other uses in accordance with applicable land use regulations in effect at that time. Solar PV panels contain valuable materials that would likely be reused and recycled at the end of their useful life. Solar panel manufacturers have identified that approximately 90 percent of materials in solar panel modules can be recycled. Site infrastructure would be removed, including the fences and the concrete pads that may support the inverters, transformers, and related equipment, and concrete posts would be removed to grade level; all materials would be recycled to the extent feasible. Metal, scrap equipment, and parts that do not have free-flowing oil can be sent for salvage. Equipment containing any free-flowing oil would be managed as waste and would require evaluation. Oil and lubricants removed from equipment would be managed as used oil, which is a hazardous waste in California. Decommissioning would comply with federal, State, and local standards and all regulations that exist when the project is decommissioned, including the requirements of San Bernardino County Development Code Section 84.29.070.

As the battery energy storage system is dismantled and removed, the batteries would be discharged, hauled off-site, and recycled or disposed of at an appropriate location in accordance with all applicable hazardous waste requirements. Many components of energy storage systems are recyclable. However, at the time of decommissioning, batteries may be considered hazardous waste in California when they are discarded, whether or not they are rechargeable. Accordingly, the battery modules included in the battery energy storage system eventually would be disposed of in accordance with the applicable hazardous waste requirements. These materials would be stored and handled in a manner to prevent accidental release. Standard construction practices would be observed such that any incidental releases would be appropriately contained and remediated as required by regulation.

Decommissioning of the gen-tie line would not generate substantial amounts of solid waste. As stated above, the Barstow Sanitary Landfill is expected to be in operation through 2071 and would serve as a solid waste disposal location during project decommissioning. Decommissioning activities would comply with federal, State, and local standards. Therefore, decommissioning of the project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impact the attainment of solid waste reduction goals. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.13-5: The project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Impacts would be less than significant.

Refer to Impact 3.13-4, above. The project would generate solid waste during construction, operation, and decommissioning. Common construction waste may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty nonhazardous containers, and vegetation wastes. AB 939 requires that specific waste diversion goals be achieved for all California cities and counties, including an overall reduction in solid waste produced by 50 percent by the year 2000. In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the proposed design.

As previously stated, a majority of the solid waste generated during project construction, operation, and decommissioning is recyclable, and solid waste would be properly disposed of or recycled in accordance with applicable waste diversion and recycling statutes and regulations.

Minimal amounts of solid waste may be generated by construction workers and temporary operation workers from periodic panel washing and maintenance activities. All solid waste would be collected by construction and operations workers on a daily basis and transported to a licensed off-site landfill or recycling facility for disposal.

Construction, operations, and decommissioning activities for the proposed project would occur in compliance with applicable federal, State, and local statutes and regulations related to solid waste. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.13-6: The project would not result in cumulative impacts related to utilities and service systems. Impacts would be less than significant.

Cumulative projects that would have the potential to be considered in a cumulative context with the projects' incremental contribution, and that are included in the analysis of cumulative impacts relative to utilities and services, are identified in **Table 3-1, Cumulative Projects**, in Section 3.0, Introduction to Environmental Analysis, of this EIR.

It is not anticipated that the cumulative projects identified in **Table 3-1** would result in impacts relative to utilities or service systems. All current, planned, or future discretionary projects within the County's jurisdiction would be required to demonstrate the availability of adequate water, wastewater treatment, and/or solid waste disposal services prior to the issuance of permits and/or commencement of construction activities, or to identify adequate mitigation measures to ensure that new development does not adversely affect the County's ability to provide such services.

In particular, as discussed under Impact 3.13-4, groundwater supplies would be adequate to serve construction and operational demands of the project based on the long-term 20-year recharge rate from the Centro Subarea, which captures less frequent surplus recharge events. When considered with current and anticipated future development within the Centro Subarea, the project and cumulative projects would not adversely affect groundwater availability over the long-term either, due to existing and anticipated future groundwater supplies, and the ongoing regulation and management of the Centro Subarea by the MWA. Furthermore, solar projects by nature are not a water intensive land use, and cumulative solar development within the Centro Subarea would not result in substantial water demand as compared to overall annual outflow.

Based on the findings of the WSA, there is sufficient groundwater supply available within the Centro Subarea and within the Mojave Solar Facility's water rights allocation for the project during normal, single dry and multiple dry water years during a 20-year projection. A sufficient water supply would be available to meet the projected water demand associated with the project, in addition to existing and planned future uses within the Centro Subarea (**Appendix J**). Furthermore, the proposed project would require only a limited amount of water as compared to the overall size of the Centro Subarea, thereby having a minimal contribution to anticipated future increase on groundwater demands. Cumulative projects would also be required to secure a water source in accordance with the Adjudication, if water were secured from within the Centro Subarea. Therefore, cumulative impacts on water supply would be less than significant.

With regard to the relocation or construction of new or expanded water, wastewater, or stormwater drainage, electric power, natural gas, or telecommunications facilities, impacts are generally localized to each project and the connections necessary to support each project. The project would not relocate or require the construction of new water, wastewater, or natural gas facilities. Thus, no cumulative impacts to these types of facilities would occur.

The project would connect to existing telecommunications facilities in the project vicinity, using local exchange carrier services for telecommunication to support remote monitoring requirements. Similar to the proposed project, cumulative projects would also likely procure local exchange carrier services and co-locate telecommunications lines on aboveground structures, such as transmission lines, or install them underground within their respective footprints. Since each project would be required to coordinate and procure local telecommunication services and undergo environmental review for environmental impacts, cumulative impacts to telecommunications would be less than significant.

The project would also include on-site stormwater drainage features as described above; however, these would be constructed to manage on-site stormwater flows and are included as part of the proposed project. The project would not require the development of new off-site stormwater facilities.

Similar to the proposed project, cumulative projects may also require stormwater drainage improvements and would undergo environmental review for environmental impacts associated with the construction or relocation of stormwater drainage facilities. Therefore, cumulative impacts to stormwater drainage facilities would be less than significant.

Finally, the project would include new on-site electric power facilities associated with the proposed land use and off-site transmission infrastructure associated with the proposed gen-tie line. However, these are elements of the proposed project and potential impacts from this work are discussed within the respective sections of this EIR. Cumulative energy projects would also be required to secure transmission connection agreements with the appropriate utility company, and analyze and mitigate for any potential impacts associated with those transmission connections. Ultimately, the project would not contribute to significant cumulative impacts associated with the relocation or construction of new or expanded water, wastewater, or stormwater drainage, electric power, natural gas, or telecommunications facilities.

As with the proposed project, the cumulative projects considered would be required to conform with federal, State, and local regulations pertaining to solid waste disposal and recycling. As indicated, the Barstow Sanitary Landfill has adequate capacity well into the future to accommodate area growth and solid waste disposal needs. Furthermore, four other regional landfills are located within the County which could serve cumulative projects and other future developments. As such, the project, in combination with other cumulative projects, would not contribute to a significant cumulative impact relative to solid waste disposal.

As discussed above, all utilities and services have been determined available and adequate to serve the proposed solar PV facility. As such, the project, considered in combination with other cumulative projects identified, would result in a less than significant cumulative impact on utilities and service systems.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant.

3.14 Wildfire

This section evaluates the potential wildfire impacts that may result from implementation of the Overnight Solar Project (project). The following discussion addresses the affected environment and regulatory setting for wildfire, discusses potential impacts related to wildfire, and includes mitigation measures required to reduce or avoid these impacts, if applicable. This section is based on the project plans, the California Department of Forestry and Fire Protection (CAL FIRE) and San Bernardino County Fire Hazards Severity Zone Maps, the Biological Resources Technical Report prepared by Corvus Ecological Consulting (included as **Appendix D**), and the Water Supply Assessment prepared by SWCA Environmental Consultants (included as **Appendix J**). San Bernardino County (County) received comments from the Desert Tortoise Council during the scoping period (the comment letter is included in **Appendix A**), and those comments have been incorporated into this section.

3.14.1 Environmental Setting

3.14.1.1 Site Characteristics and Fire Environment

CAL FIRE maintains maps of Fire Hazard Severity Zones (FHSZs) based on factors such as fuel, slope, and fire weather to identify the degree of fire hazard throughout California (i.e., moderate, high, or very high). CAL FIRE primarily maintains maps of FHSZs for State Responsibility Areas (SRA), which are recognized by the Board of Forestry and Fire Protection as areas where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. CAL FIRE also drafted FHSZ maps for Local Responsibility Areas (LRA) in 2007, which are areas where fire suppression and prevention is the primary responsibility of a city, county, city and county, or district. After Draft LRA FHSZ maps were created for each county, more refined Recommended LRA FHSZ maps were created only for areas within each county where Very High FHSZs were identified in the Draft LRA FHSZ maps. Subsequently, these Recommended LRA FHSZ maps were the basis for local jurisdictions to develop local FHSZ maps. The County maintains a map of FHSZs within the Countywide Plan/Policy Plan, which was most recently updated in 2020. While FHSZs do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and, therefore, of greater concern.

According to the CAL FIRE San Bernardino County FHSZ Maps for the SRA, and as shown in **Figure 3.14-1, Fire Hazard Severity Zones for State Responsibility Areas**, the project site and surrounding area is designated as Outside State Responsibility Area (CAL FIRE 2023a). Therefore, the entire project, including the generation interconnect (gen-tie) corridor, is not within an area where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. The closest SRA Very High FHSZ is located approximately 57 miles west of the project, within the Tehachapi Mountains.

According to the NW San Bernardino County Draft FHSZ map for the LRA, and as shown in **Figure 3.14-2, Fire Hazard Severity Zones for Local Responsibility Areas**, a majority of the project site is classified as LRA Moderate, which is the lowest fire hazard designation. A small portion of the project site, along the eastern project site boundary, and the gen-tie corridor are in an Unzoned area of the LRA FHSZ map. Although this small portion of the project site and the gen-tie corridor are in an Unzoned area, along with the adjacent existing solar facilities, all surrounding zoned areas are classified as Moderate FHSZs

as is the vast majority of NW San Bernardino County. No Recommended LRA FHSZ maps were created for NW San Bernardino County, as no Very High FHSZs were identified within the Draft LRA FHSZ map for this area.

There are also no High FHSZs mapped within NW San Bernardino County (CAL FIRE 2007). The San Bernardino Countywide Plan/Policy Plan also includes a map of FHSZs for the County, which delineates the project site and nearly all of the Desert Region as being located within a Moderate FHSZ, similar to the CAL FIRE Draft LRA FHSZ map for this area. The gen-tie corridor is delineated as Non-Wildland/Non-Urban (San Bernardino County 2020a).

Finally, the County also maintains Hazard Overlay Maps, which depict various hazards including fire hazards. These hazard overlays are also included in the County's Development Code as zoning overlay districts. The project site and gen-tie corridor are not located within a Fire Safety Overlay District (San Bernardino County 2010a). The closest Fire Safety Overlay District is located approximately 35 miles south of the project site (San Bernardino County 2010b).

Moderate zones are typically wildland supporting areas of low fire frequency and relatively modest fire behavior. The project is generally bounded by the Lockhart PV I Solar Facility to the north, the Mojave Solar Facility to the east, and vacant and undeveloped land to the south and west.

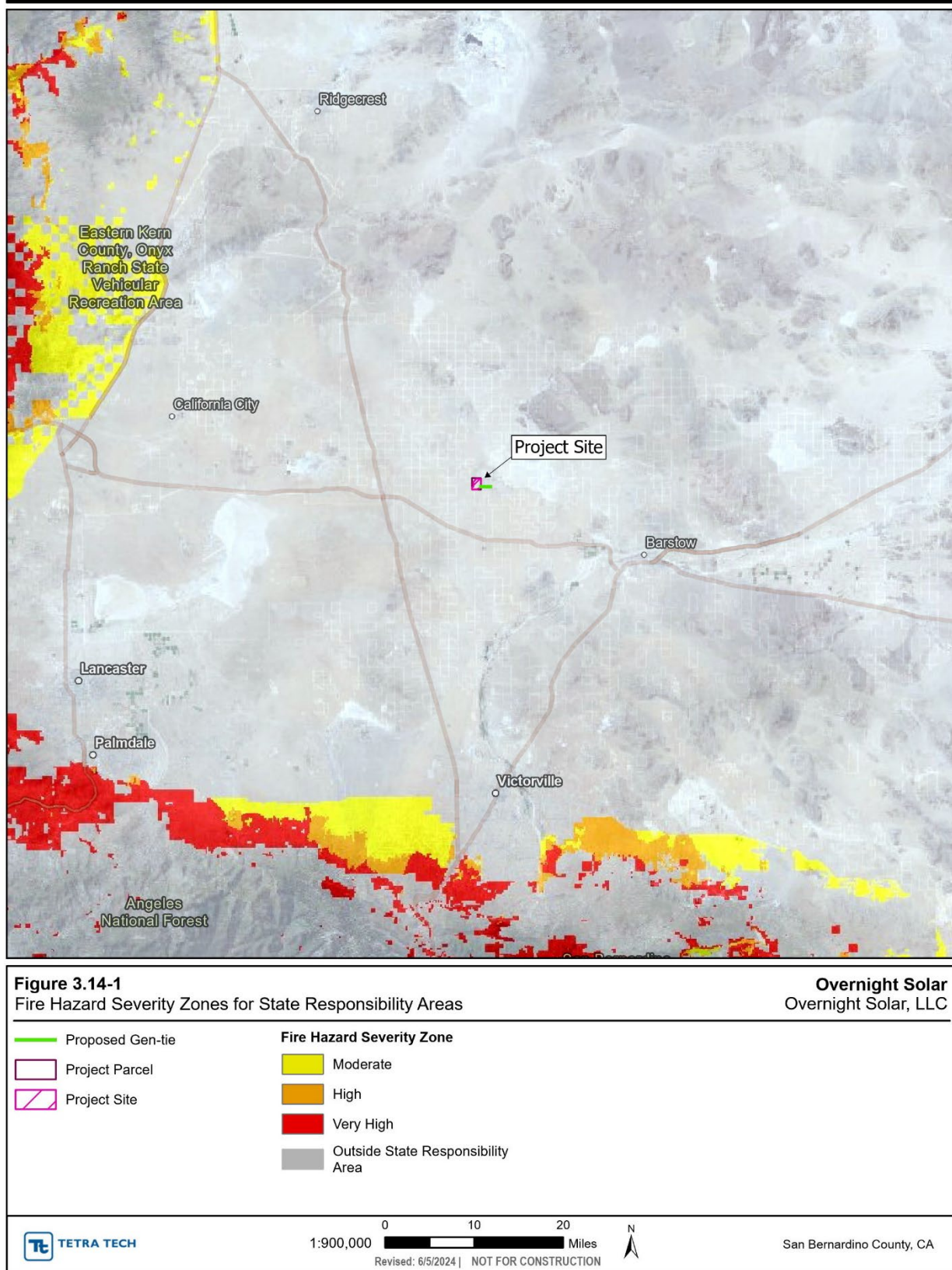


Figure 3.14-1. Fire Hazard Severity Zones for State Responsibility Area

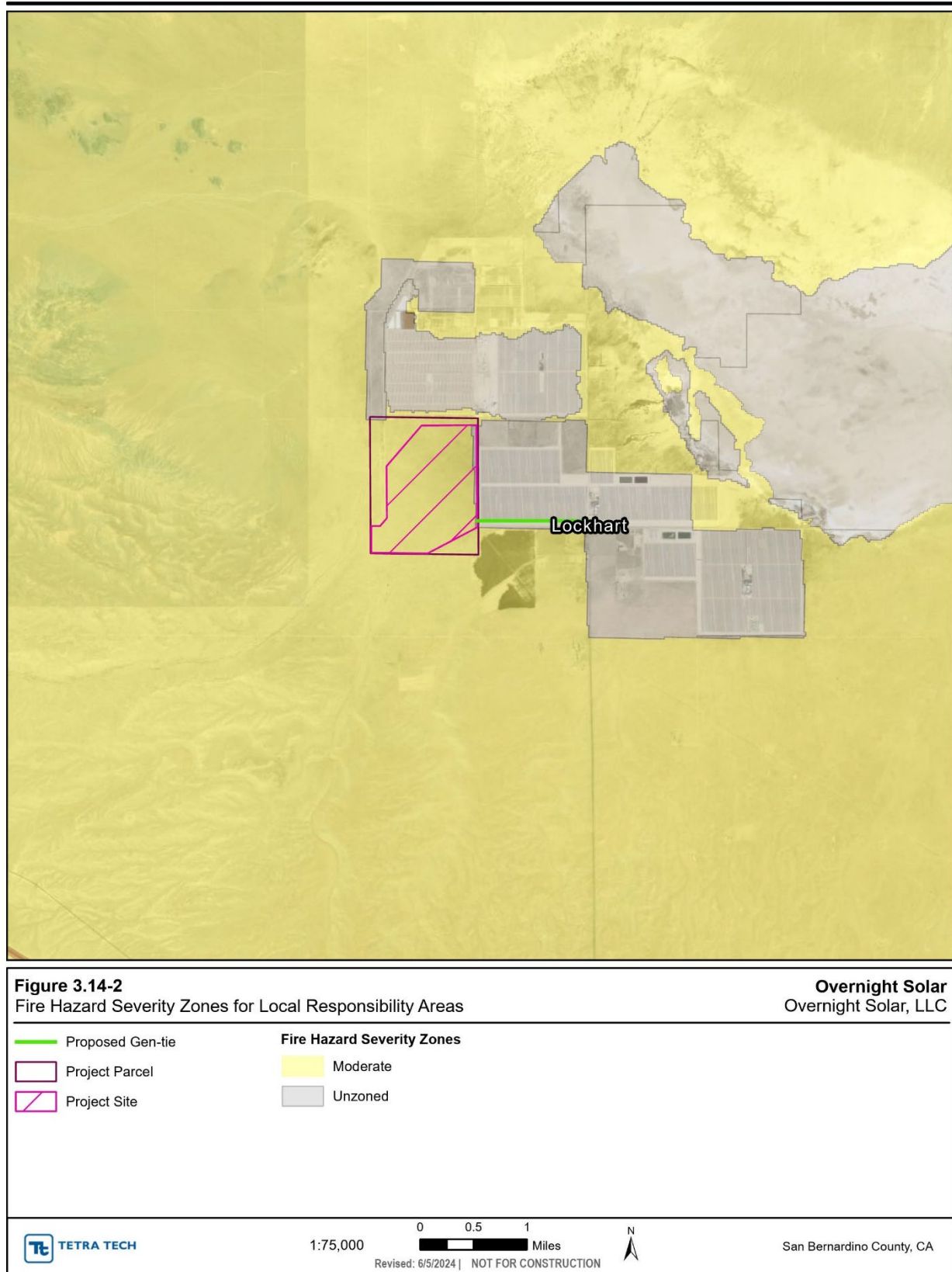


Figure 3.14-2. Fire Hazard Severity Zones for Local Responsibility Areas

3.14.1.2 California Public Utilities Commission High Fire Threat Districts

Pursuant to its Fire Safety Rulemaking, the California Public Utilities Commission (CPUC) mapped High Fire Threat Districts (HFTDs) where more stringent inspection, maintenance, vegetation clearance, and wire clearance requirements (as required by CPUC General Orders 95 and 165, described in Section 3.14.2.2 under the heading “California Public Utilities Commission Requirements”) would be implemented due to the elevated risk for powerline fires. The CPUC High Fire Threat District Map identifies three tiers of elevated risk for fires associated with utilities. The project site and gen-tie corridor are not located in a CPUC-designated HFTD. The closest CPUC-designated HFTD is located approximately 43 miles south of the project site (CPUC 2023).

3.14.1.3 Fire History

Fire history information can provide an understanding of fire frequency, fire type, most vulnerable project areas, and significant ignition sources. CAL FIRE’s Fire Resource Assessment Program (FRAP) provides mapping data of historic fires throughout the State. Fire history represented in this section uses CAL FIRE’s FRAP Historic Fire Perimeters database, and specifically data for Recent Large Fire Perimeters which include fires equal to or greater than 5,000 acres since 2018 (CAL FIRE 2023b). Since 2018, three Large Fires have occurred within the County, all within 2020. The El Dorado and Apple Fires burned 22,405 and 33,236 acres, respectively. These fires burned adjacent to each other within San Bernardino National Forest, approximately 70 miles south of the project site. The third recent Large Fire was the Dome Fire, which burned 44,211 acres approximately 100 miles east of the project site, within the Mojave National Preserve. The closest recent Large Fire to the project site was the Bobcat Fire, which burned 115,998 acres in 2020 within Angeles National Forest in Los Angeles County. The Bobcat Fire was approximately 45 miles southwest of the project site. No recent Large Fires have burned across the project site and gen-tie corridor, or within 45 miles of the project site within this timeframe.

3.14.1.4 Vegetation (Fuels) and Topography

The dominant vegetation community of the project area and greater Desert Region of the County is desert scrub, with vegetation communities predominately consisting of low-profile shrubby perennials and diminutive desert annuals. A single terrestrial vegetation community was identified within the project site during the biological resources field survey: Alkali Desert Scrub. This community is typically dominated by low-growing shrubs, grasses, and herbaceous plants able to withstand the presence of heavily salty soils (**Appendix D**). Potential fuels identified within the project site include natural materials, such as dead leaves, twigs, branches, brush, and dry grasses. There is no existing vegetation within the gen-tie corridor, as the gen-tie corridor is located within the existing fenceline of the adjacent Mojave Solar Facility. However, for wildfire prevention, the Mojave Solar Facility monitors vegetation growth throughout the facility and contracts a weed abatement company to manage vegetation as needed. Vegetation management typically occurs on an annual basis; however, there have been dry years where treatment was not necessary. The last weed abatement was conducted in January 2024.

The topography of the area, including the project site, gen-tie corridor, and surrounding area, is relatively flat. The elevation of the project site ranges from approximately 2,100 feet to 2,150 feet above mean sea level (amsl), sloping gently upwards from northeast to southwest.

3.14.1.5 Fire Protection and Local Infrastructure

The San Bernardino County Fire Protection District (SBC Fire) would be responsible for providing fire protection services for the project. The project would undergo review by SBC Fire and would incorporate any required fire protection requirements. All on-site access roads would be constructed to SBC Fire requirements and would consist of compacted native soil. All roads would be stabilized with soil stabilization material, if necessary. Improvements to off-site access roads, including potential paving and widening, would be completed as required according to County standards and in consultation with SBC Fire, the County Department of Public Works, and the Land Development Division.

3.14.2 Regulatory Framework

3.14.2.1 Federal

North American Electric Reliability Corporation Standards

The North American Electric Reliability Corporation (NERC) is a nonprofit corporation comprising six regional reliability councils. The overarching goal of NERC is to ensure the reliability of the bulk power system in North America. To achieve its goal, NERC develops and enforces reliability standards, monitors the bulk power systems, and educates, trains, and certifies industry personnel (NERC 2022). To improve the reliability of regional electric transmission systems and in response to the massive widespread power outage that occurred on the Eastern Seaboard in 2003, NERC developed a transmission vegetation management program. The program is applicable to all transmission lines operated at 200 kilovolts and above to lower voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region.

The transmission vegetation management program, which became effective on April 7, 2006, establishes requirements of the formal transmission vegetation management program. Requirements include identifying and documenting clearances between vegetation and any overhead, ungrounded supply conductors, and take into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway. The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers Standards Association Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) (IEEE 2003), which establishes minimum vegetation-to-conductor clearances to maintain electrical integrity of the electrical system.

3.14.2.2 State

California Public Resources Code

California Public Resources Code (PRC) Section 4290 requires CAL FIRE to adopt regulations implementing minimum fire safety standards for defensible space that would be applicable to lands within the SRA and lands within Very High FHSZs.

SRAs are defined by California PRC Section 4102 as areas of the State in which CAL FIRE has determined that the financial responsibility for preventing and suppressing fires lies with the State of California. SRAs are lands in California where CAL FIRE has legal and financial responsibility for wildfire protection.

SRA lands typically are unincorporated areas of a county, are not federally owned, have wildland vegetation cover, have housing densities lower than three units per acre, and have watershed or range/forage value. In SRAs, CAL FIRE is required to delineate three hazard ranges—Moderate, High, and Very High—whereas LRAs, which are under the jurisdiction of local entities (e.g., cities, counties), are required to only identify Very High FHSZs. The hazard ranges are measured quantitatively based on vegetation, topography, weather, crown fire potential (a fire's tendency to burn upward into trees and tall brush), and ember production and movement within the area of question. Where SRAs contain built environment or development, the local government agency assumes responsibility for fire protection.

The California PRC includes fire safety provisions that apply to SRAs during the time of year designated as having hazardous fire conditions. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas. Additional codes require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line must maintain a firebreak clearing around and adjacent to any pole, tower, or conductors that carry electric current as specified in PRC Sections 4292 and 4293. Section 4292 also requires that a 10-foot area around the base of poles be cleared of all flammable vegetation.

LRAs include lands that do not meet criteria for SRAs or federal responsibility areas, or are lands in cities, cultivated agricultural lands, and nonflammable areas in the unincorporated parts of a county. LRAs can include flammable vegetation and wildland-urban interface areas. LRA fire protection is provided by the local fire departments, fire protection districts, county fire departments, or by contract with CAL FIRE.

As previously discussed, the project site is classified as LRA Moderate, the gen-tie corridor is Unzoned, and neither are located within an SRA.

California Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The California Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the California Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California.

Chapter 6 (Building Services and Systems) of the California Fire Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems.

Chapter 33 (Fire Safety During Construction and Demolition) of the California Fire Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. The California

Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Chapter 12 (Energy Systems) of the California Fire Code includes requirements for various types of battery energy storage systems, including lithium-ion batteries greater than 20 kilowatt-hours, which includes the proposed energy storage facility. Chapter 12 includes requirements for vehicle impact protection, location, spacing between batteries, egress, security, and fire suppression systems. Section 1207, *Electrical Energy Storage Systems*, also adopts the National Fire Protection Association's (NFPA) Standard for the Installation of Stationary Energy Storage Systems (NFPA 855).

California Building Code

Chapter 7A of the California Building Code details the materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area. A Wildland-Urban Interface Area is defined in Section 702A as a geographical area identified by the State as a "Fire Hazard Severity Zone" in accordance with PRC Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. The California Building Code details the materials, systems, and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings.

Section 322 of the California Building Code includes requirements for the storage of lithium-ion and lithium metal batteries. Section 322 includes structural design requirements for energy storage systems utilizing lithium-ion and lithium metal batteries, in addition to fire protection requirements for both indoor and outdoor storage systems. Section 322 also requires the development of a fire safety plan.

Public Resources Code 4291-4299

California PRC Sections 4291-4299 et seq. require that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability may be maintained, as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Additionally, the PRC outlines infraction fees, certification, and compliance procedures applicable with State and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code.

2019 Strategic Fire Plan for California

Developed by the Board of Forestry and Fire Protection, the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE's overall policy direction and vision. The 2019 Strategic Fire Plan goals revolve around fire prevention, natural resource management, and fire suppression efforts, as broadly construed (CAL FIRE 2019).

California Public Utilities Commission Requirements

General Order 95

General Order 95 governs the design, construction, and maintenance of overhead electrical lines and applies to work conducted by Southern California Edison (SCE).¹ The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of this order. CPUC Decision 17-12-024 created enhanced requirements under Rule 18A, Rule 35, and Rule 38, which apply to overhead electric lines located in Tier 2 or Tier 3 HFTDs. The project site and gen-tie corridor are not located in a CPUC-designated HFTD (CPUC 2020); therefore, the enhanced requirements would not apply.

General Order 165

General Order 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform “patrol” inspections, defined as a simple visual inspection of utility equipment and structures that is designed to identify obvious structural problems and hazards, and must be performed at least once per year for each piece of equipment and structure. “Detailed” inspections, where individual pieces of equipment and structures are carefully examined, are required every 5 years for all overhead conductors and cables, transformers, switching/protective devices, and regulators/capacitors. By July 1 of each year, each utility subject to this General Order must submit an annual report of its inspections for the previous year under penalty of perjury (CPUC 2017).

Senate Bill 1028

Senate Bill (SB) 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment, and makes a violation of these provisions by an electrical corporation a crime under State law. SB 1028 also requires each electrical corporation to annually prepare a Wildfire Mitigation Plan (WMP) and submit it to the CPUC for review. The WMP must include a statement of objectives, a description of preventive strategies and programs that are focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall WMP performance and assumptions that underlie the use of the metrics. SCE filed the 2023-2025 WMP on March 27, 2023 (SCE 2023).

Senate Bill 901

SB 901 (2018) expanded upon the WMP requirements of SB 1028 and included a number of provisions related to wildfire risk and management in California including, but not limited to, the following: budget adjustments related to emergency response and readiness, the creation of a CAL FIRE Wildfire Resilience Program, and increasing the maximum penalties that can be issued by the CPUC to a public

¹ Investor-owned utilities (IOU) are private electricity and natural gas providers. The CPUC regulates IOUs.

utility that fails to comply with CPUC requirements. Additionally, the legislation requires that utilities prepare WMPs that include elements specified in the bill, such as the following:

1. A description of the preventive strategies and programs to be adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.
2. Protocols for disabling reclosers² and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.
3. Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the electrical corporation's service territory.

SCE Wildfire Mitigation Plan

Pursuant to SB 901 and SB 1028, SCE submitted its 2023-2025 WMP to the California Office of Energy Infrastructure Safety on March 27, 2023. The WMP describes SCE's approach to assessing and mitigating wildfire risk. The WMP represents the continuous refinement, expansion, and improvement of wildfire and Public Safety Power Shutoffs (PSPS) mitigation efforts. The WMP is also characterized by a continued execution of SCE's Integrated Wildfire Mitigation Strategy, which further aligns grid hardening, inspections, and vegetation management activities. The WMP includes 40 activities with program targets to reduce the risk of wildfires and support service communities.

The "primary objective of [the] 2023-2025 WMP is to reduce the risk of wildfires associated with utility equipment and to reduce the scope, scale, frequency, and impacts of PSPS events" (SCE 2023).

3.14.2.3 Local

San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan

The latest San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) was most recently updated in 2022. The MJHMP addresses both natural and human-caused hazards being faced by the County, SBC Fire, the San Bernardino County Flood Control District, and County Board of Supervisors-governed Special Districts administered by the San Bernardino County Special Districts Department. The MJHMP identifies goals, objectives, and actions pertaining to mitigating impacts from identified hazards, including geologic, wildfire, flood, drought, terrorism, and climate change hazards. The Federal Emergency Management Agency (FEMA) realizes the importance of mitigation planning and offers incentives to communities that develop one. By following FEMA guidelines for approval of this plan, the County can be eligible for grant funding intended for mitigation projects (San Bernardino County 2022a).

San Bernardino County Fire Protection District Fire Code (Ordinance No. FPD 23-01)

The latest San Bernardino County Fire Protection District Fire Code (SBC Fire Code) was adopted on March 1, 2023. The current SBC Fire Code adopts by reference the 2022 California Fire Code, along with

² Reclosing devices, such as circuit breakers, are used to isolate circuit segments when abnormal system conditions are detected.

certain changes, modifications, amendments, additions, deletions, and exceptions. These additional requirements and standards are established in the SBC Fire Code to reasonably address the local climatic, geological, and topographical conditions of the County. Such local conditions include, but are not limited to, the “Santa Ana Winds,” earthquake potential, unstable slopes, contaminated water, and the overall diverse topographical nature of the County ranging from mountainous to desert regions (SBC Fire 2023).

Furthermore, the SBC Fire Code includes Section 105.5.4A, which requires an operational permit for battery energy storage systems in addition to the provisions of Section 1207, *Electrical Energy Storage Systems*, of the 2022 California Fire Code (SBC Fire 2023).

San Bernardino Countywide Plan/Policy Plan

The Countywide Plan/Policy Plan contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the Countywide Vision. It serves as the County’s General Plan for the unincorporated areas and includes policy direction for regional services the County administers in both incorporated and unincorporated areas.

Relevant policies from the Countywide Plan/Policy Plan are summarized below (San Bernardino County 2022b).

Hazards Element

GOAL HZ-1 Natural Environmental Hazards. Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

Policy HZ-1.2 **New Development in Environmental Hazard Areas.** We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

Policy HZ-1.12 **Local Hazard Mitigation Plan Implementation.** We require adherence to the goals, objectives and actions in the Multi-jurisdictional Hazard Mitigation Plan and subsequent amendments to reduce and [mitigate](#) damages from hazards in the county.

Policy HZ-1.13 **Fire Protection Planning.** We require that all new development in County-designated Fire Safety Overlay and/or CAL FIRE-designated Very High Fire Hazard Severity Zones meet the requirements of the California Fire Code and the California Building Code as amended by the County Fire Protection District, including Title 14 of the California Code

of Regulations fire safety requirements for any new development within State Responsibility Areas, as well as provide and maintain a Fire Protection Plan or Defensible Space/Fuel Modification Plan and other pre-planning measures in accordance with the County Code of Ordinances.

Policy HZ-1.14 **Long-Term Fire Hazard Reduction and Abatement.** We require proactive vegetation management/hazard abatement to reduce fire hazards on existing private properties, along roadsides of evacuation routes out of wildfire prone areas, and other private/public land where applicable, and we require new development to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel modification, and roadside fuel reduction in the Fire Safety Overlay and/or Very High Fire Hazard Severity Zones.

Personal and Property Protection Element

GOAL PP-1 Fire and Emergency Medical. Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

Policy PP-3.7 **Fire Safe Design.** We require new development in the Fire Safety Overlay to comply with additional site design, building, and access standards to provide enhanced resistance to fire hazards.

Policy PP-3.9 **Street and Premise Signage.** We require adequate street signage and premise identification be provided and maintained to ensure emergency services can quickly and efficiently respond.

3.14.3 Thresholds for Determination of Significance

The following thresholds of significance are based on California Environmental Quality Act (CEQA) Guidelines Appendix G. For the purposes of this Environmental Impact Report (EIR), the project may have a significant adverse impact related to wildfires if it would do any of the following:

- Be located in or near SRAs or lands classified as Very High FHSZs, and if the project would:
 - Substantially impair an adopted emergency response plan or emergency evacuation plan.
 - Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
 - Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
 - Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes.

3.14.4 Project Impacts and Mitigation

Impact 3.14-1: The project is not located in or near SRAs or lands classified as Very High FHSZs, and would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

The project site and gen-tie corridor are not located in or near any SRAs or lands classified as Very High FHSZs as designated by CAL FIRE. The project site and gen-tie corridor are within an LRA and a majority of the project site is classified as LRA Moderate, which is the lowest classification. A small portion of the project site, along the eastern project site boundary, and the gen-tie corridor are in an Unzoned area of the LRA FHSZ map. Given the project site's designation as LRA Moderate and the gen-tie corridor's designation as Unzoned, the project is outside of areas identified by CAL FIRE as having substantial or very high risk. Furthermore, the project site and gen-tie corridor are not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. The closest evacuation route to the project is State Route (SR) 58, located approximately 6 miles to the south (San Bernardino County 2020b).

As noted in Section 3.12, Transportation and Traffic, the project applicant would be required, as a standard condition of approval, to prepare and submit a Congestion Management Plan to the County Department of Public Works, Traffic Division prior to the issuance of grading permits. Implementation of the Congestion Management Plan would minimize the potential for project-related construction traffic to interfere with vehicular circulation and emergency access both along local roadways and to the project site, including during any times of emergency evacuation. Project operations would generate limited daily traffic traveling to and from the site for occasional panel washing and other intermittent maintenance purposes.

Therefore, the project would not conflict with the implementation of, or physical interference with, an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.14-2: The project is not located in or near SRAs or lands classified as Very High FHSZs, and would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

As described above under Impact 3.14-1, the project site and gen-tie corridor are not located in or near any SRAs or lands classified as Very High FHSZs as designated by CAL FIRE. Slope and wind speed can influence the spread of fires. Upslope topography eventually increases the spread rate of the fire in all fuel beds over flat conditions. As described in Section 2, Project Description, the project site and gen-tie corridor are relatively flat and elevations on the project site range from approximately 2,100 feet to 2,150 feet, sloping gently upwards from northeast to southwest. The only occupants associated with

the proposed project would include temporary on site employees during construction and temporary panel washing and maintenance employees during operation.

During a wildfire occurring in the area, pollutants may be released. However, it is anticipated that any employees occupying the site would be rapidly evacuated at the time of the event, and/or evacuated well in advance of an approaching wildfire, in conformance with applicable County evacuation directives put in place. Such measures would ensure that the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire from prevailing winds would be minimized to the extent feasible.

Project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Construction and operational maintenance personnel would also be trained and equipped to extinguish small fires, thus reducing the risk of fire on-site. Given the low to moderate potential for fire, the project site's flat topography, and the relatively low number of temporary on-site project workers during both construction and operation, the project is not anticipated to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds, and other factors. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.14-3: The project is not located in or near SRAs or lands classified as Very High FHSZs, and would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Impacts would be less than significant.

As described above under **Impact 3.14-1**, the project site and gen-tie corridor are not located in or near any SRAs or lands classified as Very High FHSZs as designated by CAL FIRE. The project would include the construction of new infrastructure, including solar photovoltaic (PV) panels, an energy storage system, inverters and switchgear, an on-site project substation, a gen-tie line, telecommunications facilities, and access roads that could potentially exacerbate fire risk and result in temporary or ongoing impacts to the environment. The solar PV panels would be connected to the inverters and switchgear, whereby the energy collected from the solar panels would be converted from direct current (DC) to alternating current (AC) at the centralized inverters and transformers. From there, the AC power from inverters/transformers would be collected and transported to the battery energy storage system and project substation. From the new project substation, a gen-tie line would be constructed to connect the solar facility to its intertie location, which would be an existing gen-tie line located approximately 1.1 miles east of the proposed solar facility, just south of the existing Alba Substation. Ultimately, electricity is transferred from the PV array to the project batteries during a battery charging cycle and from the project batteries to the power grid during a battery discharge cycle through battery energy storage system connection with the project substation, which connects the project to the power grid via the

proposed gen-tie line. These facilities would all be installed in accordance with all County and State building and fire codes.

New internal access roads would be constructed to serve as access from the existing road network to the solar array blocks. All on-site roads would be constructed to SBC Fire requirements and would consist of compacted native soil. All roads would be stabilized with soil stabilization material, if necessary. Improvements to off-site access roads, including potential paving and widening, would be completed as required according to County standards and in consultation with the SBC Fire, County Department of Public Works, and Land Development Division. These project site access roads would remain in place for ongoing operations and maintenance activities after construction is completed. All new roads would comply with development requirements for emergency access and, therefore, would not exacerbate fire risk that could result in temporary or ongoing impacts to the environment.

The energy storage system would be required to comply with Section 105.5.4A of the SBC Fire Code, which requires an operational permit, and Chapter 12 of the California Fire Code, which applies to stationary electric energy storage systems and addresses development standards for design, installation, commission, operation, maintenance, and decommissioning of these systems. Specifically, the project's fire protection design would comply with California Fire Code Section 1207, *Electrical Energy Storage Systems*, which adopts the NFPA's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855).

The lithium-ion battery technology for the project would also comply with the equipment and system fire testing standards in accordance with the nationally adopted Underwriters Laboratories (UL; safety organization) standards. These requirements include stringent standards for commissioning, operation and maintenance, ongoing inspection and testing, decommissioning, seismic and structural design, signage, security installations, fire detection and suppression systems, vegetation control and minimum setbacks from lot lines, roads, and adjacent buildings. The project would also comply with UL 9540A testing, which is performed by the battery manufacturer/vendor to prevent thermal runaway and mitigate fire risk. Compliance with these advanced, nationally adopted standards are designed to ensure the site installation and operation of battery storage systems are safe for operators, first responders, and neighboring communities.

Furthermore, the project would require the preparation of a fire safety plan in accordance with California Building Code Section 322, which regulates the storage of lithium-ion batteries. The fire safety plan would address fire hazards of the different components of the project, including the energy storage facility, and would include best management practices (BMP) to reduce the potential for fire and extinguishment techniques if a fire were to occur.

Fires at battery energy storage systems are rare. In the rare instances where fires have occurred, the safety features and protocols built into today's battery energy storage systems are designed to prevent harm to operators, first responders, and neighbors. Most fires in the desert are caused by lightning or vehicles. Further, the use of maintenance vehicles can increase fire risk due to driving heated mufflers over vegetated areas. However, the project site and gen-tie corridor are not located within a High or Very High FHSZ. In construction areas, the vegetation would be cleared as needed; and the proposed project would result in a minimal increase in fire risks that could result in temporary or ongoing impacts

to the environment. Additionally, water would be used during construction for dust suppression purposes, which would secondarily reduce fire risk during construction due to the dampened soils on-site. Finally, the project would also include operational water supply for fire suppression. The project would obtain water from existing wells at the adjacent Mojave Solar Facility, and sufficient water supplies were determined to exist from this source for fire suppression purposes (**Appendix J**). Operational water for fire suppression would be contained within a water tank located next to one of the existing wells within the adjacent Mojave Solar Facility. SBC Fire maintains keys for all access gates at the Mojave Solar Facility. As discussed in Section 3.13, Utilities and Service Systems, of this EIR, there is sufficient water available to meet the future water demands of the project during normal, single dry, and multiple dry years through the project's lifespan, including for fire suppression purposes.

Given the low to moderate potential for fire and the required compliance with all County and State building and fire codes, the new infrastructure developed as part of the project would not exacerbate fire risk or result in significant temporary or ongoing impacts to the environment. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.14-4: The project is not located in or near SRAs or lands classified as Very High FHSZs, and would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes. Impacts would be less than significant.

As described above under **Impact 3.14-1**, the project site and gen-tie corridor are not located in or near any SRAs or lands classified as Very High FHSZs as designated by CAL FIRE. As discussed in Section 3.9, Hydrology and Water Quality, all stormwater flows from the project site would be sufficiently managed through maintenance of a drainage easement to the west of the existing berm; construction of small retention basins throughout the solar panel areas and project site; installation of culverts and drainage channels to facilitate the controlled conveyance of runoff across the project site; and BMPs such as vegetated swales, permeable surfaces, and infiltration trenches to reduce surface runoff (**Appendix I**). Implementation of these stormwater drainage features would capture the anticipated 100-year, 24-hour increase in runoff volume resulting from clearing of vegetation, compacting of soil, and any limited impervious (paved or structural) improvements. The proposed project layout is also designed to avoid two existing drainages located along the northwestern and southeastern project site boundaries to minimize changes in the existing drainage patterns of the site (**Figure 3.9-2**). Ultimately, these proposed stormwater drainage features would ensure the project would not result in significant impacts related to stormwater drainage.

The project would also require implementation of a Stormwater Pollution Prevention Plan (SWPPP) which would include erosion and sediment control BMPs during construction and eventual decommissioning, thereby reducing the potential of erosion and siltation and controlling potential flooding events that could occur. While the proposed new impervious surfaces would be minimal, they would still generate additional stormwater runoff on-site, albeit in minor quantities compared to

existing conditions. However, a majority of the project site and gen-tie corridor would remain pervious and most of the drainage flows within the project site and gen-tie corridor would continue to infiltrate into the soils on-site or be sufficiently managed by the proposed stormwater drainage features discussed above.

While the project would introduce new structures as part of the substation to the project site and along the gen-tie corridor, the structures would not be placed in a highly flammable landscape. In addition, as described further in Section 3.6, Geology and Soils, conditions for landslides are not present at the project site or along the gen-tie corridor due to the relatively flat topography of the site. Accordingly, there is no risk of landslides as a result of post-fire instability.

Therefore, the project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

Impact 3.14-5: The project is not located in or near SRAs or lands classified as Very High FHSZs, and would not result in cumulative impacts related to wildfire. Impacts would be less than significant.

The geographic scope for wildfire impacts is considered the Desert Region of the County, and specifically a 20-mile radius from the project site. This geographic scope was selected because the land within the region possesses relatively similar uses, including sparse desert vegetation, rural access roads, scattered rural residences, and other renewable energy and electrical utility uses. As shown in Section 3, Introduction to the Environmental Analysis, **Table 3-1, Cumulative Projects**, there are eight renewable energy projects proposed or approved in the Desert Region of San Bernardino County, within 20 miles of the project site. Of the eight total projects listed in **Table 3-1**, five would be located within 2 miles of the project site. All cumulative projects listed in **Table 3-1** would be located within LRA Moderate FHSZs. No cumulative projects would be located within High or Very High FHSZs, which are primarily located in San Bernardino National Forest to the south and the Tehachapi Mountains to the west.

With regard to impairment of an adopted emergency response plan or emergency evacuation plan, all of the related projects would be required to provide adequate emergency access in accordance with SBC Fire Code, California Fire Code, and California Building Code requirements and prior to the issuance of a building permit. Further, the project site is located within a Moderate FHSZ that is in a rural, sparsely developed area with limited population and is sparsely vegetated and lacks steep slopes. Additionally, the project would be in compliance with SBC Fire Code, California Fire Code, and California Building Code requirements including fire prevention and emergency response training for site personnel. As concluded in the discussion of project impacts above, the project would have a less than significant impact related to impairment of an adopted emergency response or evacuation plan. Because cumulative projects would also be required to provide adequate emergency access and demonstrate

compliance with the SBC Fire Code, California Fire Code, and California Building Code, cumulative impacts would be less than significant.

With regard to cumulative impacts related to exposure of project occupants to pollutant concentrations from a wildfire, the proposed project is not within an LRA or SRA identified as having a high or very high fire risk, and all cumulative projects would also be located within LRA Moderate FHSZs. No related cumulative projects would be located within either High or Very High FHSZs, as these areas are primarily located in the San Bernardino National Forest, approximately 70 miles south of the project site, and the Tehachapi Mountains, located approximately 57 miles west of the project site. Similar to the proposed project, all related projects would be required to demonstrate compliance with the SBC Fire Code, California Fire Code, and California Building Code, including implementation of project design features to reduce wildfire risk and exposure of occupants to pollutant concentrations from a wildfire. Adherence to the SBC Fire Code, California Fire Code, and California Building Code requirements would minimize potential impacts related to exposure to and the uncontrolled spread of a wildfire. Furthermore, with the exception of certain topographical features located throughout the Desert Region, the region is relatively flat overall and does not contain many steep slopes, although elevations gradually increase towards the San Bernardino National Forest and the Tehachapi Mountains. Thus, cumulative projects would not exacerbate wildfire risks due to slope. Potential pollutant concentrations from a wildfire occurring at cumulative projects could expose proposed project occupants due to distance, and potential pollutant concentrations occurring at the project site could expose cumulative project occupants due to distance. However, due to the absence of highly flammable building materials at solar energy projects, the lack of significant non-utility development in the vicinity of the project site and immediate cumulative solar projects, and the sparse desert vegetation in the project vicinity, any potential fires occurring on the project site or on cumulative project sites would be localized and unlikely to spread far beyond the source of ignition. As concluded in the discussion of project impacts above, the project would have a less-than-significant impact related to exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Consequently, with adequate preparation through the implementation of a fire safety plan, adequate fire service response in the area, and compliance with the cumulative projects with the SBC Fire Code, California Fire Code, and California Building Code, cumulative impacts would be less than significant.

Related projects may require associated infrastructure such as roads, fuel breaks, and power lines that could exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. These projects would be reviewed by the County for land use and zoning consistency and compliance with applicable requirements, and potentially analyzed for environmental impacts. The placement of infrastructure associated with cumulative projects would adhere to all fire codes to minimize the potential fire risk such as siting and design. The proposed project would include the construction of solar PV panels, an energy storage system, inverters and transformers, an on-site substation, a gen-tie line, telecommunications facilities, and access roads. While the potential for fire is considered moderate, all related projects would also be required to demonstrate compliance with the SBC Fire Code, California Fire Code, and California Building Code. Similarly, all cumulative projects would be required to mitigate any significant impacts to public services, utilities, and transportation, as does the

proposed project. As described above, the project would result in a less than significant impact related to the exacerbation of fire risk associated with the installation or maintenance of project infrastructure. Because cumulative projects would also be required to demonstrate compliance with the SBC Fire Code, California Fire Code, and California Building Code for installation or maintenance of associated infrastructure, cumulative impacts would be less than significant.

Some related projects could be proposed in areas that could expose people or structures to risks from downslope or downstream flooding or landslides as a result of post-fire instability. Based on the recent fire events in California, all projects would be required to adhere to the County's zoning and land use designations and codes, State and local fire codes, and regulations associated with drainage and site stability. These regulations, policies, and codes would reduce the potential for exposing people or structures to risks from downslope or downstream flooding or landslides as a result of post-fire instability. There are no landslide hazard areas within the Desert Region of San Bernardino County (DOC 2023), and with the exception of certain topographical features, the area is relatively flat overall and does not contain many steep slopes. Thus, cumulative projects would not be located in areas where post-fire slope instability is a concern. Regarding runoff and drainage, each cumulative project would also require site-specific hydrology and drainage studies for effective drainage design, as is required for the project. Further, all cumulative projects would disturb more than an acre of ground, therefore requiring conformance with the requirements of the National Pollutant Discharge Elimination System General Construction Permit Program through the preparation of a SWPPP, which would include erosion and sediment control BMPs during construction, thereby reducing the potential of erosion and siltation during construction and would control potential flooding events that could occur during construction. As concluded in the discussion of project impacts above, the project would not expose people or structures to significant risks due to post-fire slope instability or drainage changes and would have a less-than-significant impact. Due to the relatively flat nature of the Desert Region of the County, the lack of landslide hazard areas, and required compliance with the SBC Fire Code, California Fire Code, and California Building Code, cumulative impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance: Less than significant impact.

3.15 Effects Found Not to Be Significant

California Public Resources Code (PRC) Section 21003(f) states, “It is the policy of the state that...all persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment.” This policy is reflected in California Environmental Quality Act (CEQA) Guidelines Section 15126.2(a), which states that “an EIR [environmental impact report] shall identify and focus on the significant environmental impacts of the proposed project,” and Section 15143, which states that “the EIR shall focus on the significant effects on the environment.” CEQA Guidelines Section 15128 requires that an environmental impact report (EIR) contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.

This section is based on the Notice of Preparation (NOP) dated January 18, 2024 (see **Appendix A** of this EIR). The NOP was prepared consistent with the CEQA Guidelines to identify the potentially significant effects of the Overnight Solar Project (project) and was circulated for public review between January 18, 2024, and February 19, 2024. Comments received during public scoping were considered in the process of identifying issue areas that should receive attention in the EIR.

In the course of the evaluation, certain impacts were found not to be significant (no impact) or to be less than significant because the characteristics of the proposed project would not create such impacts. This section briefly describes such effects, based on the NOP. A number of individual impacts found to be less than significant are addressed in the various EIR sections (Sections 3.1 through 3.14) and provide a more comprehensive discussion as to why impacts are less than significant, in order to better inform decision-makers and the general public.

3.15.1 Agriculture and Forestry Resources

- 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 nonagricultural use?*

No Impact. The California Department of Conservation’s Farmland Mapping and Monitoring Program (DOC 2018) classified the project site and surrounding land as Grazing Land, and the generation interconnect (gen-tie) corridor is classified as Urban and Built-Up Land (**Figure 3.15-1, Farmland Map**). The current project site is not used for grazing or any agricultural uses. Development of the project site as proposed would not preclude future use for agricultural purposes. Decommissioning will comply with San Bernardino County (County) Development Code Section 84.29.070 once the solar generating facility reaches the end of the operational life, and project-related elements are removed and properly disposed of, the affected lands could potentially be returned to their original condition and, if irrigated, the project site could be used for agricultural purposes. Although the project would result in the installation of the solar panels and related transmission infrastructure, the actual footprint of the facilities on the project site would be limited to the footings (driven piers) for the solar arrays; concrete pads for the inverters/transformers, substations, battery storage, supervisory control and data

acquisition structures, gen-tie line infrastructure, perimeter security fencing, and on-site access routes, thereby reducing the actual disturbance to the property compared to fully developing the project site with residential or commercial building pads or other such structures and supporting infrastructure. Therefore, no impacts would occur.

b) Would the project conflict with the existing zoning for agricultural use or Williamson Act contract?

No Impact. The project site and gen-tie corridor are not under a Williamson Act contract. Currently, the project site and gen-tie corridor are zoned as Rural Living (RL), which allows for agricultural uses. Additionally, County zoning for the project site allows for the development of renewable energy generation facilities with a Conditional Use Permit (CUP) in the zoning district currently applicable to the project.

The project would undergo a Zoning Amendment and Countywide Plan/County Policy Plan Amendment as part of the approval process so that it would not conflict with Renewable Energy Policy 4.10. The project would be rezoned from RL to Resource Conservation (RC) and redesignated from RL to Resource/Land Management (RLM) in the Countywide Plan/County Policy Plan (San Bernardino County 2022). Redesignating the project site from RL to RC would allow the project site to remain available for agricultural uses. Some agricultural uses may require a discretionary permit, but these uses would still be allowed on the project site. Once the project has been decommissioned, the project site would be able to revert to agricultural uses if irrigated.

Therefore, no impacts would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timber land (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. There are no lands zoned for forest or timber production on any lands that would be affected by the proposed project. Therefore, the project would not conflict with existing zoning for or cause the rezoning of forest land. No impact would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. No forest lands are located on the project site or gen-tie corridor; therefore, no such lands would be affected by the proposed improvements. The project would not result in the loss of forest land or the conversion of forest land to non-forest use. No impact would occur.

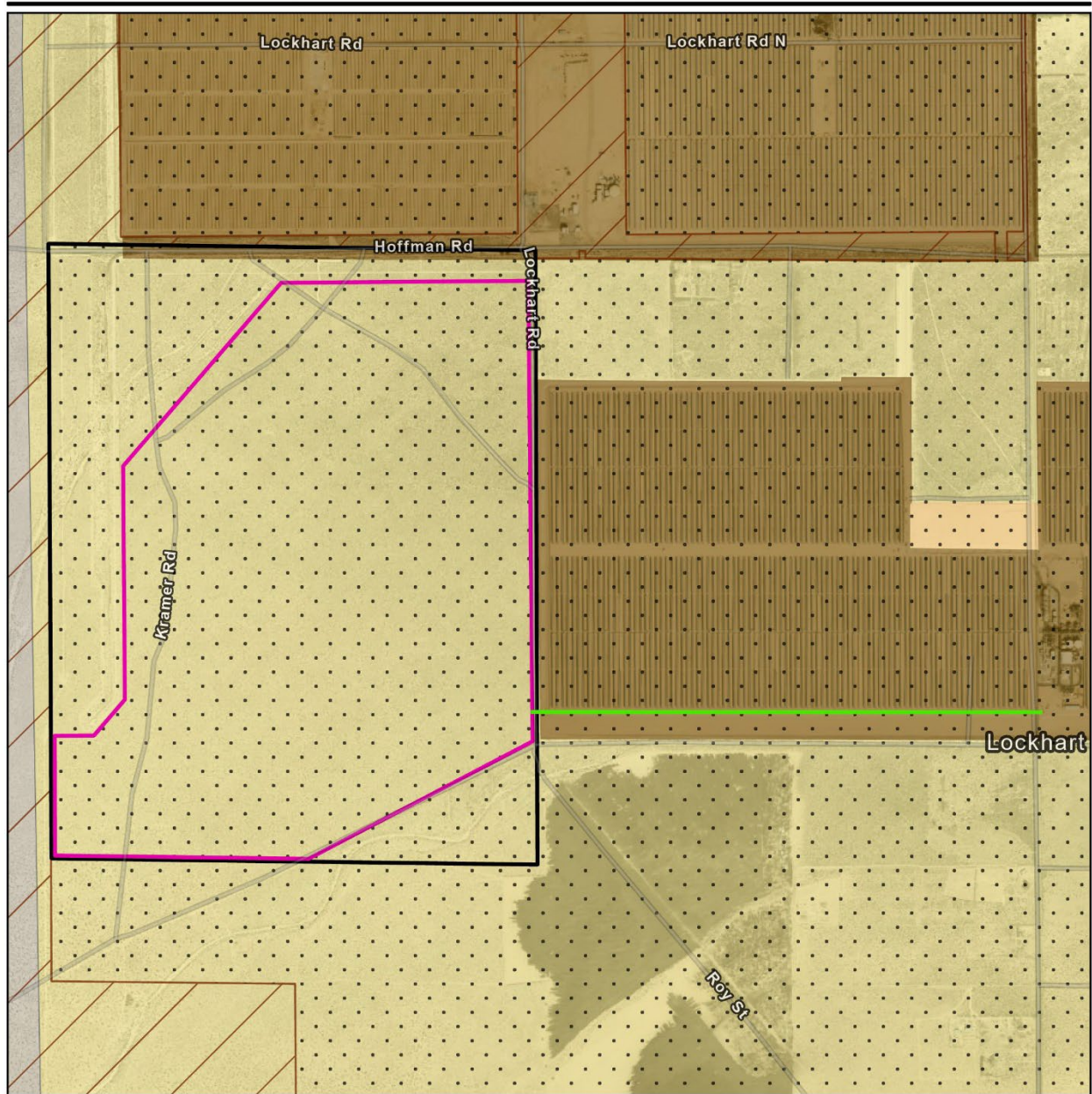


Figure 3.15-1
Farmland Map

Overnight Solar
Overnight Solar, LLC

- Project Parcel
- Project Site
- Proposed Gen-tie

- Zoning Districts**
- Resource Conservation
 - Rural Living

- Important Farmland**
- Urban and Built-up Land
 - Grazing Land
 - Other land
 - Area Not Mapped



1:19,000

0 500 1,000
Feet
Revised: 9/13/2024 | NOT FOR CONSTRUCTION



San Bernardino County, CA

Figure 3.15-1. Farmland Map

- 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 nonagricultural use or conversion of forest to non-forest use?*

No Impact. The current land use is vacant, undisturbed alkali desert scrub. The Farmland Mapping and Monitoring Program designates the project site as Grazing Land and the gen-tie corridor as Urban and Built-Up Land, but the project site has not been used for agricultural purposes in the last 10 years (Google Earth 2023). Adjacent lands are also classified as Grazing Lands but are not used for agricultural purposes. The soils classified in **Table 3.6-3, Primary Soil Series in the Vicinity of the Project**, indicate that the soils found at the project site could only be used for agricultural purposes should the project site be irrigated¹ (NRCS 2023). The project site is not irrigated. Therefore, the project site would not be able to support agricultural land uses at this time. As stated in in Section 3.15.1(a) above, once decommissioning of the project facility occurs, the project site would be restored to its current condition.

Operation and maintenance activities associated with photovoltaic (PV) solar power plants are minimal. The project would be remotely operated but would require up to approximately 12 personnel to conduct panel washing up to four times a year. Panel washing would take approximately 20 days to complete. Operational traffic would be minimal and would be limited to the approximately 12 maintenance employees and their routine maintenance vehicles.

The PV modules would be non-reflective and convert sunlight directly into electricity; therefore, they would consume no fossil fuels and emit no pollutants during operations. Therefore, the proposed project would not include activities that would restrict or impair agricultural production due to airborne pollutants, such that the proposed project is not expected to result in the conversion of farmland on adjacent or nearby properties to non-farmland uses. No impact would occur.

3.15.2 Mineral Resources

- 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 region in which the project is located has limited mineral resource recovery activity, with the closest locations identified as prospects (USGS 2023), not mines. These prospects are located in areas with igneous or metamorphic bedrock, not the alluvial fan deposits of the project site and gen-tie corridor. One previously active surface quarry (Mineral Resources Data System ID# 10116457) extracted sand and gravel and was located approximately 6.3 miles south of the project site (USGS 2023). Another nearby past-producer (Lynx Cat Mountain Quarry, about 6.2 miles southeast of the project) extracted granite. There is no granite within the project site or gen-tie corridor. As a result, the project is not expected to result in the loss of availability of mineral resources that would be of value to the region and the residents of the State. No impact would occur.

- 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?*

¹ <https://websoilsurvey.nrcs.usda.gov/app>

No Impact. No part of the project site or gen-tie corridor has been identified as a locally important mineral resource recovery site or region. The Mineral Resource Zone map available from San Bernardino County (Sheet NR-4 of the Countywide Plan/Policy Plan [San Bernardino County 2022]) does not show any resource zones that overlap the project site or gen-tie corridor. For this reason, the project is not expected to 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 would occur.

3.15.3 Population and Housing

- 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)?*

No Impact. The project would develop a utility-scale solar PV facility, energy storage facility, and gen-tie line. No residential components would be included in the project that would cause permanent or temporary population increases. The nearest residence to the project site is located approximately 1 mile from the project site and the nearest residence to the gen-tie is located approximately 0.3 mile. No residences are included within the project site or gen-tie corridor. Since workers during the construction and operations phases are expected to come from the local communities, it is not expected substantial amounts of workers and their families would relocate. Thus, the project would not result in people in the area being displaced, nor would it require an increased need for additional housing. No impact would occur.

- b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

No Impact. The project would not require the removal of any existing housing or residents as the affected lands are undeveloped, and no residential uses are present on-site who are not participating landowners in the project. Therefore, there would be no potential displacement of substantial numbers of people, necessitating the construction of replacement housing. No impact would occur.

3.15.4 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?*

3.15.4.1 Fire Protection

Less than Significant. Fire protection services for the project area are provided by the San Bernardino County Fire Protection District, while wildfire protection services would be provided by the California Department of Forestry and Fire Protection as discussed in Section 3. 14, Wildfire. The San Bernardino County Fire Department Station 56 is approximately 10.3 miles southeast of the project site at 37284 Flower Road in Hinkley. The project would be designed and operated in compliance with applicable federal, State, and local worker safety and fire protection codes and regulations to minimize the potential for occurrence of fire. The project would not result in development that would generate new

population in the area that would potentially increase demand for fire protection, as no residential uses are proposed. Project construction activities would be short term, and, due to the nature of the proposed improvements, would not substantially increase the risk of fire to occur or the need for fire protection services. Over the long term, project operation and maintenance could introduce potential ignition sources such as transformers, capacitors, electric transmission lines (including the gen-tie line), substations, maintenance vehicles, and gas- or electric-powered machinery used for maintenance of the facilities. Additionally, the proposed inverters and solar panels may represent a potential ignition source; however, the potential for fire risk for these components is considered low. All battery components for the proposed energy storage component would be installed on concrete pads and contained within an enclosure to minimize the potential for sparks or ignition to occur. Further, all such enclosures would be equipped with a fire suppression system.

The project would be designed and constructed in conformance with San Bernardino County Fire Protection District requirements (e.g., as conditions of approval). Additionally, the project applicant would be required to pay annual Public Safety Services Impact Fees in conformance with County Development Code Section 84.29.040(d) based on acreage for solar facilities and would therefore ensure the project would not adversely affect the provision of fire protection services in the area.

Therefore, the proposed solar power facility project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. Impacts would be less than significant.

3.15.4.2 Police Protection

Less than Significant. The project area is served by the San Bernardino County Sheriff's Department. The nearest sheriff's station is in Barstow, approximately 20 miles southeast of the project site at 225 East Mountain View Street. The project would not result in development which would generate new population that could potentially increase demand for police protection, as no residential uses are proposed. Due to the nature of the proposed land use, project construction and/or operation activities would not substantially increase demand for police protection services in the area. The facility would be secured with chain-link fencing with 1 foot of barbed wire at the top along the perimeter of the project site. Access gates would be provided at each project site entry point. The on-site substation would be separately fenced. Controlled security lighting would be installed, and the project site would be monitored remotely. Manual, timed, and motion-sensor lights would be installed at access gates, equipment pads and the substation for maintenance and security purposes. Remote-controlled cameras would also be installed. No other type of lighting is planned. Additionally, the applicant would be required to pay annual Public Safety Services Impact Fees in conformance with County Development Code Section 84.29.040(d) based on acreage for solar facilities, which would ensure the project does not adversely affect police protection services in the area.

With implementation of such measures, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. Impacts would be less than significant.

3.15.4.3 Schools

No Impact. The nearest school to the project site is Hinkley Elementary School, located approximately 10.5 miles southeast at 37600 Hinkley Road in Hinkley.

The need for permanent housing for project employees would not be necessary. Since workers would be sourced from surrounding communities, it is not anticipated that construction workers would permanently relocate to the local area with their families. Therefore, there would not be a need for additional school services. Additionally, due to the number of schools in the project vicinity and the nature of the proposed project, it is not anticipated that population growth would be generated in the area, and no new school-aged children would trigger an increased demand for school services.

Therefore, the proposed project would not result in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for schools. No impact would occur.

3.15.4.4 Parks

No Impact. As previously stated, project construction may result in a temporary increase in construction workers in the area; however, construction workers would not be anticipated to permanently relocate locally and would likely be sourced from other areas of San Bernardino County. Further, the proposed facilities would be manned remotely with approximately 12 workers visiting the project site up to four times per year for a period up to 20 days for panel washing and other necessary maintenance. The project would not create jobs where staff would need to relocate to nearby communities in order to frequent the project site. Thus, the project is not anticipated to generate sufficient population growth to increase demand for park facilities or other recreational services in the area.

Therefore, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any park services. No impact would occur.

3.15.4.5 Other Public Facilities

No Impact. As discussed previously, the project is not anticipated to cause permanent or temporary population increases in the area (refer to Section 3.15.3, Population and Housing). If it does occur, any increase in population would be negligible. It is not anticipated that area demand on other public facilities (e.g., libraries or parks) would be created. Therefore, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any other public facilities. No impact would occur.

3.15.5 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?*

No Impact. No residential uses are proposed as part of the project. Consequently, population growth is not anticipated, and an increase in the use of existing neighborhood and regional parks and or other recreational facilities is not anticipated.

During the construction phase, a temporary increase in construction workers in the area would occur; however, it is anticipated that construction workers would be sourced from surrounding communities, and therefore are not expected to relocate and would not generate a demand for local park services. Therefore, the project would not substantially increase the use of local or regional recreational parks or facilities such that substantial physical deterioration would occur or be accelerated. No impact would occur.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

No Impact. The project would develop a utility-scale solar PV facility, energy storage facility, and gen-tie line and would not include any type of residential development that would require recreational facilities. Workers would commute from the surrounding communities and would not be expected to relocate, which could cause a demand for local park services. Therefore, the proposed project would not result in development of recreational facilities that might have an adverse physical effect on the environment. No impact would occur.

4.0 ALTERNATIVES TO THE PROPOSED PROJECT

4.1 Introduction

Section 15126.6(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the project, or a range of reasonable alternatives to the location of the project, that could feasibly attain the basic objectives of the project. An EIR does not need to consider every conceivable alternative project, but it does have to consider a range of potentially feasible alternatives that will facilitate informed decision-making and public participation.

According to CEQA Guidelines Section 15126.6(a), the discussion of alternatives must include several different issues. The discussion of alternatives must focus on alternatives to the project, or to the project location, that will avoid or substantially reduce any significant effects of the project, even if the alternatives would be costlier or hinder to some degree the attainment of the project objectives. The “No Project” alternative must also be evaluated. The “No Project” analysis must discuss the existing conditions and what would reasonably be expected to occur in the foreseeable future if the proposed project was not approved. The range of alternatives required is governed by a “rule of reason.” Therefore, the EIR must only evaluate those alternatives necessary to permit a reasoned choice. The alternatives must be limited to only ones that would avoid or substantially lessen any of the significant effects of the proposed project.

Additionally, an EIR should not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative. The CEQA Guidelines also require an EIR to state why an alternative is being rejected. If the County ultimately rejects any or all alternatives, the rationale for rejection will be presented in the findings that are required before the County certifies the EIR and takes action on the proposed project. According to Section 15126.6(f)(1) of the CEQA Guidelines, among the factors that may be taken into account when addressing feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, policy preferences, regulatory limitations, jurisdictional boundaries, and whether the applicant could reasonably acquire, control, or otherwise have access to the alternate site.

The project alternatives are evaluated to determine the extent to which they attain the basic project objectives, while significantly reducing or avoiding any significant effects of the proposed project. The proposed project objectives are outlined in the Project Objectives subsection, in Section 2, Project Description.

The objectives of the proposed Overnight Solar Project (project) include the following:

1. Site solar photovoltaic (PV) power-generating facilities and energy storage near existing utility infrastructure, including existing Southern California Edison (SCE) transmission lines, thereby achieving economies of scale to maximize shared transmission facilities with existing solar operations.
2. Establish solar PV power-generating facilities and energy storage of sufficient size and configuration to produce reliable electricity at a competitive rate.

3. Use proven and established PV and energy storage technology that is efficient and requires low maintenance.
4. Assist the State in achieving or exceeding its Renewables Portfolio Standard (RPS) and greenhouse gas (GHG) emissions reduction objectives by developing and constructing new California RPS-qualified solar power generation facilities producing approximately 150 megawatts (MW) of renewable electrical energy.
5. Provide a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates.
6. Promote the County's Renewable Energy and Conservation Element (RECE) policies and be sited in an area identified as suitable for utility oriented renewable energy generation projects and be consistent with County land use regulations.
7. Develop a solar power generation facility in San Bernardino County, which would support the economy by investing in the local community, creating local construction jobs, and increasing tax and fee revenue to the County.

4.2 Impacts of the Proposed Project

Pursuant to CEQA, alternatives were evaluated for whether they would avoid or substantially lessen any significant impacts of the proposed project. The evaluation considered whether the alternative would create significant environmental impacts potentially greater than those of the project as proposed. To evaluate the impacts that could be avoided or substantially lessened through an alternative, the County first identified the potentially significant impacts of the proposed project. The following resource topics were evaluated further in this EIR (refer to Section 3.0, Introduction to Environmental Analysis):

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Traffic
- Utilities and Service Systems
- Wildfire

The environmental impact analysis revealed that with the implementation of mitigation measures, all impacts were determined to be less than significant. The proposed project would not result in any significant and unavoidable impacts. A summary discussion of project impacts is presented in **Table 4-1, Summary of Environmental Impacts of the Proposed Project.**

Table 4-1. Summary of Environmental Impacts of the Proposed Project

Resource Topic	Environmental Impacts
Aesthetics and Visual Resources	Less than significant impact on scenic resources; historic buildings within a State scenic highway; existing visual quality of project site and its surrounding lands; and day or nighttime views in the areas due to glare and nighttime lighting. No impact on scenic vistas.
Air Quality	Less than significant impact from air impacts during construction; exposure of sensitive receptors to substantial pollutant concentrations; conflict with applicable air quality management plan; and contribution to an air quality exceedance during construction creation of objectionable odors.
Biological Resources	Less than significant impact with mitigation on candidate, sensitive, or special-status species; federally protected wetlands; riparian or other sensitive natural vegetation communities; and conflict with local policy or ordinance protecting biological resources. No impact on movement of wildlife species or migratory wildlife corridors; and conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.
Cultural and Tribal Cultural Resources	Less than significant impact with mitigation on historical resources; archaeological resources; disturbance of human remains; and tribal cultural resources.
Energy	Less than significant impact from wasteful, inefficient, or unnecessary consumption of energy resources; and conflicts or obstruction of a State or local plan for renewable energy or energy efficiency.
Geology and Soils	Less than significant impact with mitigation on a unique paleontological resource site or unique geologic feature. Less than significant impact on adverse effects from rupture of an earthquake fault, strong seismic ground shaking, landslides, and seismic-related ground failure, including liquefaction or landslides; soil erosion and the loss of topsoil; being located on unstable; being located on expansive soils; and use of septic tanks or alternative wastewater disposal systems.
Greenhouse Gas Emissions	Less than significant impact from generation of greenhouse gas emissions that may have a significant impact on the environment; and conflict with an applicable plan, policy, or regulation for the purpose of reducing emissions.
Hazards and Hazardous Materials	Less than significant impact from the routine transport, use, or disposal of hazardous materials; the creation of reasonably foreseeable spill and accident conditions involving the release of hazardous materials into the environment; interfering with an adopted emergency plan or emergency evacuation plan; and exposing people or structures to a significant risk involving wildfires. No impact from hazardous emissions or handling of hazardous materials near an existing or proposed school; being located on a site that is included on a list of hazardous materials sites; and being located in an area covered by an airport land use plan or within 2 miles of public airport or public use airport.
Hydrology and Water Quality	Less than significant impact from violation of water quality standards or waste discharge requirements or otherwise substantially degrading surface or groundwater quality; from substantially depleting groundwater supplies or substantially interfering with groundwater recharge; altering drainage patterns of the site to result in erosion, siltation, or flooding; increasing the rate or amount of surface runoff that would result in flooding on- or off-site; creating runoff water which would exceed stormwater drainage system capacity provide substantially additional sources of polluted runoff; impede or redirect flood flows; and conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan. No impact from exposure of people or structures to significant risk involving flooding; and inundation by seiche, tsunami, or mudflow.
Land Use and Planning	Less than significant impact from conflicting with land use plans, policies, and regulations; and physically dividing an established community.

Resource Topic	Environmental Impacts
Noise	Less than significant impact from generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; and from generation of excessive groundborne vibration or groundborne noise levels. No Impact from exposure of people residing or working in project area to excessive noise levels within 2 miles of a public airport and in the vicinity of a private airstrip.
Transportation and Traffic	Less than significant impact from conflict with a program, plan, ordinance, or policy addressing the circulation system; conflict or inconsistency with CEQA Guidelines Section 15064.3, subdivision (b); from substantial increase in hazards due to a design feature or incompatible use; and from inadequate emergency access.
Utilities and Service Systems	Less than significant impact on the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities; sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years; adequate capacity to serve the project's projected wastewater demand; generation of solid waste in excess of local infrastructure capacity or the impairment of solid waste reduction goals; and compliance with federal, State, and local statutes and regulations related to solid waste.
Wildfire	Less than significant impact from substantial impairment of an adopted emergency response plan or emergency evacuation plan; exposure of project occupants to pollutant concentrations from a wildfire due to slope, prevailing winds, and other factors; exacerbation of fire risk due to installation or maintenance of associated infrastructure; and exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of post-fire slope instability or drainage changes.

4.3 Alternatives Considered But Rejected

Pursuant to CEQA Guidelines Section 15126.6(c), alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines Section 15126(f)(2)). Though the project would not result in any significant and unavoidable impacts, the County considered several alternatives that could reduce potential impacts associated with Project implementation. Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The discussion below summarizes the alternatives that were considered but ultimately rejected due to feasibility and/or potentially greater impacts without equal benefits or project objectives. These alternatives were considered by Overnight Solar, LLC (applicant) during the design phase and/or County during the alternatives development process.

4.3.1 Solar Layout Northwestern Corner (Original Project Footprint)

The Solar Layout Northwestern Corner alternative was the original project footprint, which included solar arrays in the northwestern corner of the project parcel. This alternative would increase the impacts with the installation of additional modules and associated racking and wiring on approximately 40 additional acres. This increase in acreage would result in approximately 8.5 MW of additional direct current (DC) capacity. Construction of this alternative would occur over approximately

27.5 months, requiring an average of 150 workers on site during construction, depending on the activities.

Implementation of this alternative would result in greater impacts on all environmental resource areas when compared with the proposed project, except for land use and planning impacts, which would be the same as under the proposed project. Most notably, impacts related to biological resources would be increased due to additional solar development within this corner of the project parcel. A watercourse consisting of approximately 24.3 acres of fluvially inactive floodplain and abandoned channels exists within the alternative site. This complex wash was modified and became fluvially inactive in approximately 1989-1990 when a berm was constructed along the western boundary of the project parcel to divert drainage and floodwaters north and away from newly built solar facilities in the project vicinity. Discussions with the California Department of Fish and Wildlife (CDFW) have verified to the applicant that this is no longer considered a watercourse with respect to jurisdictional waters. This non-active northern watercourse offers suitable habitat for special-status animal species, specifically desert tortoise (*Gopherus agassizii*), which were identified within this area during biological field surveys conducted for the proposed project (**Figure 3.3-3, Sensitive Species Data from Field Efforts**).

Additionally, air quality, energy, GHG emissions, hazards and hazardous materials, and noise impacts would increase due to the larger area of ground disturbance and associated construction equipment and materials usage. This alternative would also result in increased impacts to cultural, Tribal cultural, and paleontological resources due to the greater area of ground disturbance.

The Solar Layout Northwestern Corner alternative attains all of the project objectives and is potentially feasible; however, it was rejected after consultation with the CDFW and the U.S. Fish and Wildlife Service (USFWS) due to the increased impacts on biological resources, specifically desert tortoise and desert tortoise habitat. Therefore, this alternative was eliminated from further consideration in this EIR.

4.3.2 Solar and Substation Alternative Southeast Corner

The Solar and Substation Alternative Southeast Corner alternative would move the on-site substation approximately 400 feet to the north and add solar array modules to the southeast corner of the project parcel, resulting in approximately 9.3 MW DC additional capacity. This alternative would increase the impacts with the installation of additional modules and associated racking and wiring on approximately 37 additional acres. Construction of this alternative would occur over 27.5 months. An average of 150 workers would be on site during construction, depending on the activities.

Implementation of this alternative would result in greater impacts on all environmental resource areas when compared with the proposed project, except for land use and planning impacts, which would be the same as under the proposed project. The Solar and Substation Alternative Southeast Corner alternative attains all of the project objectives and is potentially feasible; however, it was rejected due to the potentially significant and unavoidable impacts to hydrology and water resources located within the southeastern corner of the project parcel. Specifically, there is one feature identified in the National Wetlands Inventory (NWI) located within the southeastern corner of the project parcel (refer to **Figure 3.3-2, Jurisdictional Waters Delineations from Field Efforts**). Therefore, this alternative was eliminated from further consideration in this EIR.

4.3.3 Alternative Solar Layout Western Strip

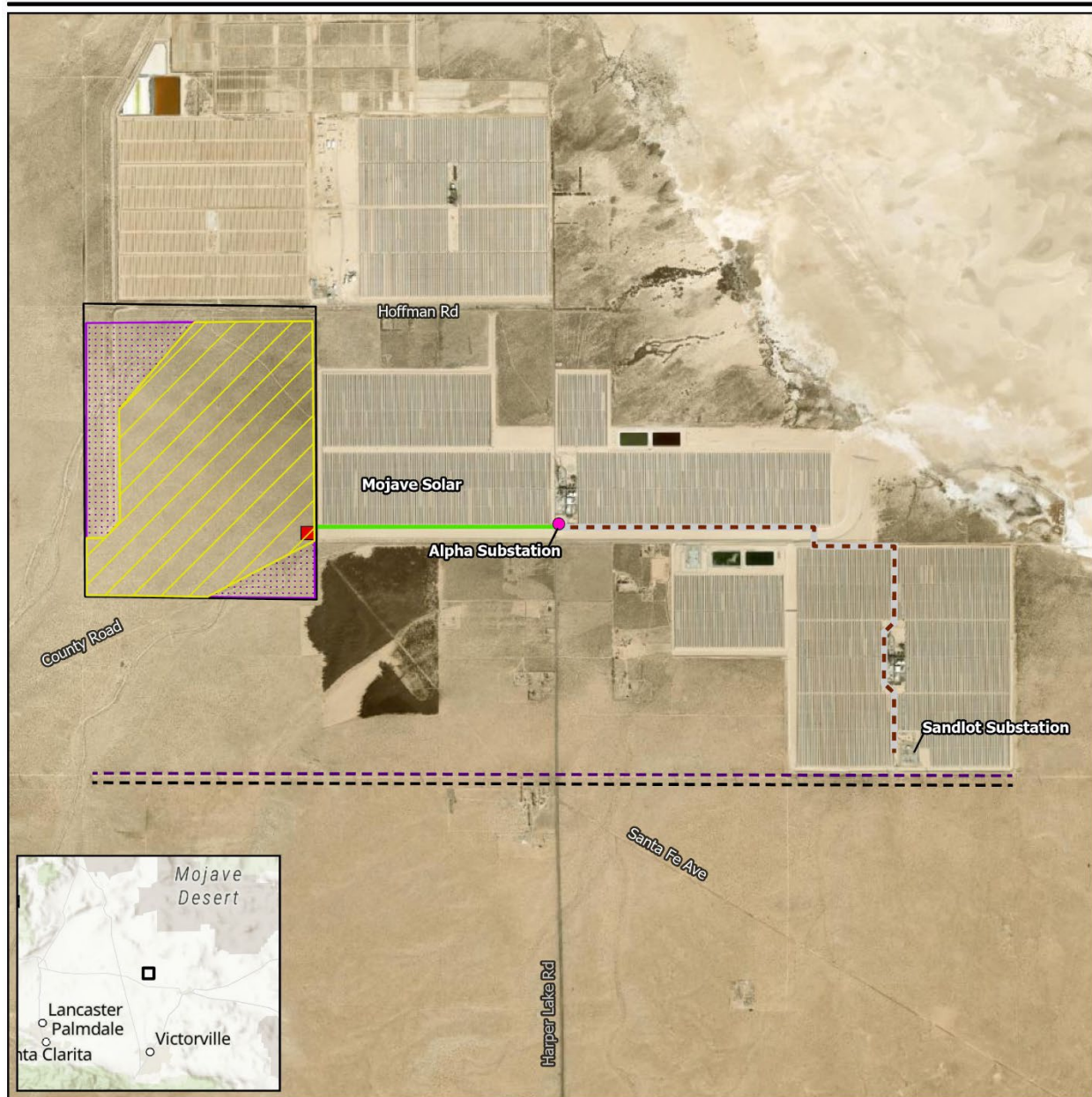
The Alternative Solar Layout Western Strip alternative would increase the project footprint by developing additional solar arrays in both the northwest corner of the project parcel, similar to the Solar Layout Northwestern Corner Alternative, and in the western area of the project parcel, on the west side of the existing drainage berm (refer to **Figure 4-1, Rejected Alternative: Solar Layout Western Strip**). This alternative would include the installation of additional solar array modules and associated racking and wiring on approximately 84 additional acres, resulting in approximately 21 MW DC additional capacity. This alternative would increase the impacts and extend the construction schedule to 28 months. An average of 150 workers would be on site during construction, depending on the activities.

Implementation of this alternative would result in greater impacts on all environmental resource areas when compared with the proposed project, except for land use and planning impacts, which would be the same as under the proposed project. The Alternative Solar Layout Western Strip alternative attains all of the project objectives and is potentially feasible; however, it was rejected after consultation with the CDFW, and due to the potentially significant and unavoidable impacts to hydrology and water resources and biological resources located along the west of the project parcel. Additionally, there is an existing transmission line and associated right-of-way within the western area of the project parcel, between the existing drainage berm and the western parcel boundary, which would further constrain the development of this area. Therefore, this alternative is infeasible and was eliminated from further consideration in this EIR.

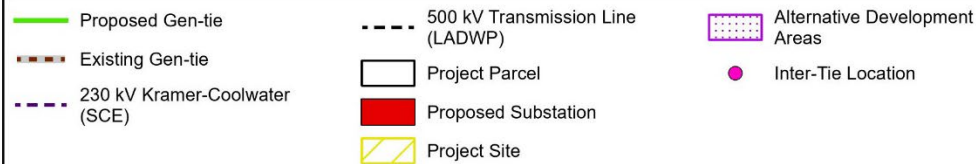
4.3.4 Distributed Generation Alternative

Distributed generation refers to the installation of small-scale solar energy facilities at individual locations at or near the point of consumption (e.g., use of solar PV panels on a business or home to generate electricity for on-site consumption). The generating capacity of a distributed generation source is significantly smaller than that of centrally located utility-scale energy generation sources and can range from generation at a single residence to larger installations for commercial or multi-unit housing applications. Distributed generation systems typically generate less than 10 MW. The distributed generation alternative would require at least 15 separate renewable energy projects at 10 MW each to provide a level of energy generation comparable to the proposed project. Finding 15 or more separate sites for development of solar power is not feasible due to the time, expense, and site control requirements associated with selecting such a large number of locations.

In order to be a viable alternative to the project, the applicant would need to own or control a sufficient amount of land to accommodate 150 MW of capacity. The applicant, however, does not currently own or control any other such sites or land in San Bernardino County and impacts are not guaranteed to be less at each site. Therefore, this alternative is infeasible and would not meet the project objectives and was eliminated from further consideration in this EIR. Specifically, this alternative would not meet the project objectives to site solar PV power-generating facilities and energy storage near existing utility infrastructure and to establish solar PV power-generating facilities and energy storage of sufficient size and configuration to produce reliable electricity at a competitive rate.

**Figure 4-1**

Rejected Alternative: Solar Layout Western Strip

Overnight Solar
Overnight Solar, LLC

1:40,000 0 0.5 1 Miles

Revised: 8/23/2024 | NOT FOR CONSTRUCTION

San Bernardino County, CA

Figure 4-1. Rejected Alternative: Solar Layout Western Strip

4.4 Alternatives to the Proposed Project

As noted previously, CEQA Guidelines Section 15126.6l(2) requires that the alternatives discussion include an analysis of the No Project Alternative. Pursuant to CEQA, the No Project Alternative refers to the analysis of existing conditions (i.e., implementation of current plans) and what would reasonably be expected to occur in the foreseeable future if the project was not approved. Potential environmental impacts associated with the No Project Alternative and two project alternatives are compared below to assess impacts from the proposed project. These alternatives include: (1) No Project Alternative, (2) Reduced Footprint Alternative, and (3) Kramer Junction Solar Site Alternative.

Table 4-2, Comparison of Alternatives and Environmental Considerations, summarizes the impact of each alternative on the environmental resources evaluated in the EIR when compared with the impact of the proposed project. Several criteria are considered for each resource topic and the conclusion considers the aggregate impact of each alternative relative to the impacts of the proposed project.

Table 4-2. Comparison of Alternatives and Environmental Considerations

Topic	1: No Project Alternative	2: Reduced Footprint Alternative	3: Kramer Junction Alternative
Aesthetics and Visual Resources	<	<	>
Air Quality	<	<	>
Biological Resources	<	<	>
Cultural and Tribal Cultural Resources	<	<	>
Energy	<	< ^{1/}	>
Geology and Soils	<	<	>
Greenhouse Gas Emissions	<	< ^{1/}	>
Hazards and Hazardous Materials	<	<	-
Hydrology and Water Quality	<	<	>
Land Use and Planning	<	-	-
Noise	<	<	>
Transportation and Traffic	<	<	-
Utilities and Service Systems	<	<	>
Wildfire	<	<	>
Attains Most Project Objectives	No	No	Yes

Note: "<" = less than proposed project impacts; "-" = similar to proposed project impacts; ">" = greater than proposed project impacts.

^{1/} Construction of Alternative 2 would require less energy usage during construction due to the reduced footprint and shortened construction timeline, thereby resulting in less GHG emissions during construction, but would not achieve the long-term benefits of generating as much renewable energy as the proposed project due to the reduced capacity.

Table 4-3, Project Objectives Consistency Analysis, identifies objectives consistency for each of the proposed alternatives. Further discussion of objectives related to each alternative is provided following the impact analysis comparison below.

Table 4-3. Project Objectives Consistency Analysis

Project Objective	1: No Project Alternative	2: Reduced Footprint Alternative	3: Kramer Junction Alternative
	Consistent	Consistent	Consistent
1. Site solar PV power-generating facilities and energy storage near existing utility infrastructure, including existing LADWP and SCE transmission lines, thereby achieving economies of scale to maximize shared transmission facilities with existing solar operations.	No	Yes	Less than project
2. Establish solar PV power-generating facilities and energy storage of sufficient size and configuration to produce reliable electricity at a competitive rate.	No	Yes ^{1/}	Yes ^{1/}
3. Use proven and established PV and energy storage technology that is efficient and requires low maintenance.	No	Yes	Yes
4. Assist the State in achieving or exceeding its RPS and GHG emissions reduction objectives by developing and constructing new California RPS-qualified solar power generation facilities producing approximately 150 MW of renewable electrical energy.	No	No ^{3/}	Yes
5. Provide a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates.	No	Yes	Yes
6. Promote the County's RECE policies and be sited in an area identified as suitable for utility oriented renewable energy generation projects and be consistent with County land use regulations.	No	Yes	Not Applicable ^{2/}
7. Develop a solar power generation facility in San Bernardino County, which would support the economy by investing in the local community, creating local construction jobs, and increasing tax and fee revenue to the County.	No	Yes	No ^{2/}

Notes:

1/ Information about energy market pricing is not public information and future competitive pricing for solar and battery storage is speculative; therefore, it was assumed that Alternatives 2 and 3 could meet the objective.

2/ Alternative 3 would be located on federal land (Bureau of Land Management) and would not promote or conflict with the County's RECE policies. Alternative 3 would also not generate tax and fee revenue to the County.

3/ Alternative 2 would only produce up to 144 MW of energy.

GHG – greenhouse gas; LADWP – Los Angeles Department of Water and Power; MW – megawatt; PV – photovoltaic; RECE – Renewable Energy and Conservation Element; RPS – Renewables Portfolio Standard; SCE – Southern California Edison

4.4.1 Alternative 1: No Project Alternative

4.4.1.1 Description of Alternative

The CEQA Guidelines require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the project versus a No Project Alternative. Under the No Project Alternative, the proposed solar energy and storage facility, and associated generation interconnect (gen-tie) line, would not be constructed. The existing conditions in the project site would remain.

4.4.1.2 Impact Comparison with the Proposed Project

Under the No Project Alternative, impacts associated with construction and operation of the solar energy and storage facility would be avoided.

Aesthetics and Visual Resources

Implementation of the No Project Alternative would not impact scenic resources, including scenic vistas, as the project site would remain in its current condition. Views of the undeveloped project site, various transportation and utility infrastructure, and residences would remain. Views of the gen-tie corridor would remain as is, enclosed by the existing Mojave Solar Facility. No new sources of light and glare would be constructed. The No Project Alternative would have no aesthetic impacts and would avoid the proposed project's less than significant impacts on scenic resources, scenic vistas, visual quality, and light and glare.

Air Quality

The No Project Alternative would not require vehicle or equipment use. Criteria air pollutant emissions would not increase and the risk to sensitive receptors would remain the same as baseline conditions. Ambient air quality of the project site and gen-tie corridor would not be affected by the No Project Alternative. The No Project Alternative would have no air quality impacts and would avoid the proposed project's less than significant impacts on air quality resulting from construction and operation of the proposed solar and energy storage facility and associated gen-tie line.

Biological Resources

The No Project Alternative would not require ground-disturbing activities and would not affect special-status plant and wildlife species that may occur within the project site. No impacts on biological resources would occur. The No Project Alternative would avoid the proposed project's mitigated impacts on biological resources including special-status species and habitats that would result from construction and operation of the proposed solar and energy storage facility and associated gen-tie line.

Cultural and Tribal Cultural Resources

The No Project Alternative would not involve ground-disturbing activities. The No Project Alternative would not impact historic, archaeological, or tribal cultural resources, or disturb human remains. The No Project Alternative would avoid the proposed project's mitigated impacts on cultural and tribal cultural resources resulting from inadvertent discovery of buried archaeological and tribal cultural resources during construction, as well as impacts on the inadvertent discovery of human remains during construction of the solar and energy storage facility and associated gen-tie line.

Energy

Under the No Project Alternative, the project site would remain undeveloped and the gen-tie corridor would remain as is, enclosed by the existing Mojave Solar Facility. No energy consumption activities would occur. As such, the No Project Alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. However, the No Project Alternative would not support the goals of the RPS and would have greater impacts on energy due to lack of offsetting existing use of non-renewable energy. Therefore, the No Project Alternative would avoid the proposed project's less than significant impacts on energy consumption required for the construction and operation of the solar and energy storage facility and associated gen-tie line. Thus, energy impacts under the No Project

Alternative would be less than the proposed project. However, the No Project Alternative would not result in beneficial energy impacts because it would not generate renewable energy, which is assumed to offset energy generated by fossil fuels.

Geology and Soils

The No Project Alternative would not involve new development on the project site or within the gen-tie corridor and would not expose structures or property to adverse effects from rupture of an earthquake fault, strong seismic ground shaking, seismic-related ground failure, liquefaction, landslides, or expansive or unstable soil. The No Project Alternative would not involve ground-disturbing activities and, therefore, no soil erosion and topsoil loss would occur. No geologic, soils, or seismicity impacts would occur with the No Project Alternative. The No Project Alternative would avoid the proposed project's less than significant impacts from exposure to earthquake faults, strong seismic ground shaking, seismic-related ground failure, landslides, soil erosion or loss of topsoil, unstable geological conditions, and expansive or unstable soils because no development would occur on the project site or along the gen-tie corridor. The No Project Alternative would also avoid the proposed project's mitigated impact to inadvertent discovery of paleontological resources as no ground-disturbing activities would occur.

Greenhouse Gas Emissions

The No Project Alternative would not require construction of a new solar energy and storage facility and associated gen-tie line, and would not result in GHG emissions as the project site would remain undeveloped and the gen-tie corridor would remain as is, enclosed by the existing Mojave Solar Facility. However, the No Project Alternative would not implement a renewable energy project and would not help the State meet its renewable energy generation targets to reduce GHG emissions. The No Project Alternative would avoid the proposed project's less than significant impacts from generation of GHG emissions during construction because no development would occur on the project site or along the gen-tie corridor. Therefore, the No Project Alternative would result in less GHG impacts as compared with the proposed project. However, the No Project Alternative would not result in beneficial GHG impacts because it is assumed that the production of renewable energy would offset carbon dioxide (CO₂) emissions generated by fossil fuels, and the No Project Alternative would generate no renewable energy.

Hazards and Hazardous Materials

Under the No Project Alternative, the project site and gen-tie corridor would remain in its current condition. As such, this alternative would not involve the routine transport, use, or disposal of hazardous materials associated with development of the project site and gen-tie corridor; 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; emit hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school; be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; result in a safety hazard or excessive noise for people residing or working in the project area for a project located within the vicinity of a private airstrip; impair implementation of or interfere with an emergency response plan or emergency evacuation plan; or

expose people or structures to significant risk of loss, injury, or death involving wildland fires. The No Project Alternative would avoid the proposed project's less than significant impacts related to hazards, hazardous materials, and wildfire risk resulting from construction, operation, and decommissioning of the proposed solar and energy storage facility and associated gen-tie line.

Hydrology and Water Quality

The No Project Alternative would not create new impervious surfaces or include any development at the project site or along the gen-tie corridor. No ground-disturbing activities would occur, and erosion and runoff rates would be unchanged from baseline conditions. As such, this alternative would not violate water quality standards or waste discharge requirements; substantially alter the existing drainage patterns of the site or area in a manner that would result in substantial erosion and/or sedimentation onsite or offsite, or result in flooding onsite or offsite; create or contribute runoff water that would exceed the capacity of an existing or planned stormwater drainage system; impede or redirect flood flows; contribute to inundation by a flood hazards, tsunami, or seiche; or conflict with or obstruct implementation of a water quality control plan or groundwater management plan. The No Project Alternative would avoid the proposed project's less than significant impacts on hydrology and water quality.

Land Use and Planning

The No Project Alternative would not conflict with the San Bernardino Countywide Plan/Policy Plan, County Development Code, or other applicable land use plans, policies, or regulations. The No Project Alternative would not require a Conditional Use Permit (CUP), Zoning Amendment, or Countywide Plan/Policy Plan Amendment. No impacts related to land use would occur. The No Project Alternative would avoid the proposed project's less than significant impacts from conflict with land use plans, policies, and regulations, and dividing an established community.

Noise

No construction or operation of a solar and energy storage facility and associated gen-tie line would occur under the No Project Alternative and ambient noise levels on the project site and along the gen-tie corridor would remain the same as existing conditions. The No Project Alternative would not conflict with local noise standards or result in changes to the ambient noise levels either temporarily, periodically, or permanently. The No Project Alternative would avoid the proposed project's less than significant impact from ambient operational noise and from groundborne vibration and noise.

Transportation and Traffic

Under the No Project Alternative, the solar panels and energy storage system and associated gen-tie line would not be constructed and would therefore not introduce construction and operational-related trips. Existing traffic patterns and volumes on nearby roadways would remain unchanged. As such, the No Project Alternative would not conflict with a program, plan, ordinance or policy addressing the circulation system, nor would the No Project Alternative conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). In addition, the No Project Alternative would not substantially increase hazards due to a geometric design feature or result in inadequate emergency access. The No Project Alternative would avoid the proposed project's less than significant impact from

conflicts with a program, plan, ordinance, or policy addressing the circulation system and from inadequate emergency access.

Utilities and Service Systems

Under the No Project Alternative, the solar panels and energy storage system and associated gen-tie line would not be constructed, and there would be no new demand for utilities and service systems on the project site or along the gen-tie corridor. As such, the No Project Alternative would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; generate solid waste in excess of State or local standards; or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, there would be no impact under the No Project Alternative, and the No Project Alternative would avoid the proposed project's less than significant impacts related to utilities and service systems.

Wildfire

Under the No Project Alternative, the solar panels and energy storage system and associated gen-tie line would not be constructed. As such, the No Project Alternative would not expose occupants to pollutant concentrations from a wildfire; require the installation or maintenance of associated infrastructure; or expose people or structures to significant risks. Therefore, there would be no impact under the No Project Alternative, and the No Project Alternative would avoid the proposed project's less than significant wildfire impacts.

4.4.1.3 Alternative 1 Summary and Feasibility

Implementation of Alternative 1, the No Project Alternative, would avoid the mitigated and less than significant environmental impacts of the proposed project because no solar energy and storage facility and associated gen-tie line would be constructed. The baseline environmental conditions on the project site would remain under the No Project Alternative. The No Project Alternative would have fewer impacts than the proposed project on all environmental resources because no construction would occur, and land use patterns of the project site would remain as undeveloped and vacant land and the gen-tie corridor would remain as is, enclosed by the existing Mojave Solar Facility. The No Project Alternative would also result in no beneficial impacts related to energy generation and GHG emissions because it is assumed that the production of renewable energy would offset energy and carbon dioxide emissions generated by fossil fuels, and the No Project Alternative would generate no renewable energy. The No Project Alternative is inherently feasible as it represents no change from existing conditions. However, the No Project Alternative would not meet any of the project objectives, including to develop a solar power and energy storage facility near existing utility infrastructure and produce reliable electricity at a competitive rate, to assist the State in achieving its RPS and GHG emissions reduction objectives, to promote the County's RECE policies, and to support the local economy through job creation and tax and fee revenue.

4.4.2 Alternative 2: Reduced Footprint Alternative

4.4.2.1 Description of Alternative

A conceptual layout and reduced footprint for the Alternative 2 solar energy and storage facility is provided on **Figure 4-2, Alternative 2: Reduced Footprint**. Alternative 2, the Reduced Footprint Alternative, would reduce the footprint of the solar energy and storage facility by increasing setbacks by 50 feet from the proposed solar array boundary. Alternative 2 would reduce the project footprint to the maximum extent possible while remaining economically feasible. Alternative 2 would reduce the intensity and duration of construction and associated construction equipment emissions and fugitive dust due to a reduction in the area of ground disturbance. Alternative 2 would further minimize impacts to desert tortoise and desert tortoise habitat in the project vicinity and would increase the distance between the solar and energy storage facility and the natural drainages along the northwest and southeast boundaries of the project site. Additionally, Alternative 2 would reduce aesthetics impacts from publicly accessible roadways in the project vicinity due the increased setbacks. Alternative 2 would also result in reduced overall water usage due to the reduction in construction activities and reduction in solar panels to be washed during project operation.

The Alternative 2 solar facility would encompass approximately 572 acres, approximately 96 percent of the 596 acres required for the proposed project. Alternative 2 would produce up to 144 MW of energy. Alternative 2 construction would occur over 25 months. An average of 150 workers would be on site during construction similar to the proposed project, depending on the activities. With the exception of water usage, operational assumptions for Alternative 2 would be the same as under the proposed project, including the frequency of panel washing and duration per occurrence.

The gen-tie line and on-site substation would remain generally the same under Alternative 2 as with the proposed project; however, the substation would be shifted 50 feet to the west and the gen-tie line would be 50 feet longer to account for this shift in placement of the substation. Accordingly, these project components are not further discussed below under the impact comparison between Alternative 2 and the proposed project as there would be no substantial difference between the two scenarios, with the exception of air quality and noise impacts as the substation would be slightly farther from existing residences.

4.4.2.2 Impact Comparison with the Proposed Project

Aesthetics and Visual Resources

Alternative 2 would avoid solar development on approximately 24 acres of land within the project site. The impact on scenic vistas and views from scenic highways would be the same as the proposed project, as there are no scenic vistas or scenic highways in the Alternative 2 site vicinity. Alternative 2 would reduce the change in visual quality from nearby public roads because the extent of land conversion would be minimized and solar array setbacks would be increased.

Alternative 2 would reduce the number of solar panels that would be introduced to the Alternative 2 site due to the 4 percent reduction in the project footprint. Accordingly, glare impacts under Alternative 2 would be reduced compared with the proposed project due to the increased setbacks around the Alternative 2 site perimeter and siting of solar panels further from existing public roadways, including

Lockhart Ranch Road. Impacts related to a change in the existing visual character of the site would be similar to the proposed project, as the Alternative 2 site would still result in the development of a solar and energy storage facility on currently vacant and undeveloped land.

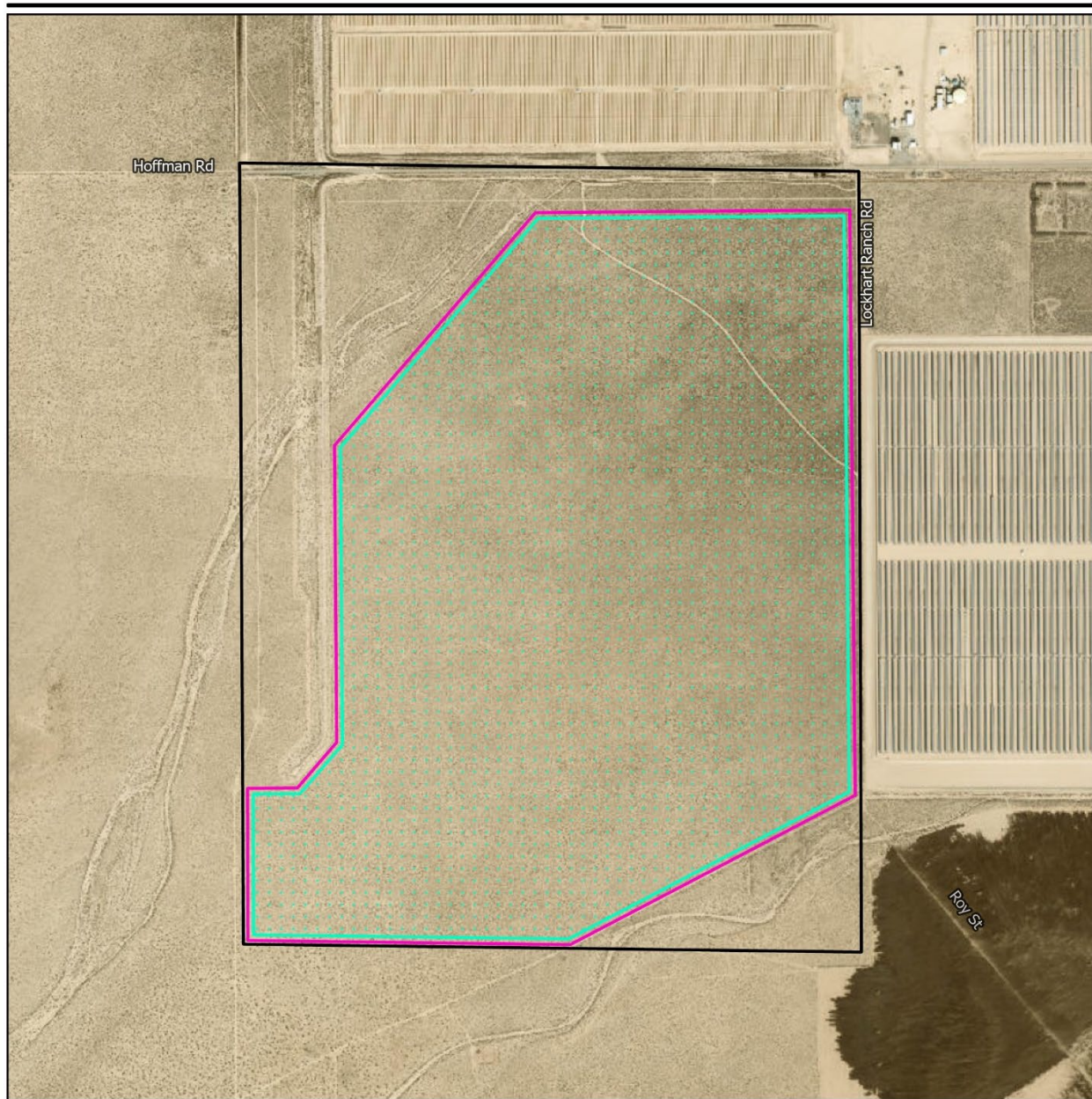


Figure 4-2
Alternative 2: Reduced Footprint Alternative

Overnight Solar
Overnight Solar, LLC

- Project Parcel
 Reduced Footprint Alternative
- Project Site

Note: The gen-tie line and on-site substation would remain generally the same under Alternative 2 as with the proposed project; however, the substation would be shifted 50 feet to the west and the gen-tie line would be 50 feet longer. Accordingly, these project components are not further discussed below under the impact comparison between Alternative 2 and the proposed project as there would be no difference between the two scenarios, with the exception of noise impacts as the substation would be slightly farther from existing residences.



1:15,000

0 600 1,200
Feet

Revised: 8/23/2024 | NOT FOR CONSTRUCTION



San Bernardino County, CA

Figure 4-2. Alternative 2: Reduced Footprint

Implementation of Alternative 2 would reduce aesthetic impacts on visual quality and light and glare. Alternative 2 would have less impact on aesthetics than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts.

Air Quality

Alternative 2 would reduce the intensity and duration of construction and associated construction equipment emissions and the fugitive dust due to a 24-acre reduction in the area of ground disturbance. The reduced overall footprint of the project would reduce the fugitive dust generated during construction of the project. Because the proposed project would not exceed Mojave Desert Air Quality Management District (MDAQMD) thresholds for all pollutants, and Alternative 2 would reduce the intensity and duration of construction, Alternative 2 would be anticipated to also not exceed MDAQMD thresholds for all pollutants. Alternative 2 would have less air quality impacts than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts.

Biological Resources

The area of disturbance for Alternative 2 would be approximately 24 acres less than the proposed project. Alternative 2 would have less impact on biological resources than the proposed project because Alternative 2 would involve less ground disturbance, which would reduce the potential for impacts to biological resources in general, including special-status species such as the desert tortoise, burrowing owl (*Athene cunicularia*), desert kit fox (*Vulpes macrotis mutica*), Mohave ground squirrel (*Xerospermophilus mohavensis*), America badger (*Taxidea taxus*), and special-status and migratory birds. No additional specific areas used by sensitive species have been included in this alternative as the highest-use areas have already been removed as part of the proposed project. The entire project parcel is covered by the same vegetative community, and the setback proposed by this alternative would result in an overall reduction in impacts to general biological resources. However, Alternative 2 would still require the same biological resource mitigation measures as the proposed project (refer to Section 3.3, Biological Resources).

Alternative 2 would be located farther from the northern and southern watercourses adjacent to the Alternative 2 site due to the increased setbacks along the site perimeter. However, Alternative 2 would still require the same mitigation measure for avoidance of development within the southern watercourse as this area was delineated as a jurisdictional waterway. Alternative 2 would have less impact to biological resources than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts with the same mitigation.

Cultural and Tribal Cultural Resources

Alternative 2 would avoid development and associated ground-disturbing activities on 24 acres of the project site. The reduced area of ground disturbance would reduce the potential for inadvertent discovery and damage of significant archaeological and tribal cultural resources, as well as to human remains. Alternative 2 would still require mitigation for the inadvertent discovery of archaeological and Tribal cultural resources and human remains due to proposed ground-disturbing activities associated with construction, similar to the proposed project (refer to Section 3.4, Cultural and Tribal Cultural Resources). Alternative 2 would have less potential to impact cultural and Tribal cultural resources than

the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts with the same mitigation.

Energy

Alternative 2 would reduce the intensity and duration of construction due to a 24-acre reduction in the area of ground disturbance. Eliminating approximately 24 acres from project development and reducing the construction timeline would result in reduced energy use during construction due to the proportional reduction in project size. Similar to the proposed project, Alternative 2 would be required to comply with the California Air Resource Board's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. The fuel efficiency of the vehicles being used by the employees under this alternative would be similar to the proposed project; however, the amount of petroleum, diesel fuel, and electricity consumed as a result of vehicular trips to and from the Alternative 2 site during construction would be reduced due to the shortened construction timeline. Similar to the proposed project, Alternative 2 would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Alternative 2 would produce 144 MW of renewable energy, which would be 6 MW less than the 150 MW of renewable energy produced by the proposed project. As such, the reduced production of renewable energy would mean that the State would need to produce and procure renewable energy in other places to meet the renewable energy targets in Senate Bill (SB) 100. Overall, Alternative 2 would result in less energy impacts as compared with the proposed project due to the reduced construction timeline, and both the proposed project and Alternative 2 would result in less than significant impacts. However, Alternative 2 would also result in less beneficial energy impacts because it would produce less renewable energy, which is assumed to offset energy generated by fossil fuels.

Geology and Soils

Alternative 2 would be located within the same parcel as the proposed project and on the same geologic and soil units. The Alternative 2 site would be located 50 feet farther from existing fault lines due to the increased setbacks. The area of Alternative 2 ground disturbance would be 572 acres, 4 percent less than the proposed project. Alternative 2 would reduce impacts from loss of topsoil due to the reduction in the project footprint. Impacts related to rupture of a known fault, seismic ground shaking, ground failure, landslides, soil expansion, unstable soils, proximity to fault lines, and soils capable of supporting a septic tank would all be the same under Alternative 2 as with the proposed project because Alternative 2 is located on the same parcel. Alternative 2 would still involve ground-disturbing activities on undeveloped land, and therefore would have the potential to inadvertently impact previously undiscovered paleontological resources similar to the proposed project. Less ground disturbance would occur under Alternative 2 due to the reduced footprint, thereby reducing the potential for inadvertent impacts to previously undiscovered paleontological resources. However, the potential for impacts to paleontological resources would still exist, and mitigation for the inadvertent discovery of paleontological resources would still be required (refer to Section 3.6, Geology and Soils). Alternative 2 would have less impact to geology, soils, and paleontological resources than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts with the same mitigation.

Greenhouse Gas Emissions

Alternative 2 would reduce the intensity and duration of construction by reducing the project footprint by approximately 4 percent. Accordingly, construction emissions would be lower due to the reduced footprint, reduced area of ground disturbance, and shortened construction timeline. Under Alternative 2, GHG emissions would be reduced by a similar amount in conjunction with the reduced footprint. Alternative 2 would produce 144 MW of renewable energy, which would be less than the 150 MW of renewable energy produced by the proposed project. The reduced production of renewable energy would mean that the State would need to produce and procure renewable energy in other places to meet the renewable energy targets in SB 100. Overall, Alternative 2 would result in less GHG emissions impacts as compared with the proposed project due to the reduced construction timeline, although both the proposed project and Alternative 2 would result in less than significant impacts. However, Alternative 2 would also result in less beneficial GHG emissions impacts because it would produce less renewable energy, which is assumed to offset GHG emissions generated by fossil fuels.

Hazards and Hazardous Materials

Alternative 2 would involve use of the same hazardous materials as the proposed project (e.g., fuels, asphalt, lubricants, toxic solvents, pesticides, and herbicides); however, the reduction in the Alternative 2 footprint would reduce the amount of hazardous materials used and reduce areas where these materials would be used and stored by avoiding development on approximately 24 acres. Similar to the proposed project, Alternative 2 would also not be located within the County's Airport Land Use Consistency Plan, and no impact would occur. Alternative 2 is also located on the same parcel as the proposed project, which was not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, nor is it located within one-quarter mile of an existing or proposed school. Impacts with regard to impairment of or interference with an adopted emergency response plan or emergency evacuation plan would also be less than significant, similar to the proposed project. Wildfire risks would be reduced due to the reduction in the disturbance area and amount of electrical equipment installed on the Alternative 2 site. The project parcel is not located within an area of high or very high fire hazard and the impacts of Alternative 2 would be less than significant, similar to the proposed project. Alternative 2 would have less hazards and hazardous materials impacts than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts.

Hydrology and Water Quality

Alternative 2 would avoid solar development on approximately 24 acres of land. The reduced ground disturbance would reduce the potential for increased sedimentation and runoff during storm events. Alternative 2 would require less water for dust control during construction and operation due to the reduction in the total number of acres that would be disturbed during construction. Alternative 2 would result in reduced impacts to groundwater supplies due to the overall reduction in water usage as less groundwater would be drawn from the wells used to serve the Alternative 2 site. Similar to the proposed project, Alternative 2 would require implementation of stormwater drainage features to sufficiently manage on-site stormwater flows on the Alternative 2 site. Alternative 2 would have less hydrology and water quality impacts than the proposed project as related to all hydrology and water quality

thresholds including those related to impervious surfaces, interference with groundwater recharge, conflicts with water quality control plans and sustainable groundwater management plans, and location in flood hazard/tsunami/seiche zones. Both the proposed project and Alternative 2 would result in less than significant impacts.

Land Use and Planning

Alternative 2 is located within the same land use and zoning designation as the proposed project in which solar development is allowed via a CUP with a Zoning Amendment and Countywide Plan/Policy Plan Amendment. Accordingly, Alternative 2 would require the same approvals as the proposed project. Alternative 2 would create additional separation between existing rural residences and the proposed solar and energy storage facility due to the increased setbacks. Additionally, the proposed project would not physically divide an established community. Alternative 2 would result in the same land use and planning impacts as the proposed project, and both the proposed project and Alternative 2 would result in less than significant impacts.

Noise

Construction equipment used for Alternative 2 would be similar to the proposed project. However, Alternative 2 would increase setbacks and create additional separation between existing rural residences and construction activities. Since noise attenuates with distance, Alternative 2 would reduce peak construction noise levels at the nearest receptor due to the increased setback from existing residences. Groundborne vibration levels would be below the minimum vibration level for human perception under both the proposed project and Alternative 2.

The primary noise sources during operation would be the inverter skids consisting of one inverter and one transformer, the 230-MW ampere substation transformer, and the battery energy storage system units. Under Alternative 2, the substation would be located 50 feet farther from the closest existing residence when compared to the substation's location under the proposed project, which is located approximately 1 mile east under the proposed project. However, the battery energy storage system and inverter skids would be sited in generally the same locations as under the proposed project since these components are not located within the Alternative 2 increased setback area. Accordingly, Alternative 2 noise impacts would be less than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts.

Transportation and Traffic

Under Alternative 2, the intensity of daily construction and the daily construction workforce would remain the same; however, overall construction would be shorter in duration. Alternative 2 would still require implementation of a Congestion Management Plan as a Condition of Approval, same as with the proposed project. Similar to the proposed project, Alternative 2 would not substantially increase hazards due to design features or incompatible uses and would be designed for adequate emergency access consistent with County and State Fire Code requirements. Although the acreage for Alternative 2 would be reduced, vehicle miles traveled (VMT) generated during construction and operation would be similar to those generated by the proposed project, and impacts would be less than significant. Neither the proposed project nor Alternative 2 would result in conflicts with programs, plans, ordinances, or policies addressing the circulation system. Alternative 2 would have less transportation

and traffic impact than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts on all thresholds.

Utilities and Service Systems

Alternative 2 would require less water during construction and operation due to the reduction in the project footprint and number of solar panels installed, which would require less operational panel washing. Accordingly, sufficient water supplies would exist for Alternative 2 under normal, dry, and multiple dry year scenarios because sufficient water supplies exist for the larger, proposed project. Alternative 2 would also produce less wastewater during construction due to the reduced construction timeline, although operational wastewater would be the same for both Alternative 2 and the project as maintenance crew assumptions would be the same under both scenarios. Alternative 2 would result in the same less than significant impacts as the proposed project with regard to stormwater drainage, telecommunications, electrical, and natural gas facilities. Alternative 2 would also produce less solid waste than the proposed project relative to the reduction in construction activities required for the reduced project footprint. Alternative 2 would have less utilities and service systems impact than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts.

Wildfire

As with the proposed project, Alternative 2 is not classified as being within a high fire hazard severity zone (FHSZ) and would not be anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The site is located in a rural, sparsely developed area with limited population. The Alternative 2 site is not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. Therefore, Alternative 2 would not substantially impair an adopted emergency response plan or emergency evacuation plan. Nonetheless, Alternative 2 would still require implementation of a Congestion Management Plan to ensure the project would not impede emergency access conditions during construction.

Alternative 2 is located on the same parcel as the proposed project, which is relatively flat. Accordingly, impacts related to the exposure of project occupants to pollutant concentrations from a wildfire due to slope, prevailing winds, or other factors would be similar to the proposed project. Additionally, Alternative 2 would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage channels, similar to the proposed project.

Similar to the proposed project, Alternative 2 would include the installation of a solar and energy storage facility, associated infrastructure, and a gen-tie line. With regard to the installation or maintenance of associated infrastructure, components of Alternative 2 would not be placed within a high or very high fire hazard zone and thus would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Furthermore, Alternative 2 would still be required to comply with the same provisions of the California Fire Code and would require the preparation of a fire safety plan in accordance with California Building Code (CBC) Section 322, which regulates the storage of lithium-ion batteries. Overall, due to the reduced footprint and overall reduction in electrical

equipment (fewer solar arrays) installed on the Alternative 2 site, wildfire impacts would be less than the proposed project. Alternative 2 would have less wildfire impact than the proposed project, although both the proposed project and Alternative 2 would result in less than significant impacts.

4.4.2.3 Alternative 2 Summary and Feasibility

Overall, implementation of Alternative 2 would result in reduced impacts on aesthetics, air quality, biological resources, cultural and tribal cultural resources, energy, geology and soils, GHG emissions, paleontological resources, hydrology and water quality, hazards and hazardous materials, noise, transportation and traffic, utilities and service systems, and wildfire when compared with the proposed project. Impacts related to land use and planning would be similar to the proposed project. However, Alternative 2 would also result in less beneficial impacts related to energy generation and GHG emissions because it is assumed that the production of renewable energy would offset energy and carbon dioxide emissions generated by fossil fuels, and the Alternative 2 would generate less renewable energy than the proposed project.

Alternative 2 would not produce the 150 MW of the proposed project and would fall short of this project objective. Alternative 2 attains most, but not all, of the project objectives (refer to **Table 4-3, Project Objectives Consistency Analysis**) and is potentially feasible. Specifically, Alternative 2 would meet the project objectives of developing a solar power and energy storage facility near existing utility infrastructure and producing reliable electricity at a competitive rate, promoting the County's RECE policies, providing a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates, and supporting the local economy through job creation and tax and fee revenue. However, Alternative 2 would only partially meet the project objective of assisting the State in achieving its RPS and GHG emissions reduction objectives because it would not produce 150 MW of renewable electrical energy.

4.4.3 Alternative 3: Kramer Junction Solar Site Alternative

4.4.3.1 Description of Alternative

Alternative 3, the Kramer Junction Solar Site Alternative, would include 150 MW of electric generation capacity and 150 MW of battery energy storage capacity on Assessor's Parcel Number (APN) 0498-171-01, which comprises approximately 640 acres. Although the Alternative 3 parcel is larger than the proposed project parcel, Alternative 3 would utilize a similar number of acres to the proposed project, which is the size needed to achieve the target capacity of solar PV and battery energy storage. Similar to the proposed project, Alternative 3 would involve the development of solar PV panels, battery storage, associated infrastructure, and a gen-tie line. Given the land area, Alternative 3 could have a similar generation capacity as the proposed project. The Alternative 3 site is located on Bureau of Land Management (BLM)-administered land, approximately 0.5-mile north of U.S. Route (US) 58 and 1.6 miles west of State Route (SR) 395. The site can be accessed via Pipeline Road, an existing unpaved roadway, which connects to Boron Frontage Road North, a paved roadway. The Alternative 3 site is just northeast of the community of Boron and just northwest of the Kramer Junction, as shown on **Figure 4-3, Alternative 3: Kramer Junction Alternative**. The Alternative 3 site is in an undesignated area of the Desert Renewable Energy Conservation Plan (DRECP). The applicant does not currently control land rights for the Alternative 3 site or the Alternative 3 gen-tie line corridor.

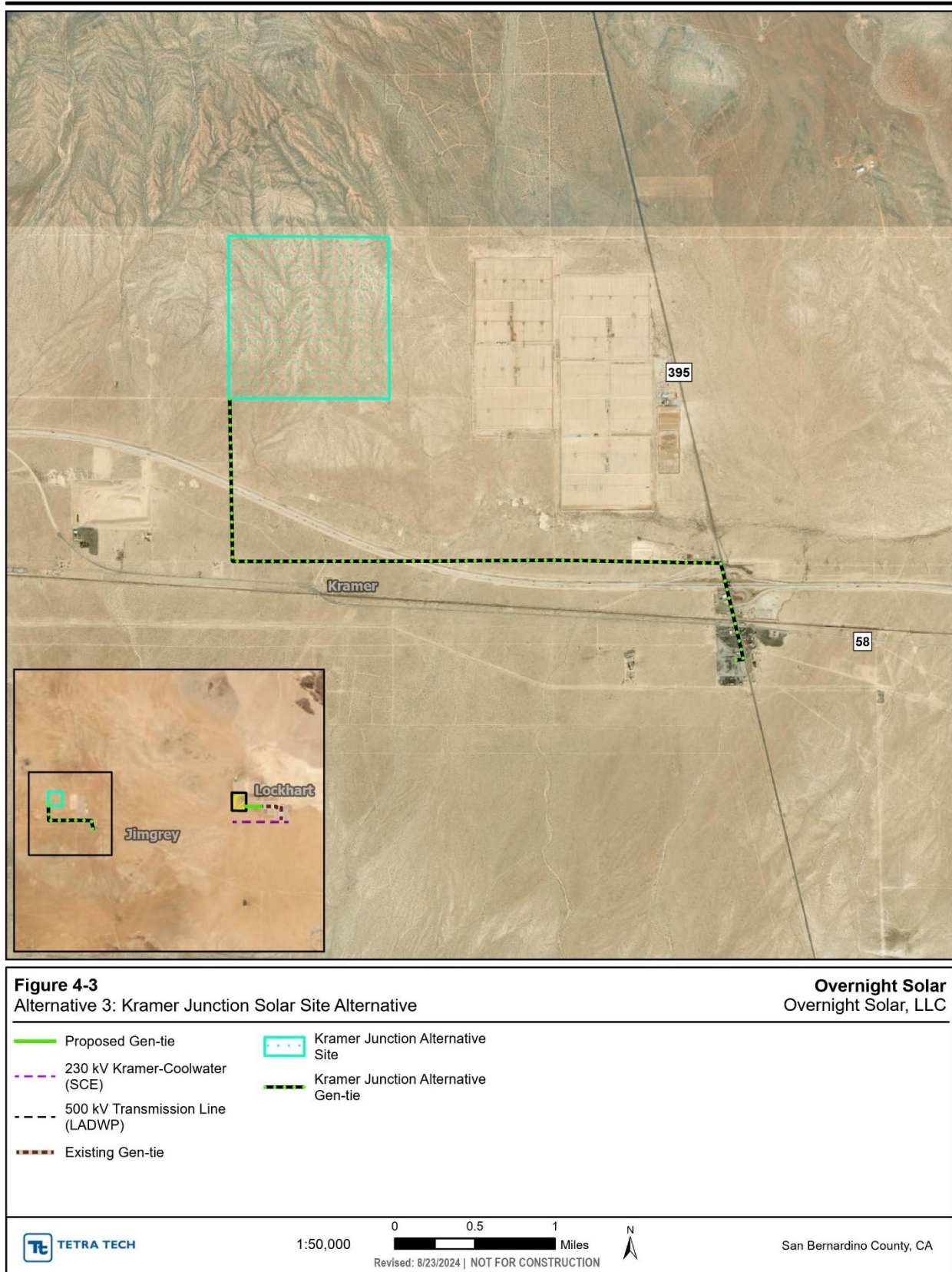


Figure 4-3. Alternative 3: Kramer Junction Alternative

Alternative 3 is located wholly on BLM-administered land and would require a BLM right-of-way grant for development, in addition to a CUP from the County for development of an overhead gen-tie line. Obtaining BLM approval would increase the cost and length of time required for permitting the project; however, the Alternative 3 site is considered a feasible location for solar development because it is an allowable use under the DRECP. Although the Alternative 3 parcel covers approximately 640 acres, the actual area of development would be similar in size to the proposed project (approximately 596 acres) in order to meet the project objectives of producing 150 MW of solar PV energy and 150 MW of battery storage.

The anticipated route of the Alternative 3 gen-tie is shown on **Figure 4-3, Alternative 3: Kramer Junction Alternative**, but has not been fully determined at this time. It is assumed that the gen-tie line would be approximately 5 miles in length with an associated right-of-way. The point of interconnection would be at the existing Kramer Junction Substation. Upgrades to the Kramer Substation may be required to allow for the interconnection. Depending on the final location of the gen-tie, existing rights-of-way may be required for the entirety, or a portion, of the gen-tie line.

Construction of Alternative 3 would be more intensive than for the proposed project, as the Alternative 3 site is more topographically diverse and would require more grading than the proposed project. Additionally, construction of the gen-tie line would take longer than the proposed project due to the longer distance. Overall, the anticipated construction workforce would be the same as the proposed project, but the construction timeline would increase by 3 months, to a total of 29 months. Operation of Alternative 3 would be similar to the proposed project, and would be done remotely. However, Alternative 3 would require the use of portable toilet and hand washing facilities during construction and during infrequent panel washing events. Bottled water would also be provided during construction and panel washing events. During normal remote operations, sanitary facilities at the Mojave Solar Facility would be used.

Alternative 3 would locate the proposed solar facility and gen-tie line closer to existing residences than the proposed project. The closest existing residences would be located approximately 0.6 mile west of the Alternative 3 site and 0.1 mile west of the gen-tie line. Alternative 3 would also be consistent with the existing zoning of RC (Resource Conservation) and land use designation of RLM (Resource/Land Management).

4.4.3.2 Impact Comparison with the Proposed Project

Aesthetics and Visual Resources

Alternative 3 would include development of the solar facility within an undisturbed desert area, covered in a network of desert washes. There is a decommissioned solar facility (SEGS III-VII Kramer Junction Solar Plant) approximately 0.5 mile east of the Alternative 3 site, although some infrastructure still remains at this facility site. A transmission corridor containing a high-voltage transmission line, a sub-transmission line, gas pipeline, fiber optic cable, and distribution lines also exists between this decommissioned solar facility and the west side of SR-395. Additionally, an existing boron mine is located approximately 3 miles west of the Alternative 3 site. The visual quality of the Alternative 3 site and surrounding area is considered low to moderate, given the existing developments east and west of the Alternative 3 site and the lack of significant visual features in the area.

Construction at the Alternative 3 solar site would result in changes in existing views from SR-395, located approximately 1.6 miles to the east, and US-58, located approximately 0.5 mile to the south. US-58 is an eligible State scenic highway. Existing views towards of the Alternative 3 site from the US-58 are currently dominated by undeveloped desert landscape with scrub shrub vegetation and mountains in the distant background. Due to the short distance between eligible State scenic highway, US-58, and the Alternative 3 site, and due to the change in visual character from undeveloped desert landscape to a solar facility, Alternative 3 could result in potentially significant impacts to scenic vistas and scenic resources within a State scenic highway. Alternative 3 would likely require mitigation such as visual screening along the southern Alternative 3 site boundary.

Alternative 3 would replace views of the open desert with views of a solar facility. The gen-tie line for Alternative 3 would be approximately 5 miles long and would parallel US-58, as compared with the proposed project's approximately 1.1-mile gen-tie line, which would be approximately 5.5 miles north of US-58. The Alternative 3 gen-tie line and solar facility would not substantially obstruct or interrupt views of the surrounding landscape; however, the level of contrast to the existing undisturbed landscape would be moderate to moderately high in areas where the solar facility is close to US-58. The resulting impact on visual quality would potentially be significant and would require mitigation such as visual screening along the southern Alternative 3 site boundary.

Alternative 3 would introduce similar new sources of lighting and glare to the Alternative 3 site as the proposed project. All lighting would be installed in accordance with County standard for nighttime lighting. The gen-tie line would be constructed with metallic components, which could introduce new sources of glare to the Alternative 3 site. One rural residence is located approximately 0.6 mile west of the Alternative 3 site, closer than existing residences would be to the proposed project site (approximately 1 mile). However, unlike solar thermal facilities, which rely on large fields of mirrors to reflect light, the potential reflection from solar PV modules is inherently low since they are designed to capture and not to reflect sunlight. Impacts from light and glare would be less than significant, similar to the proposed project.

Alternative 3 would have greater impacts on aesthetics than the proposed project due to the introduction of utility elements into a more undisturbed visual landscape near an eligible scenic highway, and would likely require mitigation in the form of visual screening. Implementation of mitigation could bring impacts to a mitigated less than significant level, whereas the proposed project would result in less than significant impacts with no mitigation required.

Air Quality

Alternative 3 would involve the use of construction equipment and vehicles that would result in temporary construction emissions. The alternative could result in extended exposure of residences to criteria air pollutants or toxic air contaminants due to the increased construction timeline, which would be 3 months longer than the proposed project. Additionally, the closest existing residence to the Alternative 3 site is located approximately 0.6 mile west, which is closer than the closest residence to the proposed project site (approximately 1 mile). The Alternative 3 gen-tie line would also be located closer to an existing residence (0.1 mile west) than the closest residence to the proposed project's gen-tie line (0.3 mile south). This alternative is located within a dry desert area with a network of washes,

rills, and gullies. The Alternative 3 site is more topographically diverse than the proposed project site. Alternative 3 would require more grading for site development to even out the grade for solar panel installation. The additional grading would result in a longer construction timeline and greater potential for generation of fugitive dust (PM_{10} and $PM_{2.5}$ [particulate matter less than 10 and 2.5 microns in diameter, respectively]) during construction. The additional grading would also require increased use of diesel-powered equipment, which would result in greater nitrogen oxides emissions. Accordingly, Alternative 3 would result in increased emissions as compared with the proposed project, and could require mitigation, such as use of Tier 4 construction equipment.

Alternative 3 would use the same types of construction equipment as the proposed project and the same total workforce; however, construction would be approximately 3 months longer than the proposed project due to the increased grading required and longer gen-tie line. This alternative would result in increased air quality emissions from fugitive dust due to the substantial grading that would be required on the site and longer gen-tie corridor. Alternative 3 could expose sensitive receptors at the nearby rural residences to criteria air pollutants or toxic air contaminants in a greater capacity than the proposed project.

Alternative 3 would have greater impacts on air quality than the proposed project due to the increased earthwork, longer gen-tie line, increased construction timeline, and closer proximity to existing residences (0.6-mile west of Alternative 3 site and 0.1-mile west of Alternative 3 gen-tie), which could require mitigation, such as use of Tier 4 construction equipment. Alternative 3 could also obstruct implementation of applicable air quality plans and result in a cumulatively considerable net increase of criteria pollutants due to the greater construction work. However, Alternative 3 wouldn't result in other emissions adversely affecting a substantial number of people. Overall, implementation of mitigation could potentially reduce impacts to a less than significant level, whereas the proposed project would result in less than significant impacts with no mitigation required.

Biological Resources

Alternative 3 would have the potential to affect special-status wildlife and plant species, including direct impacts on habitat for desert tortoise, burrowing owl, prairie falcon (*Falco mexicanus*), Crotch's bumble bee (*Bombus crotchii*), and Mohave ground squirrel. Special-status plant species with the potential to occur on the Alternative 3 site include desert cymopterus (*Cymopterus deserticola*), white pygmy-poppy (*Canbya candida*), Booth's evening-primrose (*Eremothera boothii* ssp. *boothii*), sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), and Barstow woolly sunflower (*Eriophyllum mohavense*) (CDFW 2024). Additionally, a wetland and waterways delineation would need to be conducted to determine any federal (U.S. Army Corps of Engineers) or State (Regional Water Quality Control Board and/or CDFW) jurisdictional waterways, requiring water impact permits (e.g., CDFW Lake and Streambed Alteration Agreement).

The Alternative 3 site is located on BLM-administered land within the DRECP. The BLM has identified Development Focus Areas (DFA) for renewable energy projects to concentrate large utility-scale renewable energy projects in areas that are outside of the California Desert Conservation Area Plan Boundary. The Alternative 3 site is in an undesignated area of the DRECP rather than a DFA. However, solar development is an allowable use under the DRECP and would be consistent with this conservation

plan. The Alternative 3 site is not located within DRECP designated California Desert National Conservation Lands, BLM Wilderness Areas, or BLM Areas of Critical Environmental Concern (DRECP 2019).

Alternative 3 impacts on special-status species, habitat, and plants would be potentially significant. Similar to the proposed project, Alternative 3 is located in proximity to known populations of Mohave ground squirrel and would result in loss of Mohave ground squirrel habitat. The Alternative 3 site is also located within a DRECP designated Key Population Center for Mohave ground squirrel and would be required to comply with the applicable DRECP conservation and management actions. Significant development within this designated Key Population Center for Mohave ground squirrel could severely impact a core population center for the Mohave ground squirrel and sever a viable linkage between populations in adjacent areas. Implementation of the mitigation measures identified for the proposed project (refer to Section 3.3, Biological Resources), in addition to compliance with DRECP conservation and management actions, would potentially reduce impacts to Mohave ground squirrel.

Similar to the proposed project, Alternative 3 would also have the potential to impact habitat for desert tortoise, burrowing owl, desert kit fox, American badger, and special status and migratory birds. Implementation of the mitigation measures identified for the proposed project (refer to Section 3.3, Biological Resources) would reduce impacts to these species to a less than significant level.

Alternative 3 would also have the potential to impact Crotch's bumble bee habitat, which the proposed project would not impact. Additional mitigation may be required under Alternative 3 for Crotch's bumble bee, which would be determined through focused species-specific surveys. Finally, Alternative 3 would have a greater impact on desert washes due to the greater prevalence of washes, rills, and gullies on the Alternative 3 site.

Alternative 3 would result in greater impacts on special-status species, habitat, and plants than the proposed project. Mitigation measures identified for the proposed project could be implemented to reduce some biological resource impacts; however, additional mitigation measures may be required to address potential impacts on desert washes and Crotch's bumble bee. Alternative 3 would result in greater impacts on biological resources than the proposed project, which could require additional mitigation beyond that required for the proposed project. Implementation of mitigation could potentially reduce impacts to a less than significant level, whereas the proposed project was determined to result in less than significant impacts with mitigation.

Cultural and Tribal Cultural Resources

Alternative 3 would include ground-disturbing activities on undeveloped desert terrain. Similar to the project, ground-disturbing construction activities have the potential to uncover buried archeological and tribal cultural resources or human remains and result in a significant impact. Implementation of the mitigation measures identified for the proposed project for the inadvertent discovery of archaeological and Tribal cultural resources and human remains would reduce potential impacts to a less than significant level (refer to Section 3.4, Cultural and Tribal Cultural Resources). However, implementation of Alternative 3 would result in greater potential impacts on cultural and tribal cultural archaeological resources than the proposed project due to the increased amount of grading due to greater topographic variability across the site and increased length of the Alternative 3 gen-tie line.

However, Alternative 3 would not impact historical resources, similar to the proposed project. Alternative 3 would have greater impacts on cultural and tribal cultural resources than the proposed project due to the increased earthwork and longer gen-tie line, although both the proposed project and Alternative 3 would result in less than significant impacts with the same mitigation.

Energy

Alternative 3 would involve the use of construction equipment and vehicles that would result in the consumption of energy, including petroleum, diesel fuels, and electricity. The Alternative 3 site is more topographically diverse than the proposed project site. Alternative 3 would require more grading for site development to even out the grade for solar panel installation. Thus, the additional grading would result in greater consumption of fuels during construction than the proposed project. Similar to the proposed project, Alternative 3 would be required to comply with the California Air Resource Board's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. The fuel efficiency of the vehicles being used by the employees under this alternative would be similar to the proposed project. Similar to the proposed project, this alternative would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Alternative 3 would have greater impacts on energy than the proposed project due to the increased earthwork and longer gen-tie line, although both the proposed project and Alternative 3 would result in less than significant impacts.

Geology and Soils

Implementation of Alternative 3 would include development of the solar facility within an area of desert washes with uneven terrain. Additional grading would be required for site preparation and Alternative 3 would result in greater ground disturbance for development of the gen-tie line due to the longer transmission distance. Alternative 3 grading would have greater potential to cause soil erosion and loss of topsoil. Soils at the Alternative 3 site consist of sandy loam. The Alternative 3 site soil conditions are not subject to liquefaction, landslides, or collapse. Depth to groundwater would be greater than at the proposed project site due to the higher elevation of the Alternative 3 site.

The Alternative 3 site is underlain by an unnamed, pre-quaternary concealed fault and is located approximately 4 miles southwest of the quaternary South Lockhart Fault and approximately 3 miles north of the quaternary Kramer Hills Fault (DOC 2023). A geotechnical investigation would be required, similar to the proposed project, to determine any developmental constraints associated with fault lines. However, final structural design would be required to adhere to the seismic design recommendations of the CBC, which would ensure that Alternative 3 would not result in adverse effects from fault lines and associated seismic ground shaking. Therefore, impacts would be similar to those for the proposed project. With CBC compliance through final structural design, impacts related to rupture of a known fault, seismic ground shaking, ground failure, landslides, soil expansion, unstable soils, proximity to fault lines, and soils capable of supporting a septic tank would all be the same under Alternative 3 as with the proposed project.

Alternative 3 would require more grading than the proposed project due to the presence of slopes and desert washes. Due to the increased ground disturbance on both the site and along the longer gen-tie corridor, Alternative 3 would have an increased potential for inadvertent impacts to previously

undiscovered paleontological resources, and paleontological resource mitigation would still be required (refer to Section 3.6, Geology and Soils). Alternative 3 would have greater impacts on geology, soils, and paleontological resources than the proposed project due to the increased earthwork and longer gen-tie line, although both the proposed project and Alternative 3 would result in less than significant impacts with the same mitigation.

Greenhouse Gas Emissions

Alternative 3 construction would involve off-road construction equipment and vehicles that would result in construction GHG emissions, which would be short-term and temporary. The Alternative 3 site is also more topographically diverse than the project site and would require more vegetation removal and grading for site development to even out the grade for solar panel installation. The additional grading would result in a longer construction timeline and a greater use of off-road construction equipment, which would result in greater GHG emissions than the proposed project. The Alternative 3 gen-tie line is also longer than the proposed project's line, and installation of this gen-tie line would result in greater GHG emissions. However, as construction of the proposed project would only result in 236 metric tons of carbon dioxide equivalent (CO₂e) amortized over a 30-year project lifetime, it is assumed that Alternative 3 would similarly not exceed the GHG significance threshold of 3,000 metric tons of CO₂e over the project lifetime, which would remain the same as the proposed project.

Operations and maintenance of Alternative 3 would be similar to the proposed project, so it is assumed that Alternative 3 would not exceed the GHG significance threshold of 3,000 metric tons of CO₂e per year because the proposed project would only result in 274 metric tons of CO₂e per year. Operational impacts associated with GHG emissions under Alternative 3 would likely be less than significant. Finally, Alternative 3 would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions, similar to the proposed project. Alternative 3 would result in greater GHG emissions than the proposed project due to the increased earthwork and longer gen-tie line, although Alternative 3 is assumed to result in less than significant impacts similar to the proposed project.

Hazards and Hazardous Materials

Alternative 3 would involve the use of the same hazardous materials as the proposed project (e.g., fuels, asphalt, lubricants, toxic solvents, pesticides, and herbicides). Project construction activities would occur in accordance with all applicable standards for the routine handling and transport of hazardous materials set forth by the County and State and federal health and safety requirements. The closest school to Alternative 3 is Boron Junior High School, located approximately 3 miles west of the closest project components. Therefore, the Alternative 3 site and gen-tie corridor would not be located within 0.25 mile of a school or located on sites that are included on a list of hazardous materials sites, as determined through review of the EnviroStor and GeoTracker databases (DTSC 2023; SWRCB 2023).

There is one leaking underground storage tank cleanup site located approximately 3 miles southwest of the Alternative 3 site, within the community of Boron. However, no development would occur at that location. Alternative 3 would increase the potential for occurrence of wildfires in the Alternative 3 site above existing conditions and would introduce energy storage infrastructure containing flammable materials to a vegetated desert landscape. However, impacts would be similar to the proposed project, and the development of a solar and energy storage facility on the Alternative 3 site would still require

compliance with the same provisions of the California Fire Code. Alternative 3 would require the preparation of a fire safety plan in accordance with CBC Section 322, which regulates the storage of lithium-ion batteries. Impacts related to hazards and hazardous materials would be similar to the proposed project. Alternative 3 would have a similar less than significant impact related to the potential for wildfires as the proposed project.

Alternative 3 would not include development in the vicinity of a public use airport. However, the Boron Airstrip, a private airstrip, is located approximately 0.7 mile south of the Alternative 3 site. The Alternative 3 facilities would not be expected to create a hazard to air traffic due to the distance between the alternative and the Boron Airstrip. Additionally, a search of the Federal Aviation Administration's (FAA) Notice Criteria Tool indicates that development on the Alternative 3 site would not require the filing of a notice to the FAA for a Determination of No Hazard (FAA 2024).

Finally, impacts with regard to impairment of or interference with an adopted emergency response plan or emergency evacuation plan would also be less than significant, similar to the proposed project. Alternative 3 would have similar hazards and hazardous materials impacts as the proposed project, and both the proposed project and Alternative 3 would result in less than significant impacts.

Hydrology and Water Quality

Alternative 3 is located in an area crossed by a network of desert washes. Grading and earthwork under Alternative 3 would be greater than the proposed project and would result in increased risk of erosion and associated water quality impacts. Alternative 3 could also require redirecting streams due to grading within the desert washes. Preparation of a project-specific Storm Water Pollution Prevention Plan would ensure that Alternative 3 would not violate water quality standards or waste discharge requirements, would not substantially increase the rate or amount of surface runoff, and would minimize construction-related water quality impacts from erosion; however, impacts on stream flows could be significant due to grading within desert washes.

Construction of the Alternative 3 solar facility would require use of water for dust suppression. The Alternative 3 site does not contain any groundwater wells and does not have any existing groundwater use. However, Alternative 3 would likely procure water from the same source as the proposed project at the existing Mojave Solar Facility wells, which would be trucked in to the Alternative 3 site. Alternative 3 would utilize more water than the proposed project for dust control, which could have a significant impact on groundwater supplies.

The Alternative 3 site is also located near the existing U.S. Borax mine, located approximately 3 miles to the west, but there are no known sources of contamination on the site. Alternative 3 is not expected to create a new source of contaminated water. However, Alternative 3 would result in increased impacts to groundwater supplies due to the increased water usage required for construction.

The presence of Alternative 3 within an area of desert washes would increase the likelihood of flooding and substantial damage to the facility during flooding. Additional engineering would be required to avoid flood damage including the impediment or redirection of flood flows, and impacts would be greater than under the proposed project with regard to the alteration of existing drainage patterns. However, Alternative 3 would not risk release of pollutants due to project inundation from tsunami or

seiche zones, nor would Alternative 3 conflict with or obstruct implementation of water quality control plans or sustainable groundwater management plans.

Alternative 3 would result in greater hydrology and water quality impacts than the proposed project due to the location of the solar facility within an area of desert washes, and impacts under Alternative 3 could be significant while the proposed project would result in less than significant hydrology and water quality impacts.

Land Use and Planning

The Alternative 3 solar and energy storage site is located within the County but outside of the County's jurisdiction. The Alternative 3 site is located entirely within land under the jurisdiction of the BLM and located approximately 2 miles east of Kern County. However, the Alternative 3 gen-tie corridor is located within land under the County's jurisdiction. The Alternative 3 site is zoned as RC in the County's Zoning Ordinance and is designated as RLM in the Countywide Plan/Policy Plan. However, as the Alternative 3 site is under BLM jurisdiction, land use on this site is regulated by the DRECP, which designates the site as undesignated and outside of the DFA.

The proposed gen-tie line is within the County's jurisdiction and the nearest transmission interconnection would be Kramer Substation, located approximately 2.75 miles southeast of the Alternative 3 site. The gen-tie line from the Alternative 3 site to the Kramer Substation may cross areas zoned as RC, RL (Rural Living), and CR (Rural Commercial) in the County's Zoning Ordinance, and designated as RLM, RL, and C (Commercial) by the Countywide Plan/ Policy Plan. Transmission lines are permitted within these zoning districts and, therefore, the gen-tie corridor would not require a zoning amendment or a CUP.

Alternative 3 would have similar land use impacts as the proposed project; however, a BLM right-of-way grant for development would need to be obtained prior to any solar facility being allowed in the area. Alternative 3 would not divide an established community. Overall, Alternative 3 would result in similar land use and planning impacts as the proposed project, and both the proposed project and Alternative 3 would result in less than significant impacts.

Noise

Alternative 3 would involve short-term construction noise and long-term operational noise. The closest sensitive receptors are rural residences located approximately 0.6 mile west of the Alternative 3 site and 0.1 mile west of the gen-tie corridor. The established community of Boron is also located approximately 2 miles southwest of the Alternative 3 site. The impact from noise generation during construction and operation would be greater than the proposed project because Alternative 3 would be located closer to existing sensitive receptors than the proposed project. For comparison, the proposed project site is located approximately 1 mile from the closest sensitive receptor and the proposed project gen-tie line is located 0.3 mile from the closest sensitive receptor. Groundborne vibration levels would also be greater at nearby residences due to the shorter distances under Alternative 3 and may be potentially significant. Accordingly, Alternative 3 noise impacts would be greater than the proposed project due to the shorter distance to nearby residences, and Alternative 3 would likely require mitigation measures to reduce noise impacts, unlike the proposed project which would result in less than significant noise impacts with no mitigation required. Although the closest

private airstrip is located approximately 0.7-mile south, this is an unpaved airstrip that does not appear to be frequently used. Thus, it would not expose people working at the project site (construction workers or operational panel washing workers) to excessive noise levels.

Transportation and Traffic

The number of vehicle trips associated with construction and operation of Alternative 3 would be similar to the proposed project. Alternative 3 would also require development and implementation of a Congestion Management Plan as a Condition of Approval, similar to the proposed project. The Congestion Management Plan would also ensure that Alternative 3 would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Any new access roads constructed for Alternative 3 would be designed to achieve County standards for emergency access and would not increase hazards due to a design feature. No closures to US-58 or SR-395 would occur that may affect emergency access in the vicinity of the project.

The Alternative 3 site is also located closer to existing highways and would require less traffic along local roadways than the proposed project, resulting in less VMT and less impact to local roadway infrastructure. However, because the Alternative 3 gen-tie line is longer than the proposed project's line, VMT and impacts to local roadway infrastructure would also increase for gen-tie line construction as compared with construction of the proposed project gen-tie line. Furthermore, intermittent operations and maintenance employees would use the existing operations and maintenance facilities at the Mojave Solar Facility for domestic water and toilet facilities, similar to the proposed project. The Alternative 3 site is located approximately 12 miles farther from the Mojave Solar Facility than the proposed project, which would require longer travel time and result in greater VMT during operation than under the proposed project. Alternative 3 would result in similar transportation and traffic impacts as the proposed project, and both the proposed project and Alternative 3 would result in less than significant impacts.

Utilities and Service Systems

As the Alternative 3 project would be operated remotely, Alternative 3 would utilize the existing operations and maintenance facilities at the Mojave Solar Facility for domestic water and toilet facilities during normal remote operations, similar to the proposed project. However, during construction and infrequent operational panel washing events, the Alternative 3 project would use portable toilet and hand washing facilities at the Alternative 3 site. Bottled water would also be provided during construction and panel washing events. As such, Alternative 3 would result in similar impacts as the proposed project with regard to wastewater facilities.

Alternative 3 would procure water from the same source as the proposed project at the existing Mojave Solar Facility wells, which would be trucked in to the Alternative 3 site. However, Alternative 3 would require greater use of water supplies than the proposed project for dust control due to the increased grading and compaction that would be required at the site to level the surface undulations within the washes. Operational water demand for panel washing would be the same as the proposed project, as both Alternative 3 and the proposed project would result in the same capacity of 150 MW. Alternative 3 would result in the same less than significant impacts as the proposed project with regard to telecommunications, electrical, and natural gas facilities. However, impacts with regard to stormwater

drainage facilities would likely be increased under Alternative 3 due to the greater presence of existing desert washes on the site which would require greater consideration during design of Alternative 3.

Finally, Alternative 3 would result in similar generation of solid waste as the proposed project and solid waste impacts would be less than significant.

Alternative 3 would have greater utilities and service systems impacts than the proposed project due to the increased water usage, and impacts under Alternative 3 could be significant while the proposed project would result in less than significant impacts.

Wildfire

As with the proposed project, Alternative 3 is not classified as being within a high FHSZ and is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The Alternative 3 site is located in a rural, sparsely developed area with limited population, and is not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. The closest evacuation route to the project is SR-58, located approximately 0.5 mile to the south (San Bernardino County 2020). Therefore, Alternative 3 would not substantially impair an adopted emergency response plan or emergency evacuation plan. Nonetheless, Alternative 3 would still require the implementation of a Congestion Management Plan to ensure the project would not impede emergency access conditions during construction.

The Alternative 3 site and surrounding area are more topographically diverse than the project site. Accordingly, impacts related to the exposure of project occupants to pollutant concentrations from a wildfire due to slope, prevailing winds, or other factors would be greater than the proposed project. There are more natural drainage channels within the Alternative 3 site and surrounding area, and the presence of Alternative 3 within an area of desert washes would increase the likelihood of flooding. Accordingly, Alternative 3 could expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage channels.

Similar to the proposed project, Alternative 3 includes the installation of a solar and energy storage facility, associated infrastructure, and a gen-tie line. The gen-tie line under Alternative 3 would be longer than under the proposed project, which would result in the development of more electrical infrastructure than the proposed project. With regard to the installation or maintenance of associated infrastructure, components of Alternative 3 would not be placed within a high or very high fire hazard zone and thus would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Furthermore, Alternative 3 would still be required to comply with the same provisions of the California Fire Code and would require the preparation of a fire safety plan in accordance with CBC Section 322, which regulates the storage of lithium-ion batteries. However, due to the increased length of the Alternative 3 gen-tie line and the more topographically diverse nature of the Alternative 3 site, wildfire impacts from Alternative 3 would be greater than under the proposed project.

Alternative 3 would have greater wildfire impacts than the proposed project due to the longer gen-tie line, although both the proposed project and Alternative 2 would result in less than significant impacts.

4.4.3.3 Alternative 3 Summary and Feasibility

Implementation of Alternative 3 would not result in any reduced impacts as compared with the proposed project. Implementation of Alternative 3 would result in greater impacts on aesthetics, air quality, biological resources, cultural and Tribal cultural resources, energy, geology and soils, paleontological resources, GHG emissions, hydrology and water quality, noise, utilities and service systems, and wildfire than the proposed project. Implementation of Alternative 3 would result in similar impacts on hazards and hazardous materials, land use and planning, and transportation and traffic.

Alternative 3 is located wholly on BLM-administered land and would require a BLM right-of-way grant for development, in addition to a CUP from the County for development of an overhead gen-tie line. Obtaining BLM approval would increase the cost and length of time required for permitting the project. Alternative 3 would meet some of the project objectives and is considered potentially feasible because it is located within DRECP land use areas that are suitable for solar development. Specifically, Alternative 3 would meet the project objectives of producing reliable electricity at a competitive rate, supporting the local economy through job creation and tax and fee revenue, providing a new source of energy storage that assists the State in achieving or exceeding its energy storage mandates, and assisting the State in achieving its RPS and GHG emissions reduction objectives by producing 150 MW of renewable electrical energy. However, Alternative 3 would not meet the project objectives of developing a solar power and energy storage facility near existing utility infrastructure and promoting the County's RECE policies.

4.4.4 Environmentally Superior Alternative

CEQA requires that an environmentally superior alternative be identified; that is, an alternative that would result in the fewest or least significant environmental impacts. If the No Project Alternative is the environmentally superior alternative, CEQA Guidelines Section 15126.6(e)(2) requires that another alternative that could feasibly attain most of the project's basic objectives be chosen as the environmentally superior alternative.

The No Project Alternative is the environmentally superior alternative. However, in accordance with CEQA Guidelines Section 15126.6(e)(2), a secondary alternative must be chosen since the No Project Alternative is environmentally superior. Therefore, the County has preliminarily identified the Reduced Footprint Alternative (Alternative 2) as the environmentally superior alternative because it would result in the fewest adverse environmental effects aside from the No Project Alternative. Alternative 2 would reduce impacts under all environmental resource areas except land use and planning, which would be the same as under the proposed project. Alternative 2 also attains most or all of the basic project objectives, however it would not allow for the project to achieve its key goal of producing 150 MW of renewable energy. Furthermore, Alternative 2 would also result in less beneficial impacts related to energy generation and GHG emissions because it is assumed that the production of renewable energy would offset energy and carbon dioxide emissions generated by fossil fuels, and the Alternative 2 would generate less renewable energy than the proposed project. Nonetheless, County decision-makers may weigh the relative benefits of the alternatives differently and, with additional information received in or developed during the project approval process, reasonably could reach a different decision.

5.0 OTHER CEQA CONSIDERATIONS

This section addresses those topics requiring evaluation under California Environmental Quality Act (CEQA) Guidelines Section 15126, which requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify: (1) the growth-inducing impacts of the proposed project; (2) significant environmental effects of the proposed project; and (3) significant irreversible environmental changes that would result from implementation of the proposed project. Energy conservation is discussed in Section 3.5, Energy. Each of these topics is discussed below.

5.1 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss a project's potential to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The CEQA Guidelines also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. This section analyzes such potential growth-inducing impacts, based on criteria suggested in the CEQA Guidelines.

In general terms, a project may foster spatial, economic, or population growth in a geographic area if it meets any one of the following criteria:

- Removes an impediment to growth (e.g., establish an essential public service or provide new access to an area).
- Fosters economic expansion or growth (e.g., change revenue base, expand employment, etc.).
- Fosters population growth (e.g., construct additional housing), either directly or indirectly.
- Establishes a precedent-setting action (e.g., an innovation, a change in zoning, or a general plan amendment approval).
- Develops or encroaches on an isolated or adjacent area of open space (distinct from an infill type of project).

Should a project meet any one of the above-listed criteria, it may be considered growth inducing. The potential growth-inducing impacts of the proposed project are evaluated against these five criteria in this section.

CEQA Guidelines Section 15126.2(d) requires that an EIR discuss the ways a project could be growth inducing and “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.” However, the CEQA Guidelines do not require that an EIR predict (or speculate), specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages (see CEQA Guidelines Section 15145).

5.1.1 Removal of a Barrier to Growth

Several types of projects can induce population growth by removing obstacles that prevent growth. An example of this type of project would be the expansion of a wastewater treatment plant, which would accommodate additional sewer connections within a service area and therefore would allow future construction and growth.

The applicant (Overnight Solar, LLC) proposes to construct and operate the proposed project on approximately 596 acres and produce approximately 150 megawatts (MW) of renewable energy and include up to 150 MW of battery storage capacity. The project would use existing electrical transmission infrastructure in the project vicinity to deliver renewable energy to the electric grid.

Development of the project would not remove any impediments that currently inhibit growth. Obstacles to population growth in the region surrounding the project site are primarily due to the feasibility of development, demand and economic constraints, lack of utility connections in the area, General Plans, zoning, other development restrictions, and regulations promulgated by local agencies. The project would not remove direct growth constraints or add a direct stimulus to growth. Rather, the increase in energy generation from the project would support growth, as growth requires additional energy production. However, the project would not directly foster growth.

5.1.2 Economic Growth

The proposed project would be considered growth inducing if growth resulted from direct and indirect employment needed to construct, operate, and maintain the proposed project, and/or if growth resulted from the additional electrical power that would be generated by the proposed project. Construction would be performed by independent contractors hired by the developer for the project. In general, construction workers would be hired from the local labor pool or nearby urban areas such as Barstow and Victorville. If contract workers are employed, they would not cause growth in the area due to the short-term and temporary nature of their employment.

Once operational, the project would be monitored remotely via the supervisory control and data acquisition (SCADA) system and would not require the presence of full-time, on-site employees. The project would include occasional operations and maintenance visits, such as for equipment repair/replacement and panel washing. Due to the limited nature of operations and maintenance activities required for the project, the project would not cause significant long-term economic growth.

5.1.3 Population Growth

CEQA requires the consideration of potential direct and indirect growth-inducing impacts of a proposed project. Implementation of the proposed project would not induce the construction of new homes that would result in direct residential growth.

In some cases, direct population growth can be created through the introduction of new businesses. However, direct population growth associated with the proposed project is not forecast to occur because the community has a need for employment and most of the jobs created are forecast to be filled by San Bernardino County (County) residents.

In California, new energy facilities are responsive to growth due to State and federal regulations and do not in and of themselves induce growth. Therefore, the project would not substantially induce population growth.

5.1.4 Establishment of a Precedent-Setting Action

The project applicant seeks a Conditional Use Permit (CUP), a Zoning Amendment, and a Countywide Plan/Policy Plan Amendment to construct a renewable energy generation facility. Approval of the CUP, Zoning Amendment, and Countywide Plan/Policy Plan Amendment would not be considered precedent-setting actions (defined as any act, decision, or case that serves as a guide or justification for subsequent situations), as other renewable energy facilities have received similar approvals and have operated in the immediate vicinity and within the region. Furthermore, several other similar projects are currently in the planning and environmental review stage seeking similar approvals. Therefore, approval of the project would not set a precedent.

5.1.5 Encroachment on Open Space

The project site totals approximately 596 acres on an 825-acre parcel. The project site is undeveloped and contains desert vegetation. Areas surrounding the project site include a patchwork of undeveloped Bureau of Land Management (BLM) lands, other vacant lands, and other approved solar facilities (**Figure 2-3, Surrounding Land Uses**).

Although the project site is undeveloped, the project site and generation interconnect (gen-tie) corridor are zoned as Rural Living (RL). The project site is also designated as RL in the Countywide Plan/Policy Plan, which allows for the development of rural residential uses. The gen-tie corridor is designated as Resource/Land Management (RLM) in the Countywide Plan/Policy Plan. The project includes a Zoning Amendment and Countywide Plan/Policy Plan Amendment to allow for the development of a solar energy facility on the project site. These amendments would change the RL zoning to Resource Conservation (RC) and the RL land use designation to RLM within the project site. The gen-tie corridor is already designated as RLM in the Countywide Plan/Policy Plan, and transmission lines are permitted within the RL zoning district. Therefore, the gen-tie corridor would not require a zoning amendment.

The RC designation is intended to provide open space and recreational activities, single-family homes on very large parcels, and similar compatible uses including solar energy facilities. Although the designation is intended to provide open space and recreational activities, it is not considered open space, as the County Development Code also contains Open Space (OS) zoning specifically for open space and recreational uses alone. Based on a review of historical maps dating back to 1915 and aerial photographs dating back to 1959, the project site has been primarily mapped as vacant land with some unpaved roadways (**Appendix H**). Furthermore, the existing zoning and land use designation currently allow for rural residential development on the project site. Therefore, the project would not result in the loss of open space. Additionally, with the issuance of a CUP, the project would be consistent with the County's Development Code. Because the project would be consistent with the County Development Code, including Chapter 84.29, *Renewable Energy Generation Facilities*, it would also be consistent with the Countywide Plan/Policy Plan land use designation. Upon issuance of the Zoning Amendment, Countywide Plan/Policy Plan Amendment, and CUP, the project would also be consistent

with the Renewable Energy and Conservation Element of the Countywide Plan/Policy Plan (refer to Section 3.10, Land Use and Planning).

5.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that an EIR discuss any significant impacts associated with the project. Sections 3.1 through 3.15 of this EIR describe the potential environmental impacts of the proposed project and recommends mitigation measures to reduce impacts to a less than significant level, where feasible. The Executive Summary includes **Table ES-1, Environmental Impact Summary**, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation.

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Sections 3.1 through 3.15. Based on the analysis within this EIR, the project would not result in any significant and unavoidable impacts or any cumulative impacts.

5.3 Significant Irreversible Environmental Changes

CEQA Guidelines Section 15126.2(c) requires an EIR to discuss the significant irreversible environmental changes that would result from the implementation of a proposed project. Examples include a project's primary or secondary impacts that would generally commit future generations to similar uses (e.g., highway improvements at the access point), use nonrenewable resources during the initial and continued phases of the project (because a large commitment of such resources make removal or nonuse thereafter unlikely), and/or result in irreversible damage from any potential environmental accidents associated with the project.

The proposed project would not result in an unusually high demand for nonrenewable resources. The project would be a clean, renewable energy source. It would implement many State and local goals and policies directed at moving away from a reliance on fossil fuels and encouraging renewable energy (refer to Section 3.5, Energy). After the usable/permitted life of the project is over, the facility would be decommissioned and restored to its pre-development condition. Pursuant to County Development Code Section 84.29.070, a Decommissioning Plan would be prepared, all aboveground structures would be removed, and most of the project materials would be recycled or sold as scrap. Shrubs and other plants would be revegetated by re-seeding following decommissioning.

6.0 PREPARERS

Environmental Impact Report

San Bernardino County

Mark Wardlaw	Planning Director
Jon Braginton	Contract Planner
Chris Warrick	Supervising Planner

Kimley-Horn

Lead Agency Reviewer

Jessie Fan	Project Manager
Heidi Rous	Principal-in-Charge

Tetra Tech

EIR Consultant to the Applicant

Anna Shamey	Senior Project Manager
Jennifer Merrick	Senior Reviewer
Joe Harrison	Hazards and Hazardous Materials, Land Use and Planning, Utilities and Service Systems, Wildfire, Alternatives, Other CEQA Considerations
Elizabeth Bradley	Energy, Transportation and Traffic, Effects Not Found To Be Significant
Paula Fell	Aesthetics, Wildfire
Lysa Modica	Air Quality, Greenhouse Gas Emissions
Sucharitha Sridharan	Air Quality, Greenhouse Gas Emissions
Jessie Beckman	Biological Resources
Jack Gordon	Biological Resources
Dave Rasmussen	Biological Resources
Berenika Byszewski	Cultural and Tribal Cultural Resources
Erin King	Cultural and Tribal Cultural Resources
Derrick Coleman	Geology and Soils, Hydrology and Water Quality, Effects Not Found To Be Significant
Jay Neuhaus	Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality
Chris Hulik	Noise, Acoustical Analysis Report
Kevin Fowler	Noise, Acoustical Analysis Report

Em Johnson	Transportation and Traffic
David Gravender	Technical Editor
Dawn Nelson	Word Processor
Danny Han	GIS Analyst

SWCA Environmental ConsultantsConsultant to the Applicant

Erica Rippe	Lead Environmental Planner
Pauline Roberts	Natural Resources Technical Director
Brad Sohme	Air Quality & Greenhouse Gas Technical Report
Erin Wielenga	Air Quality & Greenhouse Gas Technical Report
Steven O'Brien	Phase I Environmental Site Assessment
Linnea Hofstrom	Phase I Environmental Site Assessment
Maggie Rouin	Water Supply Assessment
Molan Perryman	Water Supply Assessment
Chris Garrett	Water Supply Assessment
Ben Snyder	Stormwater Drainage Report
Jessica Ha	Stormwater Drainage Report

Corvus Biological ConsultingConsultant to the Applicant

Brooks Hart	Biological Resources Technical Report
Caroline Champlin	Biological Resources Technical Report

PaleoWestConsultant to the Applicant

Kyle Knabb	Cultural Resource Assessment Report
Gena Severen	Cultural Resource Assessment Report
Benjamin Scherzer	Paleontological Resource Assessment Report
Jessica DeBusk	Paleontological Resource Assessment Report

KleinfelderConsultant to the Applicant

Woongju Mun	Geotechnical Investigation Report
Michael O. Cook	Geotechnical Investigation Report

Jeffery D. Waller Geotechnical Investigation Report

Linscott, Law & Greenspan, Engineers

Consultant to the Applicant

Renald Espiritu Traffic Impact Study

John Boarman Traffic Impact Study

7.0 REFERENCES

Section 1.0 Introduction

Mojave Water Agency. 1996. Mojave Basin Area Adjudication and Stipulated Judgement. https://www.mojavewater.org/wp-content/uploads/2022/06/Judgment_After_Trial_with_2002_Amendment.pdf (accessed September 2024).

San Bernardino County. 2007. County of San Bernardino 2006 General Plan Program: Final Environmental Impact Report and Appendices [SCH #2005101038].

San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: <https://countywideplan.com/policy-plan/> (accessed September 2024).

Section 2.0 Project Description

Federal Emergency Management Agency (FEMA). 2008. National Flood Hazard Layer (NFHL) Viewer. August 28, 2008. Available online at: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd> (accessed October 2023).

Section 3.0 Introduction to the Environmental Analysis

None cited.

Section 3.1 Aesthetics

Bureau of Land Management (BLM). 1986. Visual Resource Inventory. BLM Manual Handbook H8410-1. Available online at: https://www.blm.gov/sites/blm.gov/files/program_recreation_visual%20resource%20management_quick%20link_%20BLM%20Handbook%20H-8410-1%20C%20Visual%20Resource%20Inventory.pdf (accessed August 2024).

California Department of Transportation (Caltrans). 2024. California Scenic Highway System Map. Available online at: <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca> (accessed January 2024).

San Bernardino County. 2007. County of San Bernardino 2007 General Plan. Available online at: <https://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf> (accessed July 2024).

San Bernardino County. 2014. San Bernardino County Development Code. August 21. Available online at: https://codelibrary.amlegal.com/codes/sanbernardino/latest/sanberncity_ca/0-0-0-169172 (accessed May 2024).

San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: <https://countywideplan.com/wp->

[content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421](#) (accessed November 2023).

Shields. 2010. PV Systems: Low Levels of Glare and Reflectance vs. Surrounding Environment.

Section 3.2 Air Quality

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available online at: <https://sfmohcd.org/sites/default/files/20-CARB%2CAirQualityandLandUseHandbook2005.pdf> (accessed July 2024).

CARB. 2024a. Air Quality Data Statistics, Top Four Summary for Monitored Data at Barstow Station. Available online at: <https://www.arb.ca.gov/adam/topfour/topfour1.php> (accessed July 2024).

CARB. 2024b. Appendix C Maps and Tables of Designations for State and National Ambient Air Quality Standards. Available online at: <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations> (accessed January 2024).

CARB. 2024c. Overview: Diesel Exhaust and Health. Available online at: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health> (accessed June 2024).

Centers for Disease Control and Prevention (CDC). 2022. Valley Fever (Coccidioidomycosis) Statistics. Available online at: <https://www.cdc.gov/valley-fever/php/statistics/index.html#:~:text=States%20usually%20report%20a%20total,are%20never%20diagnosed%20or%20misdiagnosed> (accessed February 2024).

California Department of Public Health (CDPH). 2024. Valley Fever in California Dashboard. Available online at: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/ValleyFeverDashboard.aspx> (accessed February 2024).

Mojave Desert Air Quality Management District (MDAQMD). 1995. Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan. Available online at: <https://www.mdaqmd.ca.gov/home/showdocument?id=176> (accessed July 2024).

MDAQMD. 2020. California Environmental Quality Act (CEQA) and Federal Conformity Guidelines. Available online at: <https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000> (accessed July 2024).

MDAQMD. 2023a. Federal 70 ppb Ozone Attainment Plan: Western Mojave Desert Nonattainment Area. Available online at: <https://www.mdaqmd.ca.gov/home/showpublisheddocument/9589/638084392297570000> (accessed July 2024).

MDAQMD. 2023b. MDAQMD Rule Book. Available online at: <https://www.mdaqmd.ca.gov/rules/rule-book> (accessed August 2024).

National Climate Data Center (NCDC). 2023. Monthly Normals. Available at:

<https://www.ncei.noaa.gov/products/land-based-station/us-climate-normals> (accessed July 2024).

Office of Environmental Health Hazard Assessment (OEHHHA). 2023. Health Effects of Diesel Exhaust. Available online at:

<https://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf> (accessed July 2024).

San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed July 2024).

South Coast Air Quality Management District (SCAQMD). 2003. White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution. Available online at:

<https://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2> (accessed July 2024).

U.S. Environmental Protection Agency (USEPA). 2023. Process of Reviewing the National Ambient Air Quality Standards. Available online at: <https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards> (accessed July 2024).

USEPA. 2024. Outdoor Air Quality Data: Monitor Value Report. Available online at:

<https://www.epa.gov/outdoor-air-quality-data/monitor-values-report> (accessed January 2024).

Western Regional Climate Center. 2002. Prevailing Wind Direction. Available online at:

https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg (accessed July 2024).

Section 3.3 Biological Resources

Boarman, W.I. 2002. Reducing Predation by Common Ravens on Desert Tortoises in the Mojave and Colorado Deserts. U.S. Geological Survey, Western Ecological Research Center. Sacramento, CA. Accessed December 2023.

BLM. 2006. West Mojave Plan. March 2006. Available online at:

https://eplanning.blm.gov/public_projects/lup/72544/97511/117667/wemo_rod_3-06.pdf (accessed December 2023).

BLM and United States Department of Energy (DOE). 2012. Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States, DOE/EIS-0403. Available online at: <https://www.energy.gov/nepa/articles/eis-0403-final-programmatic-environmental-impact-statement> (accessed December 2023).

- Calflora. 2023. Information on California plants for education, research, and conservation. [Web application]. Berkeley, California: The Calflora Database [a non-profit organization]. Available online at: <http://www.calflora.org/> (accessed December 2023).
- California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. Available online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline=true> (accessed July 2024).
- California Department of Fish and Wildlife (CDFW). 2010. Mohave Ground Squirrel Survey Guidelines. Sacramento, CA. Available online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83975&inline> (accessed December 2023).
- CDFW. 2023. California Natural Diversity Database (CNDDDB) RareFind 5. Sacramento, CA. Available online at: <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> (accessed December 2023).
- CDFW. 2024. Mohave Ground Squirrel Species Information. Available online at: <https://wildlife.ca.gov/Conservation/Mammals/Mohave-Ground-Squirrel> (accessed July 2024).
- California Native Plant Society (CNPS), Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Available online at: <https://www.rareplants.cnps.org> (accessed December 2023).
- Conservation Biology Institute. 2023. Golden Eagle – Species Distribution Model Map DRECP. Available online at: <https://drecp.databasin.org/maps/3c3434fa9934406cb2fa8db4570d1e60/> (accessed) (accessed December 2023).
- Cornell Lab of Ornithology (Cornell). 2019a. All About Birds – Golden Eagle. Cornell Lab of Ornithology, Ithaca, New York. Available online at: https://www.allaboutbirds.org/guide/Golden_Eagle/lifehistory (accessed December 2023).
- Cornell. 2019b. All About Birds – Loggerhead Shrike. Cornell Lab of Ornithology, Ithaca, New York. Available online at: https://www.allaboutbirds.org/guide/Loggerhead_Shrike/id# (accessed July 2024).
- Cornell. 2019c. All About Birds – Prairie Falcon. Cornell Lab of Ornithology, Ithaca, New York. Available online at: https://www.allaboutbirds.org/guide/Prairie_Falcon/overview (accessed December 2023).
- Kagan, R. A., T. C. Viner, P. W. Trail, and E. O. Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. US Fish and Wildlife Service, National Fish and Wildlife Forensics Laboratory. Available online at: <https://www.ourenergypolicy.org/resources/avian-mortality-at-solar-energy-facilities-in-southern-california-a-preliminary-analysis/> (accessed December 2023).
- Lovich, J. E., and J. R. Ennen. 2011. Wildlife Conservation and Solar Energy Development in the Desert Southwest, United States. *BioScience* 61 (12): 982–992. Available online at: <https://academic.oup.com/bioscience/article/61/12/982/392612> (accessed December 2023).

- National Land Cover Dataset (NLCD). 2023. Multi-Resolution Land Characteristics (MRLC) Consortium – Data. Available online at: <https://www.mrlc.gov/> (accessed December 2023).
- National Parks Service. 2022. American Badger Species Profile. Available online at: <https://www.nps.gov/whsa/learn/nature/american-badger.htm> (accessed June 2024).
- Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. Available online at: <https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> (accessed December 2023).
- Patton, A. 2008. *Vulpes macrotis*. Animal Diversity Web. Available online at: https://animaldiversity.org/accounts/Vulpes_macrotis/ (accessed July 2024).
- San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed July 2024).
- U.S. Fish and Wildlife Service (USFWS). 2009. Desert Tortoise Field Manual. Available online at: <https://www.fws.gov/media/desert-tortoise-field-manual> (accessed December 2023).
- USFWS. 2019. Mojave Desert Tortoise Pre-project Survey Protocol. Available online at: <https://www.fws.gov/media/Mojave-desert-tortoise-pre-project-survey-protocol-2019> (accessed December 2023).
- USFWS. 2023. Information for Planning and Conservation (IPaC). Available online at: <https://ecos.fws.gov/ipac/> (accessed May 2023).
- USFWS. 2024. Desert Tortoise Species Profile. Available online at: <https://www.fws.gov/species/desert-tortoise-gopherus-agassizii> (accessed July 2024).
- Walston, L. J., K. E. Rollins, K. E. LaGory, K. P. Smith, and S. A. Meyers. 2016. A Preliminary Assessment of Avian Mortality at Utility-Scale Solar Energy Facilities in the United States. *Renewable Energy* 92: 405–414. Available online at: <https://www.sciencedirect.com/science/article/pii/S0960148116301422> (accessed December 2023).

Section 3.4 Cultural and Tribal Resources

- LSA Associates, Inc. 2023. Cultural Resources Assessment, Desert Breeze Solar Project. February 2023. Riverside, CA.
- San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed August 2024).

Section 3.5 Energy

- CARB. 2019. The California Low-Emissions Vehicle Regulations. Available online at: <https://ww2.arb.ca.gov/sites/default/files/2019-07/cleancomplete%20lev-ghg%20regs%2010-19.pdf> (accessed December 2023).
- CARB. 2023. AB 32 Climate Change Scoping Plan. Available online at: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/about> (accessed April 2024).
- California Energy Commission (CEC). 2020. 2019 Integrated Energy Policy Report. February 2020. Available online at <https://efiling.energy.ca.gov/getdocument.aspx?tn=232922> (accessed November 2023).
- CEC. 2023. Gasoline Sales Statistics. Available online at: <https://www.energy.ca.gov/media/3874> (accessed April 2024).
- California Public Utilities Commission (CPUC). 2023a. Winter 2023/2024 Southern California Gas Reliability Assessment. Available online at: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/natural-gas/aliso-canyon/2023_winter_reliability_daily_stochastic_mass_balance_model.pdf (accessed November 2023).
- CPUC. 2023b. Renewables Portfolio Standard (RPS) Program. Available online at: <https://www.cpuc.ca.gov/rps/> (accessed November 2023).
- Energy Information Administration (EIA). 2022a. Energy Consumption Overview: Estimates by Energy Source and End-Use Sector, 2020. June 24, 2022. Available online at: https://www.eia.gov/state/seds/sep_sum/html/sum_btu_1.html (accessed November 2023).
- EIA. 2022b. Total Energy Consumption Estimates per Capita by End-Use Sector, Ranked by State, 2022. Available online at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_use_capita.html&sid=US (accessed November 2023).
- EIA. 2023a. California State Profile and Energy Estimates – Table F15: Total Petroleum Consumption Estimates, 2022. Available online at: http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA (accessed April 2024).
- EIA. 2024. Natural Gas Consumption by End Use. Available online at: https://www.eia.gov/dnav/ng/ng_cons_sum_a_EPG0_VC0_mmcft_a.htm (accessed April 2024).
- National Highway Traffic Safety Administration (NHTSA). 2023. Corporate Average Fuel Economy standards. Available online at: <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy> (accessed November 2023).

- San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed November 2023).
- Southern California Edison (SCE). 2023a. Who We Serve & How We Do It. Available online at: <https://www.sce.com/about-us/who-we-are> (accessed December 2023).
- SCE. 2023b. 2021 Power Content Label – Southern California Edison. Available online at: https://www.sce.com/sites/default/files/custom-files/PDF_Files/SCE_2022_Power_Content_Label_B%26W.pdf (accessed April 2024).
- Southern California Gas Company (SoCalGas). 2021. 2021 California Gas Report Supplement. Available online at: https://www.socalgas.com/sites/default/files/2021_California_Gas_Report_Supplement.pdf (accessed November 2023).
- SoCalGas. 2023. Company Profile. Available online at: <https://www.socalgas.com/about-us> (accessed December 2023).
- The Climate Registry. 2022. 2022 Default Emission Factors. Available online at: <https://theclimateregistry.org/wp-content/uploads/2022/11/2022-Default-Emission-Factors-Final.pdf> (accessed December 2023).
- USEPA and NHTSA. 2016. Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2. Federal Register / Vol. 81, No. 206 / Tuesday, October 25, 2016 / Rules and Regulations. Available online at: <https://www.gpo.gov/fdsys/pkg/FR-2016-10-25/pdf/2016-21203.pdf> (accessed November 2023).

Section 3.6 Geology and Soils

- Amoroso, L., and D. M. Miller. 2012. Surficial Geologic Map of the Cuddeback Lake 30' x 60' Quadrangle, San Bernardino and Kern Counties, California. Scientific Investigations Map 3107 and Pamphlet. U.S. Geological Survey.
- American Society of Civil Engineers (ASCE). 2016. Minimum Design Load for Buildings and Other Structures (ASCE/SEI 7-16).
- California Department of Conservation (DOC). 2023. Geologic Hazards Data & Maps. On-line, interactive map. Available online at: <https://maps.conservation.ca.gov/geologichazards/#dataviewer> (accessed December 2023).
- California Geologic Survey (CGS). 2002. California Geomorphic Provinces. CGS Note 36. Available online at: <https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf> (accessed July 2024).
- CGS. 2023. EQ Zapp: California Earthquake Hazards Zone Application. Available online at: <https://www.conservation.ca.gov/cgs/geohazards/eq-zapp> (accessed December 2023).

- Field, E.H., and 2014 Working Group on California Earthquake Probabilities. 2015. UCERF3: A new earthquake forecast for California's complex fault system. U.S. Geological Survey Fact Sheet 2015-3009. Available online at: <https://dx.doi.org/10.3133/fs20153009> (accessed December 2023).
- Google Earth. 2023. Google Earth. Coordinates: 35.017898, -117.356355. Available online at: <https://maps.app.goo.gl/yGoAx9XYtBFcptpG7> (accessed July 2024).
- Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. U.S. Department of Agriculture (USDA). Available online at: <https://www.nrcs.usda.gov/resources/data-and-reports/web-soil-survey> (accessed December 2023).
- SCS (Soil Conservation Service). 1986. Soil Survey of San Bernardino County California, Mojave River Area. US Department of Agriculture in cooperation with University of California Agricultural Experiment Station. February 1986.
- San Bernardino County. 2022. Countywide Plan/Policy Plan. Natural Resources Section, Cultural Resources Element (last updated 10/27/2020) and Safety and Security Section, Hazards Element (last updated 9/27/2022). Available online at: <https://countywideplan.com/policy-plan/> (accessed December 2023).
- Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources, Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.
- U.S. Geological Survey (USGS). 2023a. California geologic map data, A GIS database of geologic units and structural features in California. Available online at: <https://maps.conservation.ca.gov/cgs/gmc/> (accessed December 2023).
- USGS. 2023b. Areas of Land Subsidence in California. A web-based geospatial tool. Available online at: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html (accessed September 2023).

Section 3.7 Greenhouse Gas Emissions

- CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16, 2022. Available online at: <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf> (accessed July 2024).
- Intergovernmental Panel on Climate Change (IPCC). 2007. The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Available online at: https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf (accessed July 2024).
- IPCC. 2013. The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available online at: https://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf (accessed July 2024).

- IPCC. 2021. Climate Change 2021. The Physical Science Basis. Available online at: https://report.ipcc.ch/ar6/wg1/IPCC_AR6_WGI_FullReport.pdf (accessed June 2024).
- National Oceanic and Atmospheric Administration (NOAA). 2022. News & Features, Carbon Dioxide Now More than 50% Higher than Pre-industrial Levels. Available online at: <https://www.noaa.gov/news-release/carbon-dioxide-now-more-than-50-higher-than-pre-industrial-levels> (accessed July 2024).
- San Bernardino County. 2011. Greenhouse Gas Emissions Reduction Plan. Available online at: <https://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGFull.pdf> (accessed June 2024).
- San Bernardino County. 2019. General Plan. Renewable Energy and Conservation Element. Available online at: https://www.sbcounty.gov/uploads/LUS/Renewable/2019_WEBSITE/REC%20Element.pdf (accessed July 2024).
- San Bernardino County. 2021. County of San Bernardino Greenhouse Gas Reduction Plan Update. Available online at: https://www.sbcounty.gov/uploads/LUS/GreenhouseGas/GHG_2021/GHG%20Reduction%20Plan%20Update-Greenhouse%20Gas%20Reduction%20Plan%20Update%20-%20Adopted%209-21-2021.pdf (accessed July 2024).
- San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed July 2024).
- San Bernardino County Council of Governments (SBCOG). 2021. San Bernardino County Regional Greenhouse Gas Reduction Plan. Available online at: https://www.gosbcta.com/wp-content/uploads/2019/09/San_Bernardino_Regional_GHG_Reduction_Plan_Main_Text_Mar_2021.pdf (accessed June 2024).
- SCAQMD. 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. Available online at: [https://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](https://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf) (access June 2024).
- USEPA and National Highway Traffic Safety Administration (NHTSA). 2010. Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards. Joint Technical Support Document. EPA-420-R-10-901. April. Available online at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1006W9S.PDF?Dockey=P1006W9S.PDF> (accessed June 2024).
- USEPA and NHTSA. 2012. Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards. EPA-420-R-12-901. August. Available online at:

<https://nepis.epa.gov/Exe/ZyPDF.cgi/P100F1E5.PDF?Dockey=P100F1E5.PDF> (accessed June 2024).

Section 3.8 Hazards and Hazardous Materials

Battelle. 2001. Comparative Risks of Hazardous Materials and Non-Hazardous Materials Truck Shipment Accidents/Incidents. Available online at:

<https://libraryarchives.metro.net/dpgtl/publications/2001-comparative-risks-of-hazardous-materials-and-non-hazardous-materials-truck-shipment-accidents-incidents.pdf> (accessed November 2023).

California Department of Forestry and Fire Protection (CAL FIRE). 2019. 2019 Strategic Plan. Approved January 22, 2019. Available online at: <https://www.paperturn-view.com/cal-fire-communications/strategicplan2019-final?pid=MjU253660&p=3> (accessed November 2023).

CAL FIRE. 2023. Fire Hazard Severity Zones in State Responsibility Area. September 29, 2023. Available online at: <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008> (accessed November 2023).

Caltrans. 2014. California Manual on Uniform Traffic Control Devices. Revision 7. Available online at: <https://dot.ca.gov/programs/safety-programs/camutcd> (accessed November 2023).

Department of Toxic Substances Control (DTSC). 2023. EnviroStor Database Search. Available online at: <https://www.envirostor.dtsc.ca.gov/public/> (accessed December 2023).

Fthenakis, V., and K. Zweibel. 2003. CdTe PV: Real and Perceived EHS Risks. Published May 2003. Available online: <https://www.nrel.gov/docs/fy03osti/33561.pdf> (accessed December 2023).

San Bernardino County. 2010a. San Bernardino County Land Use Plan Hazard Overlays – CHDH B. Dated March 9, 2010. Available online at: https://www.sbcounty.gov/Uploads/lus/HazMaps/CHDHB_20100309.pdf (accessed November 2023).

San Bernardino County. 2010b. San Bernardino County Land Use Plan Hazard Overlays – EHFH B. Dated March 9, 2020. Available online at: https://www.sbcounty.gov/Uploads/lus/HazMaps/EHFHB_20100309.pdf (accessed November 2023).

San Bernardino County. 2020. Policy Map HZ-5 Fire Hazard Severity Zones. October 27, 2020. Available online at: <https://countywideplan.com/wp-content/uploads/sites/68/2021/02/HZ-5-Fire-Hazard-Severity-Zones-201027.pdf?x23421> (accessed November 2023).

San Bernadino County. 2022a. San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan. Amended December 2022. Available online at: <https://www.sbcounty.gov/uploads/SBCFire/documents/EmergencyServices/Hazard-Mitigation-Plan-202212.pdf> (accessed November 2023).

- San Bernardino County. 2022b. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed November 2023).
- San Bernardino County Fire Protection District (SBC Fire). 2023. San Bernardino County Fire Protection District Ordinance No. FPD 20-01. Adopted March 1, 2023. Available online at: <https://sbcfire.org/wp-content/uploads/sites/46/2023/05/Ordinance-No.-FPD-23-01.pdf?x41269> (accessed May 2024).
- State Water Resources Control Board (SWRCB). 2023. GeoTracker Database Search. Available online at: <https://geotracker.waterboards.ca.gov/> (accessed December 2023).
- United Nations. 2019. UN 3536 Lithium Batteries Installed in Cargo Transport Unit. Available online at: <https://unece.org/DAM/trans/doc/2019/dgac10c3/ST-SG-AC.10-C.3-2019-8e.pdf> (accessed December 2023).
- USEPA. 2023. Used Lithium-ion Batteries. Available online at: <https://www.epa.gov/recycle/used-lithium-ion-batteries#businesses> (accessed November 2023).
- USEPA. 2024. Universal Waste – Overview of the Universal Waste Program. Available online at: <https://www.epa.gov/hw/universal-waste> (accessed May 2024).

Section 3.9 Hydrology and Water Quality

- CDFW. 1994. A Field Guide to Lake and Streambed Alteration Agreements. Sections 1600-1616, California Fish and Game Code. Environmental Services Division.
- California Department of Water Resources (DWR). 2003. California's Groundwater, Bulletin 118. Harper Valley Groundwater Basin, South Lahontan Hydrologic Region (basin description updated February 27, 2004). Available online at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/6_047_KernRiverValley.pdf (accessed January 2024).
- DWR. 2024. SGMA Basin Prioritization Dashboard. Available online at: <https://gis.water.ca.gov/app/bp-dashboard/final/> (accessed January 2024).
- FEMA. 2008. National Flood Hazard Layer (NFHL) Viewer. August 28, 2008. Available online at: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd> (accessed October 2023).
- Google Earth. 2023. Google Earth Historical Imagery of the project site. Accessed January 2024.
- Lahontan Regional Water Quality Control Board (LRWQCB). 2021. Water Quality Control Plan for the Lahontan Region, North and South Basins. Plan effective March 31, 1995, including amendments effective August 1995 through September 22, 2021.

- LRWQCB. 2022. Draft Revisions to the Water Quality Control Plan for the Lahontan Region to Clarify Beneficial Uses for the Mojave River, Update Site Cleanup, Land Disposal and Bishop Underground Tank Policy Sections, and Other Editorial Revisions. March 11, 2022.
- San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed January 2024).
- Tully & Young. 2021. 2020 Urban Water Management Plan, Mojave Water Agency, Final. Adopted May 27, 2021.
- USGS. 1986. Lockhart Quadrangle, California, San Bernardino County. 7.5 Minute Series Topographic Map. Provisional Edition, No. 35117-A3-TF-024.
- USGS and NRCS. 2013. Federal Standards and Procedures for the National Watershed Boundary Dataset [WBD], 4th edition. U.S. Geological Survey Techniques and Methods 11-A3. 63 p.
- WorldClimate. 2024. California Climate Information. Available online at: <http://www.worldclimate.com/climate/us/california/> (accessed January 2024).

Section 3.10 Land Use and Planning

- San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed December 2023).

Section 3.11 Noise

- Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013.
- California Governor's Office of Planning and Research. 2017. State of California General Plan Guidelines.
- Federal Transit Authority (FTA). 2006. Transit Noise and Vibration Impact Assessment Manual.
- International Organization for Standards (ISO). 1996. Acoustics – Attenuation of Sound during Propagation Outdoors. Part 2: General Method of Calculation. ISO Standard 9613-2. Geneva, Switzerland.
- Kimley-Horn and Associates, Inc. 2023. Desert Breeze Solar Project – Noise Technical Memorandum.
- Kurze, U. and L. Beranek. 1988. Noise and Vibration Control. Institute of Noise Control Engineering, Washington, DC.
- Michael Baker International. 2021. Lockhart Solar PV II Project – Noise Technical Memorandum.
- San Bernardino County. 2014. Development Code, Section 83.01.080, Table 83-2. Available online at: http://sbcounty-ca.elaws.us/code/coord_t8_d3_ch83.01_sec83.01.080 (accessed August 2024).

San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed August 2024).

USEPA. 1971. Technical Document NTID300.1, Noise from Construction Equipment and Operations, US Building Equipment, and Home Appliances. Prepared by Bolt Beranek and Newman for USEPA Office of Noise Abatement and Control, Washington, DC. December 1971.

USEPA. 1980. Construction Noise Control Technology Initiatives. Technical Report No. 1789. U.S. Environmental Protection Agency, Washington, DC: September 1980.

Section 3.12 Transportation and Traffic

Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Available online at: https://opr.ca.gov/ceqa/docs/20190122-743_Technical_Advisory.pdf (accessed November 2023).

San Bernardino County. 2019. Transportation Impact Study Guidelines. Available online at: <https://www.sbcounty.gov/uploads/DPW/docs/Traffic-Study-Guidelines.pdf> (accessed November 2023).

San Bernardino County. 2022. Countywide Plan/Policy Plan. Natural Resources Section, Cultural Resources Element (last updated 10/27/2020) and Safety and Security Section, Hazards Element (last updated 9/27/2022). Available online at: <https://countywideplan.com/policy-plan/> (accessed November 2023).

Southern California Association of Government (SCAG). 2024. 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. Available online at: <https://scag.ca.gov/2016-rtpscs> (accessed July 2024).

Section 3.13 Utilities and Service Systems

California Department of Resources Recycling and Recovery (CalRecycle). 2023. SWIS Facility/Site Activity Details: Barstow Sanitary Landfill. Available online at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1871?siteID=2653> (accessed October 2023).

DWR. 2014. Sustainable Groundwater Management Act (SGMA). Available online at: <https://water.ca.gov/programs/groundwater-management/sgma-groundwater-management> (accessed May 2024).

Mojave Water Agency (MWA). 2021. 2020 Urban Water Management Plan. Adopted May 27, 2021. Available online at: <https://www.mojavewater.org/wp-content/uploads/2022/06/MWA2020UWMPFinal061621.pdf> (accessed October 2023).

San Bernardino County. 2018. San Bernardino Countywide Integrated Waste Management Plan. Updated April 2018. Available online at: <https://www.sbcounty.gov/uploads/DPW/docs/SB-County-Final-Draft-Summary-Plan-SP-for-SWAT-07-2018r.pdf> (accessed May 2024).

San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed October 2023).

San Bernardino County. 2023. SWMD Waste Disposal Sites. Available online at: <https://dpw.sbcounty.gov/solid-waste-management/waste-disposal-sites/> (accessed October 2023).

Tully & Young. 2021. 2020 Urban Water Management Plan, Mojave Water Agency, Final. Adopted May 27, 2021.

USEPA, California Natural Resources Agency, and California Department of Food and Agriculture. 2014. California Water Action Plan. Available online at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/cwap_enhancing/docs/cwap_final.pdf (accessed May 2024).

Section 3.14 Wildfire

CAL FIRE. 2007. NW San Bernardino County Draft Fire Hazard Severity Zones in LRA. Available online at: https://34c031f8-c9fd-4018-8c5a-4159cdf6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/upload-2/fhszl06_1_map64.pdf (accessed November 2023).

CAL FIRE. 2019. 2019 Strategic Plan. Approved January 22, 2019. Available online at: <https://www.paperturn-view.com/cal-fire-communications/strategicplan2019-final?pid=MjU253660&p=3> (accessed November 2023).

CAL FIRE. 2023a. Fire Hazard Severity Zones in State Responsibility Area. September 29, 2023. Available online at: <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008> (accessed August 2024).

CAL FIRE. 2023b. Fire Resource Assessment Program, GIS Mapping and Data Analytics, California Fire Perimeters (all) - Recent Large Fire Perimeters (≥ 5000 acres). Available online at: <https://calfire-forestry.maps.arcgis.com/apps/mapviewer/index.html?layers=e3802d2abf8741a187e73a9db49d68fe&layerId=1> (accessed November 2023).

CPUC. 2017. General Order Number 165, Inspection Requirements for Electric Distribution and Transmission Facilities. Amended December 14, 2017, by D17-12-024 in R.15.05-006.

CPUC. 2020. General Order 95, Rules for Overhead Electric Line Construction. Amended January 2020. Available online: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M338/K730/338730245.pdf> (accessed November 2023).

- CPUC. 2023. CPUC High Fire Threat District (HFTD) Mapping Database. Available online: <https://ia.cpuc.ca.gov/firemap/#> (accessed November 2023).
- DOC. 2023. DOC Maps: Geologic Hazards. Available online: <https://maps.conservation.ca.gov/geologic Hazards/> (accessed November 2023).
- San Bernardino County. 2010a. San Bernardino County Land Use Plan Hazard Overlays – CHDH B. Dated March 9, 2010. Available online at: https://www.sbcounty.gov/Uploads/lus/HazMaps/CHDHB_20100309.pdf (accessed November 2023).
- San Bernardino County. 2010b. San Bernardino County Land Use Plan Hazard Overlays – EHFH B. Dated March 9, 2020. Available online at: https://www.sbcounty.gov/Uploads/lus/HazMaps/EHFHB_20100309.pdf (accessed November 2023).
- San Bernardino County. 2020a. Policy Map HZ-5 Fire Hazard Severity Zones. October 27, 2020. Available online at: <https://countywideplan.com/wp-content/uploads/sites/68/2021/02/HZ-5-Fire-Hazard-Severity-Zones-201027.pdf?x23421> (accessed November 2023).
- San Bernardino County. 2020b. Policy Map PP-2 Evacuation Routes. October 27, 2020. Available online at: <https://countywideplan.com/wp-content/uploads/sites/68/2021/02/PP-2-Evacuation-Routes-201027.pdf?x23421> (accessed November 2023).
- San Bernadino County. 2022a. San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan. Amended December 2022. Available online at: <https://www.sbcounty.gov/uploads/SBCFire/documents/EmergencyServices/Hazard-Mitigation-Plan-202212.pdf> (accessed November 2023).
- San Bernardino County. 2022b. San Bernardino Countywide Plan/Policy Plan. Amended September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed November 2023).
- SBC Fire. 2023. San Bernardino County Fire Protection District Ordinance No. FPD 20-01. Adopted March 1, 2023. Available online at: <https://sbcfire.org/wp-content/uploads/sites/46/2023/05/Ordinance-No.-FPD-23-01.pdf?x41269> (accessed May 2024).
- SCE. 2023. 2023-2025 Wildfire Mitigation Plan. Adopted March 27, 2023. Available online: https://www.sce.com/sites/default/files/AEM/Wildfire Mitigation Plan/2023-2025/2023-03-27_SCE_2023_WMP_R0.pdf (accessed November 2023).

Section 3.15 Effects Not Found To Be Significant

- DOC. 2018. California Farmland Mapping and Monitoring Program – Important Farmland Finder. Updated 2018. Available online at: <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed February 2024).

Google Earth. 2023. Google Earth Aerial Imagery of the project site. Accessed November 2024.

San Bernardino County. 2022. San Bernardino Countywide Plan/Policy Plan. Adopted September 2022. Available online at: https://countywideplan.com/wp-content/uploads/sites/68/2021/01/CWP_PolicyPlan_HardCopy_MainText_Tables_2022_Sept_Adopted.pdf?x23421 (accessed October 2023).

NRCS. 2023. Web Soil Survey. Available online at: <https://websoilsurvey.nrcs.usda.gov/app> (accessed November 2023).

USGS. 2023. Mineral Resources Data System (MRDS). Available online at: <https://mrdata.usgs.gov/mrds/> (accessed November 2023).

Section 4.0 Alternatives to the Proposed Project

CDFW. 2024. California Natural Diversity Database. Available online at: <https://wildlife.ca.gov/Data/CNDDB> (accessed May 2024).

DOC. 2023. Geologic Hazards Data & Maps. On-line, interactive map. Available online at: <https://maps.conservation.ca.gov/geologic Hazards/# dataviewer> (accessed December 2023).

DTSC. 2023. EnviroStor Database Search. Available online at: <https://www.envirostor.dtsc.ca.gov/public/> (accessed December 2023).

Desert Renewable Energy Conservation Plan (DRECP). 2016. Desert Renewable Energy Conservation Plan. Executive Summary for the Record of Decision. Available online at: https://eplanning.blm.gov/public_projects/lup/66459/133459/163123/DRECP_BLM_ROD_Executive_Summary.pdf (accessed August 2024).

Federal Aviation Administration (FAA). 2024. FAA Notice Criteria Tool. Available online at: <https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm> (accessed March 2024).

San Bernardino County. 2020. Policy Map PP-2 Evacuation Routes. October 27, 2020. Available online at: <https://countywideplan.com/wp-content/uploads/sites/68/2021/02/PP-2-Evacuation-Routes-201027.pdf?x23421> (accessed November 2023).

SWRCB. 2023. GeoTracker Database Search. Available online at: <https://geotracker.waterboards.ca.gov/> (accessed December 2023).

Section 5.0 Other CEQA Considerations

None cited.