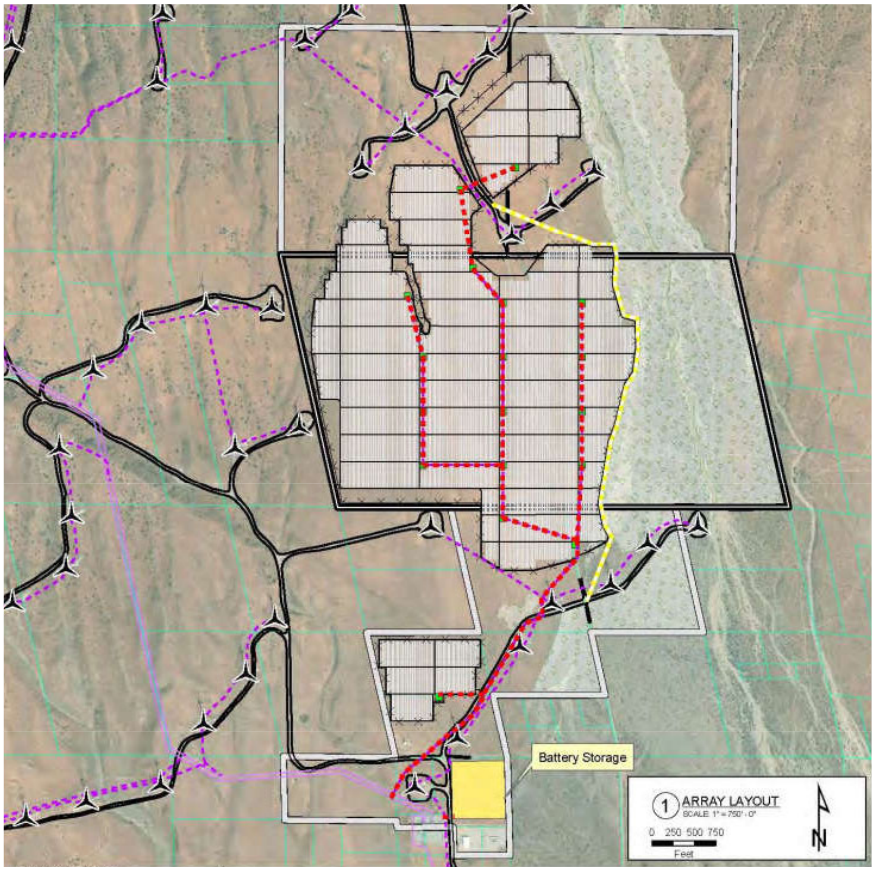
United States Department of the Interior
Bureau of Land Management

Camino Solar Project

ENVIRONMENTAL ASSESSMENT



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Environmental Assessment

EA Number: DOI-BLM-CA-D050-2020-0011-EA

Title/Proposed Action Type:	Camino Solar Project
Applicant/Proponent:	Aurora Solar, LLC
Location of Proposed Action:	Kern County, California
Proposed Action Acreage:	383 acres total (150 acres on private land and 233 on BLM-administered land)
USGS Topographic Map:	Mount Diablo Meridian, State of California, County of Kern. Township 10N, R15 W, Section 18, Lots 1-8, Section 23,26,34,35,36.

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1.1 Introduction

The Bureau of Land Management (BLM) has prepared this Environmental Assessment (EA) pursuant to the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. Section 4321 et seq.), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500–1508), and BLM NEPA Handbook H-1790-1. This EA evaluates the environmental effects of the Camino Solar Project in Kern County, California (the Proposed Action or project). This EA is a component of the Draft Environmental Impact Report/EA (EIR/EA) for the Camino Solar Project. The full text of the EIR/EA is available at the Kern County Planning and Natural Resources Department website: https://kernplanning.com/planning/environmental-documents/.

Purpose and Need

The BLM's purpose and need for the Proposed Action is to respond to Aurora Solar, LLC's application under Title V of the Federal Land Policy and Management Act of 1976 (FLPMA, 43 U.S.C. Section 1761(a)(4)) to grant a right-of-way (ROW) for the construction, operation, maintenance, decommissioning and restoration of a solar photovoltaic (PV) facility.

Decision to Be Made

The BLM will decide whether to grant, grant with conditions, or deny the requested ROW.

1.2 Issues

The issues analyzed in this EA have been identified based on the potential for the project to cause an impact on the human and physical environment at the site of the project. Table 1-1, *Issues*, identifies the issues raised by the project and presents a rationale for which resource/environmental factors warrant further analysis in this EA. An evaluation of these issues is presented in Section 1.5, *Environmental Consequences of the Proposed Action*. Appendix M-1 contains the full text of all mitigation measures discussed throughout this EA.

TABLE 1-1: ISSUES

Resource/ Environmental Factor	Further EA Analysis Warranted?	Issues
Air Quality	**Yes**	The Eastern Kern Air Pollution Control District (EKAPCD) is designated as non-attainment with respect to the California Ambient Air Quality Standards for criteria pollutants related to ozone and PM_{10} and National Ambient Air Quality Standards for criteria pollutants related to ozone. Construction of the project could generate emissions that exceed state and federal thresholds for ozone and PM_{10}. This resource is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Biological Resources	**Yes**	No threatened, endangered, or proposed for listing animal or plant species have been identified within or near the project area. Impacts to these species are unlikely. The project may impact vegetation, sensitive plant species, woodlands and habitat. This resource is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Cultural Resources	**Yes**	Proposed grading activities may impact archaeological and historic resources or sites with Native American religious concerns. This is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Development Focus Areas	No	The project will comply with all Desert Renewable Energy Conservation Plan (DRECP) Conservation Management Actions (CMAs) that are applicable to Development Focus Areas (DFA). See Section 1.4, *Land Use Plan Conformance and Relationship to Statutes, Regulations and Other Plans*, and Appendix M-2. No further analysis is warranted in this EA.
Environmental Justice	No	There are no identified minority income populations in the project area. No further analysis is warranted in this EA.
Floodplains	No	The project is not located within any 100-year flood zones or other identified floodplain. No further analysis is warranted in this EA.
Farmland (Prime or Unique)	No	The project is not located within any Prime or Unique Farmlands as designated by the U.S. Department of Agriculture. No further analysis is warranted in this EA.
Fuels and Fire Management	No	With implementation of Mitigation Measure MM 4.14-1, the project operator would implement a Fire Safety Plan to minimize potential for ignition and spread of wildland fire during construction, operation, decommissioning and restoration of the project. In addition to associated vegetation clearance standards, adherence to building codes relevant to fire safety and other applicable laws and regulations would reduce wildfire ignition potential and project-related wildfire risk. Further details are provided in Section 4.14, *Public Services*, of the Draft EIR/EA. No further analysis is warranted in this EA.
Greenhouse Gas Emissions	**Yes**	The project would generate greenhouse gas (GHG) emissions during construction, operation, decommissioning and restoration activities, but is expected to have a beneficial impact overall by displacing significant amounts of GHGs over the course of the project's lifespan. This environmental factor is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.

TABLE 1-1: ISSUES (CONTINUED)

Resource/ Environmental Factor	Further EA Analysis Warranted?	Issues
Geology / Mineral Resources/ Energy Production	No	The project has the potential to be subjected to strong seismic ground shaking. No other geologic impacts are anticipated (see Section 4.7, *Geology and Soils,* of the EIR/EA, for details). Mitigation Measures MM 4.7-1 through MM 4.7-4 would fully mitigate impacts for geologic, seismic hazards and/or related events. There are no known mineral resources at the project site and the project would not interfere with nearby mineral extraction operations (see Section 4.12, *Mineral Resources,* of the EIR/EA, for details). There are also no known petroleum or natural gas resources at the project site (see Section 4.12, *Mineral Resources,* of the EIR/EA, for details). The project would utilize solar energy resources to generate electricity. Solar energy is a renewable resource. Therefore, no impacts to finite energy resources are anticipated. No further analysis is warranted in this EA.
Invasive Plants / Noxious Weeds	No	The project will fully comply with DRECP CMA LUPA-BIO-10, which establishes standard practices for weed management; therefore, there will be no substantial impacts or extraordinary circumstances with respect to the management of invasive species/noxious weeds. No further analysis is warranted in this EA.
Lands/Access	No	No encumbrances exist at the project site. An existing dirt road identified as 135208 in the Wester Mojave Plan currently bisects the project site in a north/south direction. The project would relocate the dirt road to eastern perimeter of the project site boundary such that access from the south of the project site to the north would be maintained. No other impacts to lands or access is anticipated. No further analysis is warranted in this EA.
Livestock Grazing	No	The entire project site is located within the 7,871-acre Antelope Valley grazing allotment under the management of the BLM Ridgecrest Field Office. The BLM-administered portion of the project site was subject to an existing grazing permit. However, that permit expired in February 2019. No further analysis is warranted in this EA.
Noise	No	There are no occupied residential dwellings or other noise-sensitive receptors within 1,000 feet of the project site, nor are there any sensitive wildlife species located at the project site that could be affected by noise. The closest noise sensitive receptors to the project site are residences located approximately 1.2 miles to the west of the site. See Section 4.13, *Noise*, of the EIR/EA, for further details. No further analysis is warranted in this EA.
Paleontological Resources	**Yes**	Proposed grading activities may impact paleontological resources. This resource is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Wastes (Hazardous or Solid)	No	No potentially harmful materials would be left on, or in the vicinity of the project area. No chemicals subject to Superfund Amendments and Reauthorization Act (SARA) Title III in amounts greater than 10,000 pounds would be used. No extremely hazardous substances as defined in 40 CFR Section 355 in threshold planning quantities would be used. Solid waste generated from the project area would be properly disposed at an approved landfill. In addition, the project will implement Mitigation Measures MM 4.9-1, which requires the preparation and implementation of a Hazardous Materials Business Plan, MM 4.9-2, which includes requirements for herbicide application, and MM 4.17-1, which includes requirements for solid waste disposal. No further analysis is warranted in this EA.

TABLE 1-1: ISSUES (CONTINUED)

Resource/ Environmental Factor	Further EA Analysis Warranted?	Issues
Rangeland Health Standards and Guidelines	No	Rangeland Health Assessments have not been completed within the project's land status area. No further analysis is warranted in this EA.
Recreation	No	The project site does not contain any recreational resources and would not impact any Special Recreation Management Areas (SRMA) or Extensive Recreation Management Area (ERMAs). No further analysis is warranted in this EA.
Socioeconomics	No	There are no identified minority or low-income populations in the study area for the project. No further analysis is warranted in this EA.
Soils	**Yes**	The project may result in soil erosion. This resource is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Special Designations	No	The project site does not occur within any Areas of Critical Environmental Concern (ACEC), National Conservation Lands (NCL), Wilderness Areas or areas managed for wilderness character. The nearest ACEC, NCL, National Monument, and Wilderness Areas include the following: • West Desert and Eastern Slopes NCL located 14.5 miles to the northeast of the project site; • Horse Canyon ACEC located 15 miles to the northeast of the project site; • Cesar E Chavez National Monument is located 20 miles to the north of the project site; and • Bright Star Wilderness located 37 miles to the northeast of the project site. Due to the project's distance from the nearest special land designations, no direct or indirect, or short-term or long-term effects are anticipated for special designations. Thus, no further analysis is warranted in this EA.
Unallocated Lands	No	Unallocated lands are not present at or near the project site. No further analysis is warranted in this EA.
Variance Lands	No	Variance lands are not present at or near the project site. No further analysis is warranted in this EA.
Visual Resources	**Yes**	The project could affect scenic vistas or other public views from the Pacific Crest Trail. This resource is further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Wetlands / Riparian Zones	No	No wetlands or riparian zones are at or near the project site. No further analysis is warranted in this EA.
Wild and Scenic Rivers	No	No wild and scenic rivers are identified in or adjacent to the project area. No further analysis is warranted in this EA.
Water Resources	**Yes**	The project may result in erosion, sedimentation, and may also affect water quality if an accidental release of hazardous materials occurred. The project also has the potential to decrease groundwater supplies. These environmental factors are further analyzed in Section 1.5, *Environmental Consequences of the Proposed Action*.
Wild Horses and Burros	No	The project is not proposed, nor would be located, within any Herd Areas or Herd Management Areas for wild horses and burros. No further analysis is warranted in this EA.

1.3 Proposed Action and Alternatives

Alternative A – Proposed Action

The project would include the development of a solar facility and associated infrastructure with the capacity to generate a maximum of 44 megawatts (MW) of Solar Photovoltaic energy and energy storage capacity on a total of 383 acres. Lands within the project site include 233 acres of public lands administered by the BLM Ridgecrest Field Office and 150 acres of private land. The project would operate year-round. Project facilities would include solar PV generating facilities and solar modules, an energy storage facility, on-site substation or switchyard, electrical collector system and inverters, and site access and security components. Each is summarized below; further details are provided in Chapter 3.0, *Project Description*, of the EIR/EA.

- **Solar PV Generating Facilities and Solar Modules:** Installation of PV modules with the capacity to generate up to 44 MW of solar-generated electricity. Solar panels would be made of thin film or polycrystalline silicon material covered by glass, mounted on a galvanized metal fixed tilt or single axis racking system, and connected to inverters and to an energy storage facility.
- **Energy Storage Facility:** Installation of an energy storage system and appurtenances that would provide energy storage capacity for the electric grid.
- **On-site Substation or Switchyard:** No on-site substations would be constructed as part of the project. Rather, the project would connect the existing Manzana Project and Whirlwind substations with minor on-site modifications to add circuit breakers, disconnect switches, metering and protection equipment, main step-up transformers, and other electrical equipment.
- **Electrical Collector System and Inverters:** Underground medium voltage (34.5 kilovolt [kV]) collection systems throughout the solar facility and overhead medium voltage collection systems. The collection systems would be aggregated at multiple circuit breakers or medium voltage switchgear positions within the project facilities, leading to the Manzana Project Substation. A new, approximately 0.75-mile-long, underground 34.5 kV collector line would be constructed on private land between the Camino Solar site and the existing Manzana Project substation. A single riser pole would connect the line to the existing aboveground Manzana Project transmission line at the interconnection with the substation. At the Manzana Project substation, transformers would increase the project-generated energy from 34.5 kV to 230 kV. The energy then would be transferred to the existing Whirlwind Substation using the Manzana Project's 230 kV generation tie (gen-tie) line.
- **Site Access and Security:** On-site access roads and perimeter security fencing and nighttime directional lighting.

Typical Operations and Maintenance (O&M) activities that would occur on the project site during operation include, but are not limited to: liaison and remote monitoring; administration and reporting; semi-annual and annual services; remote operations of inverters; site security and management; additional communication protocol; repair and maintenance of solar facilities, substations, electrical transmission lines, and other project facilities; and periodic panel washing. The existing O&M facility and staff for the Manzana Wind facility would be utilized for the project by the project proponent. Up to three additional staff may be required to operate and maintain the project. The existing O&M facility is located at the southern edge of the project (see Figure 3-2, *Project Site*, of the EIR/EA).

The project has an anticipated operational life of up to 35 years, after which the project proponent may choose to update site technology and re-commission, or decommission and remove the systems and their components and restore the site.

Alternative B – Reduced Acreage Alternative

Alternative B, the Reduced Acreage Alternative, would reduce the project acreage by avoiding an area of the project site that contains California Juniper Woodland. This area is located within the northwest portion of the project site and would reduce the project's footprint from 383 acres to 378.6 acres (see Figure 6-1, *Reduced Acreage Alternative*, in Chapter 6, *Alternatives*, of the EIR/EA). All project facilities would remain in the same locations as proposed under the project, including the 34.5 kV collector line, which would still be constructed on private land between the Camino Solar site and the Manzana Project substation. The energy would be transferred to the Whirlwind Substation using the existing Manzana Project 230 kV gen-tie line. The acreage of this alternative is expected to retain enough land to construct a solar array field capable of generating 44 MW, which is the same generation output estimated for the project.

Alternative C – No Action Alternative

Under the No Action Alternative, none of the proposed infrastructure would be constructed, none of the proposed operation and maintenance activities would take place, decommissioning-related disturbance and other activities would not occur, and existing site conditions would remain unchanged by project development or operation.

Alternatives Considered but Eliminated from Further Analysis

Alternatives considered but eliminated from further analysis are discussed in Section 6.5 of the EIR/EA. In addition, no further analysis is provided for the following alternatives, which were selected for further consideration by Kern County for purposes of CEQA.

- Alternative 2: General Plan/Specific Plan and Zoning Build-Out Alternative
- Alternative 4: No Ground-Mounted Utility-Solar Development Alternative – Distributed Commercial and Industrial Rooftop Solar Only

BLM decided not to further analyze Alternative 2: General Plan/Specific Plan and Zoning Build-Out Alternative because this alternative would solely apply to private lands under the jurisdiction of Kern County. The BLM-administered portion of the project site would remain a renewable energy development project. This is because the project site is located in a Development Focus Area (DFA) as designated by the Desert Renewable Energy Conservation Area Plan (DRECP). Further details about the DRECP are provided in Section 1.4, *Land Use Plan Conformance and Relationships to Statutes, Regulations and Other Plans*. According to the DRECP, DFAs are available for solar, wind, and/or geothermal development.

Alternative 4: No Ground-Mounted Utility-Solar Development Alternative – Distributed Commercial and Industrial Rooftop Solar Only was not carried forward for further analysis in this EA analysis because BLM has no authority over the installation of distributed generation systems, other than on its own facilities.

Therefore, BLM would have no action to approve or evaluate under this alternative scenario as described in Chapter 6, *Alternatives*, of the EIR/EA.

1.4 Land Use Plan Conformance and Relationships to Statutes, Regulations and Other Plans

Applicable BLM land use plans for the project include the California Desert Conservation Area (CDCA) Plan of 1980, as amended. The latest amendment to the CDCA Plan (DRECP) was approved in September 2016. The plan amendment balances land conservation and outdoor recreation with the growing demand for renewable energy, including identifying requisite Conservation and Management Actions (CMAs). The project site is located within a DFA. The project would comply with all applicable statutes and regulations and all applicable DRECP CMAs. For a consistency analysis of the project relative to the DRECP's CMAs, see Appendix M-2.

1.5 Environmental Consequences of the Proposed Action

This section presents a concise assessment of the potential direct, indirect, and cumulative impacts of the project relative to the issues warranting further analysis identified in Section 1.2, *Issues*. For a detailed analysis of potential direct, indirect, and cumulative impacts of the project to all applicable issues identified in Table 1-1, *Issues*, see Chapter 4 of the EIR/EA. Cumulative projects considered as part of the provided analysis are listed in Chapter 3, *Project Description*, Table 3-5, *Cumulative Projects List*, of the EIR/EA, and include nine solar projects and eight non-solar project. The impact analysis for these issues considers the full implementation of all applicable CMAs in conformance with the DRECP described above. Appendix M-1 contains the full text of all required mitigation measures discussed in this EA.

Air Resources

Information in this section is based, in part, on the project's air quality technical report, Air Quality and Greenhouse Gas Impact Analysis for the Proposed Camino Solar Project (Ambient 2017) located in Appendix C of the EIR/EA.

Applicable Laws, Regulations, Plans, and Standards

All laws, regulations, plans and standards that govern air resources are identified in Section 4.3, *Air Quality*, Subsection 4.3.3, *General Conformity*, of the EIR/EA, and are summarized here. The federal Clean Air Act, Section 176 requires federal agencies that are funding, permitting, or approving an activity to ensure the activity conforms to the applicable State Implementation Plan (SIP) adopted to eliminate or reduce air quality violations (42 U.S.C. § 7506). Pursuant to the 1990 Federal Clean Air Act Amendments, the United States Environmental Protection Agency (EPA) passed federal conformity rules to ensure that air pollutant emissions associated with federally-approved or funded activities do not exceed emission budgets established in the applicable SIP and do not otherwise interfere with the state's ability to attain and maintain

the federal Ambient Air Quality Standards in areas working to attain or maintain the standards. The General Conformity rule applies to all non-transportation related projects. A detailed determination of the applicability of the General Conformity rule is required pursuant to 40 CFR Part 51, Subpart W, when federal actions or funding of non-transportation related activities in non-attainment areas result in emissions that exceed *de minimis* threshold levels applicable to the specific non-attainment class (EPA, 2010).

The project is located in a serious federal non-attainment area for ozone (EKAPCD 2018), and therefore the project and alternatives would be subject to the general conformity regulations if their emissions of ozone precursors (reactive organic gases [ROG] and nitrogen oxide [NO_x]) exceed *de minimis* levels of 50 tons per year for ROG and 50 tons per year for NO_x. Implementation of the project would have a direct adverse effect on air quality if proposed activities would result in emissions equal to or in excess of the General Conformity *de minimis* levels for non-attainment pollutants.

In addition, General Conformity *de minimis* levels can also be used as conservative NEPA thresholds for determining if project-related attainment pollutants would have an adverse effect on air quality. The total annual emissions of attainment pollutants from construction activities would be compared against the minimum *de minimis* levels of these pollutants, i.e., 100 tons/year for moderate non-attainment (USEPA 2018). Actions with the potential to generate emissions exceeding these thresholds would have an adverse effect on air quality.

Affected Environment

The project site is located in the northwestern portion of the Mojave Desert Air Basin (MDAB), under the jurisdiction of Eastern Kern Air Pollution Control District (EKAPCD). The MDAB is classified as nonattainment for the federal 8-hour O_3 standard.

Environmental Consequences

Alternative A – Proposed Action: The project is located in a serious non-attainment area for ozone (EKAPCD 2018); therefore, the project and alternatives would be subject to the general conformity regulations if emissions of ozone precursors exceed *de minimis* levels of 50 tons per year for ROG and 50 tons per year for NO_x. Table 1-2, *Estimated Annual Project Emissions*, shows the estimated annual project emissions of ozone precursors (ROG and NO_x) that are projected to be generated by the project.

TABLE 1-2: ESTIMATED ANNUAL PROJECT EMISSIONS

Source	Estimated Annual Emissions (tons/year)					
	ROG	**NO_x**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Annual Construction Emissions	1.3	10.9	8.2	0.0	23.2	2.8
Annual Operation Emissions	0.1	0.6	0.5	0.0	0.8	0.1
General Conformity *de minimis* Levels	50	50	100	100	100	100
Exceed *de minimis* Levels?	No	No	No	No	No	No

SOURCE: AMBIENT 2017; USEPA 2018

As shown in Table 1-2, *Estimated Annual Project Emissions*, ROG and NO_x emissions generated by project-related construction and operation activities would not exceed the applicable General Conformity *de minimis* levels of these non-attainment pollutants. Therefore, the project would conform to the SIP and would not have a substantial adverse effect on air quality under NEPA, and the BLM is exempt from performing a conformity determination. In addition, project emissions of attainment or maintenance area pollutants, shown in Table 4.3-4, *Cumulative Construction Emissions Near Project*, in Section 4.3, *Air Quality*, of the EIR/EA, would not exceed *de minimis* levels of 100 tons/year for these attainment or maintenance area pollutants. Therefore, project emissions are not expected to significantly affect air quality. Mitigation Measures MM 4.3-1 and MM 4.3-2 would further reduce project emissions.

During project construction, decommissioning and restoration, it is possible that on-site workers could be exposed to Valley Fever as fugitive dust (i.e., particulate matter [PM_{10} and $PM_{2.5}$]) is generated during construction. The initial, or acute, form of Valley Fever often is mild, with few, if any, symptoms. The initial infection (if it does not completely resolve) may progress to a chronic form of pneumonia. Valley Fever is rarely fatal. The risk of contracting Valley Fever can effectively be managed by dust control. Dust minimizing mitigation such as diesel construction equipment maintenance and standards, maintaining natural vegetation where possible, application of water, application of dust suppressants and requiring financial contribution to Valley Fever public awareness programs would be implemented pursuant to Mitigation Measures MM 4.3-1 through MM 4.3-4 and would substantially reduce potential exposure to the fungus within the soil as compared to full grading/blading of the site. Additionally, implementation of dust control measures throughout the construction period, compliant to EKAPCD rules and regulations to reduce fugitive dust emissions, would also limit the exposure of both on-site workers and members of the public. In addition, when exposure to dust is unavoidable, employers must provide National Institute of Occupational Safety and Health (NIOSH)-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or high-efficiency particulate arrestance (HEPA), and employers must develop and implement a respiratory protection program in accordance with California's Occupational Safety & Health Administration (Cal/OSHA)'s Respiratory Protection standard (8 CCR 5144). Also, implementation of Mitigation Measure MM 4.3-3 would further reduce the potential for worker exposure by requiring respiratory protection and other work safety protocols to reduce exposure to Valley Fever.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. Since Alternative B would construct approximately the same sized solar array field as the project, it is expected that Alternative B would generate approximately the same quantities pollutant emissions as Alternative A, and air quality impacts would therefore be substantially the same.

Alternative B would generate approximately the same quantities of annual pollutant emissions as Alternative A, as shown in Table 1-2, *Estimated Annual Project Emissions*. Therefore, nonattainment emissions of ROG and NO_x, generated by Alternative B-related construction and operation activities would not exceed the General Conformity *de minimis* levels. Therefore, Alternative B would conform to the SIP and the BLM would be exempt from the requirement to perform a conformity determination. In addition, Alternative B-related construction and operation activities, would not exceed *de minimis* levels of 100 tons/year for these attainment pollutants. Therefore, project emissions under Alternative B would not be expected to result, either directly or indirectly, in a substantial adverse effect on air quality. Mitigation Measures MM 4.3-1 and MM 4.3-2 would further reduce Alternative B emissions.

Alternative B would also have substantially the same potential for Valley Fever impacts as the project. Implementation of Mitigation Measures MM 4.3-3 and MM 4.3-4 would further reduce the potential for worker exposure to Valley Fever.

Alternative C – No Action Alternative: Under the No Action Alternative, the project site would remain undeveloped and there would be no construction, operation and maintenance, decommissioning or restoration activities that would generate air emissions or expose individuals to Valley Fever spores. Therefore, there would be no impacts to air resources.

Cumulative Impacts

Alternative A – Proposed Action: The geographic scope for potential cumulative air quality impacts consists of the air basin for the project: the MDAB. The temporal scope includes the approximately 35-year period including the construction, operation, maintenance, decommissioning or restoration phases of the project. Regionally, as indicated in Table 1-2, *Estimated Annual Project Emissions*, the non-attainment pollutant emissions of ROG and NO_x that would be generated by project-related activities would not exceed *de minimis* thresholds for the MDAB. Therefore, the project would conform to the SIP for nonattainment pollutants and would not require a formal conformity determination in compliance with Section 176(c) of the Clean Air Act.

Cumulative impacts resulting from the project, in conjunction with the ongoing impacts of past projects (as reflected in the description of the affected environment in Chapter 3, *Project Description*, Section 3.9, *Cumulative Projects*, of the EIR/EA) and the impacts from other present and reasonably foreseeable future projects (see Table 3-5, *Cumulative Projects List*, of the EIR/EA) would occur. However, due to the temporary nature of construction and decommissioning/restoration emissions and relatively minor amount of overall project emissions, the incremental impacts of the project in conjunction with other projects in the cumulative scenario would not result in a substantial short- or long-term adverse impact on air quality conditions in the MDAB. Locally, the implementation of fugitive dust control measures on the project site would ensure that PM_{10} and $PM_{2.5}$ emissions from on-site activities would not meaningfully contribute to the generation of emissions in the MDAB. With these measures, dust caused by project activities would be confined to the project site areas and would not cumulatively interact with dust generated from other projects farther away.

Alternative B – Reduced Acreage Alternative: Cumulative air resources impacts for Alternative B would be substantially the same as described for Alternative A, since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A). Therefore, Alternative B would not cause or contribute to a substantial cumulative short- or long-term adverse impact on air quality conditions in the MDAB.

Alternative C – No Action Alternative: The No Action Alternative would not generate emissions, and so would not cause or contribute to any cumulative impact to air resources.

Residual Effects

No anticipated residual impacts would remain after the implementation of mitigation measures recommended to address Alternative A or Alternative B-specific impacts. No additional mitigation measures are recommended.

Biological Resources

The analysis presented in this section is based on a review of relevant literature (see Section 4.4, *Biological Resources*, Subsection 4.4.1, *Introduction*, of the EIR/EA), and the field reconnaissance surveys and focused biological surveys presented in the 2018 Biological Resources Technical Report (BRTR) prepared for this project. A full copy of the BRTR is provided in Appendix D of the EIR/EA.

Applicable Laws, Regulations, Plans, and Standards

The laws, regulations, plans and standards that are applicable to this analysis of impacts to biological resources are identified in Section 4.4, *Biological Resources*, Subsection 4.4.3, *Regulatory Setting*, of the EIR/EA.

Affected Environment

Special-Status Plant Species

Special-status[1] plant species that are present or have a moderate or high potential to occur in the project site include the following: short-bracted bird's-beak (*Cordylanthus rigidus* ssp. *brevibracteatus*) (CRPR 4.2), Mt. Pinos larkspur (*Delphinium parryi* ssp. *purpureum*) (CRPR 4.3), Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii*) (CRPR 1B.2), Latimer's woodland-gilia (*Saltugilia latimeri*) (CRPR 1B.2, BLMS), Lemmon's syntrichopappus (*Syntrichopappus lemmonii*) (CRPR 4.3), Joshua tree (*Yucca brevifolia*) (proposed for listing as "threatened" pursuant to the Federal Endangered Species Act [FESA] [FT]), silver cholla (*Cylindropuntia echinocarpa*) (CDNPA), and beavertail cactus (*Opuntia basilaris* var. *basilaris*) (CDNPA), based on the vegetation and habitats that were characterized during field surveys.

Special-Status Wildlife Species

The federally and state threatened desert tortoise (*Gopherus agassizii*) has not been recorded at the project site after multiple years of protocol-level surveys, or during protocol surveys at adjacent sites making it Not Likely to Occur on the project site. This is further supported by email correspondence from BLM and the USFWS stating that desert tortoise is considered absent from the project site.

The federally-protected, BLM Sensitive, and CDFW fully-protected golden eagle has been observed flying over the project site. The project site provides suitable foraging habitat but there is no suitable habitat for nesting.

[1] Special-status, for purposes of this EA, includes: Species listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the California Endangered Species Act (Fish and Game Code §§ 2050-2116, CESA) or federal Endangered Species Act (16 U.S. Code Ch. 35, FESA); species protected under the federal Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668-668c); species that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA Guidelines § 15380); plants listed as rare under the California Native Plant Protection Act (Fish and Game Code § 1900 et seq.); plants considered by the California Native Plant Society to be rare, threatened, or endangered in California (California Rare Plant Rank [CRPR]); BLM Sensitive Species (All plant species that are CRPR 1B are considered BLM sensitive species, along with others that have been designated by the California State Director); species covered under an adopted Natural Community Conservation Plan/Habitat Conservation Plan; CDFW wildlife species of special concern; wildlife fully protected in California (Fish and Game Code § 3511, 4700, 5050); and plants covered under the California Desert Native Plants Act (CDNPA).

Other BLM Sensitive species that are present or have a moderate or high potential to occur on the project site include the coast horned lizard (*Phrynosoma blainvillii*), Swainson's hawk (*Buteo swainsoni*) burrowing owl (*Athene cunicularia*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), and San Joaquin pocket mouse (*Perognathus inornatus*). Other species of concern present include Crotch bumble bee (*Bombus crotchii*), Comstock's blue butterfly (*Euphilotes battoides comstocki*), northern California legless lizard (*Anniella pulchra*), loggerhead shrike (*Lanius ludovicianus)*, southern grasshopper mouse (*Onychomys torridus ramona*), Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*), American badger (*Taxidea taxus*), and desert kit fox (*Vulpes marcrotis arsipu*s).

Migratory Birds

Nesting and foraging habitat for birds protected under the Migratory Bird Treaty Act (16 U.S.C. § 703-712) occur within the project site.

Jurisdictional Waters

Four linear drainages potentially subject to the jurisdiction of CDFW under Fish and Game Code Section 1600 et seq., and the Lahontan Regional Water Quality Control Board (RWQCB) under Clean Water Act Section 401 and/or the Porter-Cologne Water Quality Control Act (Water Code § 13000 et seq.) were found during the jurisdiction delineation. No waters potentially subject to the jurisdiction of the U.S. Army Corps of Engineers under Clean Water Act Section 404 were identified on the project site as a result of the jurisdictional delineation.

Sensitive Natural Communities

The project site contains two sensitive natural communities: Joshua tree woodland and scale broom scrub. Joshua tree woodland is considered a sensitive natural community by CDFW. All impacts to this sensitive natural community must be avoided to the maximum extent practicable except for minor incursions as specified in the DRECP CMA LUPA-BIO-SVF-5 (see Appendix M-2). Scale broom scrub has a state rarity rank of S3, making it a CDFW sensitive natural community. Scale broom scrub, a subset of the NVC macrogroup Madrean Warm Semi-Desert Wash Woodland/Scrub, does not occur at the project site, but was mapped bordering the eastern edge of the project site. This sensitive natural community has a 200-foot setback specified in the DRECP CMA LUPA-BIO-RIPWET-1 (see Appendix M-2) and "will be avoided to the maximum extent practicable, except for allowable minor incursions."

Wildlife Movement and Habitat linkages

The project site does not intersect any known habitat linkages or wildlife movement areas.

California Desert Conservation Plan

Biological resources on BLM lands within the project site are managed under the CDCA Plan of 1980, as amended, including the DRECP. Section 4.4, *Biological Resources*, Subsection 4.4.2, *Environmental Setting*, of the EIR/EA, contains additional details about the affected environment.

Environmental Consequences

The following is a summary of environmental consequences that may result from implementation of the Alternatives. Section 4.4, *Biological Resources*, Subsection 4.4.4, *Impacts and Mitigation Measures*, of the EIR/EA, contains additional details about the environmental consequences.

Alternative A – Proposed Action: The project could result in adverse effects to the following California Rare Plant Rank (CRPR) and/or BLM Sensitive plant species: Robbins' nemacladus, short-bracted bird's-beak, Mt. Pinos larkspur, Latimer's woodland-gilia, Lemmon's syntrichopappus, Joshua tree, silver cholla, and beavertail cactus. Direct adverse effects could include mortality of individuals as a result of permanent removal or damage to root structures during the construction phase of the project through activities like clearing vegetation and removal of suitable habitat. Indirect impacts may include construction-generated dust and sedimentation into adjacent habitat supporting these plants that may affect photosynthetic uptake processes as a result of dust covering leaves, water uptake processes as a result of sedimentation around individual plants and their habitat. Implementation of Mitigation Measures MM 4.4-1 and MM 4.4-2 would substantially reduce direct adverse effects to special-status plant species by requiring that a qualified biologist determine presence or absence of these plant species prior to disturbance and establishing avoidance areas or other minimization/mitigation requirements if they are determined to be present. Joshua trees are present on site and to mitigate for unavoidable adverse effects, Mitigation Measure MM 4.4-3 outlines a Joshua Tree Impact Plan. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-3 would insure that substantial adverse effects would not occur to special-status plant species.

The project could result in an adverse effect to the following federally listed and BLM Sensitive wildlife species: golden eagle, California condor, burrowing owl, and Swainson's hawk. Direct adverse effects include mortality, displacement, foraging habitat loss, and burrow or nest loss. Golden eagle and California Condor would be subjected to potential foraging loss only. Indirect adverse effects include alteration of hydrology, increased noise, lighting, and degradation of habitat. To avoid and minimize adverse effects to these species during project activities, Mitigation Measures MM 4.4-5 through MM 4.4-10, MM 4.7-4, MM 4.9-2, which include biological monitoring, worker training, best management practices (BMPs) to minimize soil erosion, preconstruction surveys including focused surveys for burrowing owl and Swainson's hawk, nest surveys and avoidance, den/burrow avoidance and relocation, and non-toxic herbicide application are recommended. Additionally, during the O&M phase of the project, implementation of Mitigation Measures MM 4.4-9 and MM 4.1-4, detailing avian nesting surveys, 300-foot no-disturbance buffers, and lighting conditions, would reduce adverse lighting effects to wildlife species. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-10 as well as MM 4.1-4, MM 4.7-4 and MM 4.9-2 would insure that substantial adverse effects would not occur to special-status wildlife species.

The project could result in construction-related adverse effects to nesting birds protected under the MBTA. The removal of vegetation associated with grading or grubbing may result in direct impacts to nests, eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Mitigation Measure MM 4.4-9 requires conducting a pre-construction nesting bird survey if work is scheduled to occur during the nesting season and halt activities that could disturb known nests. Mitigation Measure MM 4.4-9 would substantially reduce impacts to nesting birds.

The project could result in adverse effects to two sensitive natural communities: Joshua tree woodland and scale broom scrub. Implementation of Mitigation Measures MM 4.4-3 and MM 4.4-11, which require a

Joshua Tree Impact Plan and scale broom scrub avoidance have been prescribed to reduce adverse effects on these sensitive natural communities.

The project could cause adverse effects to waters under the jurisdiction of RWQCB, and CDFW. In accordance with Mitigation Measure MM 4.4-12, the project would identify and avoid all ephemeral drainages. Under Mitigation Measure MM 4.4-13, if avoidance of the ephemeral drainages is infeasible, then the project would obtain permits from, RWQCB, and CDFW as applicable. In addition, the implementation of Mitigation Measure MM 4.7-4 would prevent construction site runoff from entering wetlands and other waters through erosion and sediment control measures. With implementation of Mitigation Measures MM 4.4-12, MM 4.4-13, and MM 4.7-4, there would be no substantial adverse effects to jurisdictional waters.

The project would not result in adverse effects on wildlife movement and habitat linkages because the project site is not located within a known wildlife migratory corridor or a wildlife connectivity area, connecting large open space areas throughout the region or locally, as mapped by the California Essential Habitat Connectivity Project. Although the project would introduce structures to the project site that would physically impede wildlife movement in certain areas and directions, the wind energy projects in the area of the project, as well as the areas to the south, which are mainly native plant communities with scattered unpaved roads and residences, provide for largely unrestricted wildlife movements through natural or semi-natural habitats. Therefore, project features that would restrict wildlife movement represent a very small fraction of area available for wildlife movement in the surrounding area.

With Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-3, MM 4.4-5 through MM 4.4-13 as well as MM 4.1-4, MM 4.7-4 and MM 4.9-2, substantial indirect adverse effects would not occur to special-status plant or wildlife species. The project would comply with all applicable biological resources-related CMAs in the DRECP (see Appendix M-2).

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. While California Juniper Woodland is a native plant community, it is not a sensitive natural community and avoidance is not required by any state, federal, or local plans, policies, or regulations. No other impacts to biological resources would be avoided or reduced by this alternative. Therefore, Alternative B's impacts to biological resources are expected to be substantially the same as identified for Alternative A. All mitigation measures discussed for Alternative A would apply to Alternative B.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no impacts to biological resources.

Cumulative Impacts

Alternative A – Proposed Action: The geographic scope for cumulative impacts to special-status species is encompassed by the planning area boundaries for the DRECP. The project could contribute to potential cumulative impacts to biological resources from the onset of onsite activities through and including completion of project decommissioning and site restoration. Following the implementation of identified mitigation measures, the project would result in incremental impacts to special-status plant species, special-status wildlife species, migratory birds, sensitive natural communities, and jurisdictional waters. Incremental impacts to special-status plant and wildlife species would result from direct destruction of special-status plants and wildlife habitats within work areas as well as unavoidable displacement of wildlife.

These impacts have already been reduced to the maximum extent feasible and habitat loss effects are mitigated through provision of mitigation measures prescribed for the project. Incremental and cumulative effects to special-status plants and wildlife are further reduced by area-wide conservation management plans, including the DRECP, that designate areas for the preservation and protection of habitats similar to those impacted by the project in order to sustain viable populations of special-status plant and wildlife species. All cumulative projects subject to the DRECP are required to comply with all DRECP CMAs. The purpose of the DRECP is to provide effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects within the DRECP planning area boundaries. Therefore, compliance with the DRECP and prescribed mitigation measures would substantially limit the project's contribution to cumulative impacts.

Alternative B – Reduced Acreage Alternative: Cumulative impacts for Alternative B would be substantially the same as described for Alternative A, since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A).

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no impacts to biological resources. Therefore, Alternative C would not cause or contribute to any cumulative biological impacts.

Residual Effects

Implementation of all applicable DRECP CMAs and prescribed mitigation measures would substantially offset potential direct, indirect, and cumulative impacts on biological resources. No substantial residual adverse effects would remain after implementation of the DRECP CMAs and mitigation measures.

Cultural Resources

This section is based in part on information provided in the August 2017, Cultural Resources Survey Report for the Camino Solar Project prepared by SWCA Environmental Consultants. A full copy of the report is provided in Appendix E.

Applicable Laws, Regulations, Plans, and Standards

Laws, regulations, plans and standards applicable to cultural resources are identified in Section 4.5, *Cultural Resources*, Subsection 4.5.3, *Regulatory Setting*, of the EIR/EA.

Affected Environment

Section 4.5, *Cultural Resources*, Subsection 4.5.2, *Environmental Setting*, of the EIR/EA, provides a detailed discussion of the affected environment. Briefly, the cultural resources study identified two isolated artifacts (one historic-period and one prehistoric) within the project site. The historic-period isolate is a hole-in-top food can that dates from the early 1900s to 1940 and likely contained evaporated milk. The prehistoric isolate is a modified chert flake with cortex on both sides. No historic-period architectural resources were identified. Additionally, the cultural resources study indicated that ground surface visibility was excellent during the field survey, and while there is a possibility for buried and currently undocumented archaeological resources within the project site, deep burial of archaeological resources is highly unlikely, and the absence of surficial artifacts strongly indicates a low potential for buried archaeological resources (SWCA 2017).

As documented in the cultural resources study (SWCA 2017), a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) was not conducted for the project. However, previous recent projects that surround the current project site included SLF searches which yielded negative results for Native American sacred sites (SWCA 2017).

Tribal consultation with five Tribes and two federally unrecognized Indian communities specifically for the Camino Photo-voltaic Solar Project was initiated by the BLM in January 2016, with additional consultation conducted in September 2019. The outreach provided basic information about the proposed project and copies of the negative finding cultural resources investigation report for Tribal review and comment. There were no follow up contacts from the Tribes resulting from the 2016 consultation request nor has anything further has been offered by the recent consultation. BLM had previously consulted with these same Tribes regarding the previous Tylerhorse Wind Energy Project during 2009-2011, also with negative findings.

The Tribes consulted by the BLM for this proposed project are: Bishop Paiute Tribe, Big Pine Tribe of the Owens Valley, Fort Independence Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, and the Timbisha Shoshone Tribe. The two tribal communities in eastern Kern County are: Kern Valley Indian Council and the Tubatulabals of Kern Valley.

Environmental Consequences

Alternative A – Proposed Action: Section 4.5, *Cultural Resources*, Subsection 4.5.4, *Impacts and Mitigation Measures*, of the EIR/EA, contains additional details about the environmental consequences of the project; key findings are summarized here. The project would involve ground disturbance in the form of grading, excavation, and other activities. Such ground-disturbing activity has the potential to directly impact cultural resources. Impacts to historic properties (cultural resources determined or treated as eligible for the National Register) would constitute a significant impact if the impact impairs, alters, or destroys those characteristics that contribute to the resource's eligibility. Two isolated artifacts were identified within the project site, one historic-period and one prehistoric. Given their lack of context and association, isolated artifacts generally are not considered eligible for the National Register. Therefore, no historic properties occur within the project site and the project would not have a significant impact on known cultural resources.

While no historic properties were identified, ground-disturbing activities associated with the project do have the potential to encounter undocumented archaeological resources that could qualify as historic properties. However, the potential for buried archaeological resources is low (SWCA 2017). In the unlikely event that unknown archaeological resources qualifying as historic properties are discovered during project construction, significant impacts to these resources could occur. Mitigation Measures MM 4.5-1 and MM 4.5-2 would require cultural resources sensitivity training for construction workers and appropriate treatment of unearthed archaeological resources during construction. With the implementation of mitigation, substantial impacts to cultural resources would not occur.

There is no indication, either from the archival research or the cultural resources survey for the project, that any particular location within the project site has been used for purposes of human burial in the recent or distant past. However, in the unlikely event that human remains are discovered during project construction activities, the remains could be inadvertently damaged. Implementation of Mitigation Measure MM 4.5-3 and compliance with appropriate federal and state law would ensure that any human remains encountered are appropriately addressed.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. Since Alternative B would construct approximately the same sized solar array field as the project, impacts to cultural resources would be substantially similar (but slightly reduced) relative to Alternative A. Given the slight reduction in ground disturbance under Alternative B, there would be a slightly lower possibility of encountering buried archaeological resources. All mitigation measures discussed for Alternative A would apply to Alternative B.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no impacts to cultural resources.

Cumulative Impacts

Alternative A – Proposed Action: The geographic scope for cumulative effects to cultural resources includes northcentral portion of the Antelope Valley, in the western Mojave Desert. This geographic scope of analysis is appropriate because the archaeological and historical resources within this area are expected to be similar to those that occur on the project site because of their proximity, and because similar environments, landforms, and hydrology would result in similar land use and, thus, site types. Cumulative impacts to cultural resources could occur at any time when the project results in disturbance of the ground surface. Because no historic properties, archaeological resources unique to the region, or other significant cultural resources have been identified within the project site, the project would not cause or contribute to a substantial short- or long-term adverse impacts to known resources. Further, regulatory requirements and mitigation measures included in this EA would reduce potential impacts to any cultural resources that inadvertently may be encountered during project implementation. Implementation of Mitigation Measure MM 4.5-1 requires cultural resources sensitivity training for construction workers. Mitigation Measure MM 4.5-2 requires appropriate treatment of uncovered archaeological resources. Although project-related ground disturbance has the potential to disturb human remains, the implementation of Mitigation Measure MM 4.5-3, as well compliance with appropriate federal and state legislation, would ensure the appropriate protocol is followed with regard to identifying and handling remains. With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-3, the project would not contribute to any substantial adverse cumulative impacts to cultural resources.

Alternative B – Reduced Acreage Alternative: Cumulative impacts to cultural resources under alternative B would be substantially similar (but slightly reduced) relative to Alternative A, since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A) and, therefore, there would be a slightly lower possibility of encountering buried archaeological resources.

Alternative C – No Action Alternative: The No Action Alternative would not change baseline conditions and so would not cause or contribute to any cumulative impacts to cultural resources.

Residual Effects

Implementation of proposed mitigation measures would substantially offset impacts on cultural resources. Following their implementation, no substantial residual adverse effects would remain.

Greenhouse Gas Emissions

Information in this section is based in part on the January 2019 Air Quality and Greenhouse Gas (GHG) Impact Analysis prepared for the project by Ambient Air Quality and Noise Consulting. A full copy of the report is located in Appendix C.

Applicable Laws, Regulations, Plans, and Standards

GHGs have different global warming potentials (GWP) (i.e., the amount of heat trapped by a certain mass of a GHG) and, because CO_2 is the most common GHG (GWP of 1), GHG emissions are quantified and reported as CO_2 equivalents (CO_2e). Independent of NEPA, but pursuant to 40 CFR Part 98 (the Mandatory Reporting of Greenhouse Gases Rule), USEPA requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 (metric tons) MT of CO_2e emissions per year (USEPA 2013a). Consistent with this requirement, this analysis compares the estimated GHG emissions for the project and alternatives to the federal GHG mandatory emissions reporting threshold of 25,000 MT per year to determine whether the GHG emissions could contribute substantially to global climate change.

Agencies within the Department of the Interior are required by Secretarial Order No. 3289 to consider potential impacts associated with climate change, including potential changes in flood risk, water supply, sea-level rise, wildlife habitat and migratory patterns, invasion of exotic species, and potential increases in wildfires (U.S. Secretary of the Interior 2009). Climate change is expected to result in additional potential changes that could affect the human and natural environment that are relevant to the project. The potential effect of climate change on the project is discussed qualitatively.

Additional laws, regulations, plans and standards that are applicable to GHG emissions are identified in Section 4.8 *Greenhouse Gas Emissions*, Subsection 4.8.3, *Regulatory Setting*, of the EIR/EA.

Affected Environment

GHG emissions have the potential to adversely affect the quality of the human environment on a cumulative basis, for example by contributing to global climate change, which potentially affects sea-level rise (coastal flooding) resiliency, rainfall and snowfall (changes in water supply and runoff), and temperatures and habitats (biological and agricultural resources). Because of the nature of environmental consequences from GHGs on global climate change, NEPA requires lead agencies to evaluate the cumulative impacts of GHGs on a global basis.

Traditional sources of electricity, e.g., fossil-fuel-fired power plants, generate GHG emissions of primarily carbon dioxide (CO_2), with smaller amounts of nitrous oxide (N_2O), and methane (CH_4) primarily from unburned natural gas. No industrial, residential, or other emitters of GHGs are currently located or operating at the project site. The ecosystem on-site, made up of plants and soils (including biological soil crusts), provides ongoing natural carbon uptake/sequestration (GHG reduction).

Environmental Consequences

Alternative A – Proposed Action: The project would generate GHG emissions from heavy-duty diesel off-road equipment; trucks used to transport fuel and water, and to deliver materials and equipment to and from the project site and by worker commutes during all phases of the project, and the battery storage

thermal management system during project operations. Indirect GHG emissions associated with proposed water use during construction would also be generated.

The total construction-related CO_2e emissions estimated for the project's 9-month construction period is 1,661 MT CO_2e. When amortized over the 35-year life of the project, this equates to 55 MT CO_2e per year. GHG emissions that would be generated as a result of decommissioning/restoration would be expected to be similar to the emissions estimated for construction because decommissioning/restoration would involve similar equipment and worker trips as proposed during construction. Therefore, the total amortized emissions that would be associated with construction and decommissioning/restoration of the project is 110 MT CO_2e per year. These values do not exceed the NEPA threshold of 25,000 MT CO_2e per year. Therefore, under NEPA, construction of the project would not result, either directly or indirectly, in a substantial adverse effect related to the generation of GHG emissions.

The annual operational emissions would be 122 MT CO_2e. Therefore, the annual operational emissions of 122 MT CO_2e plus the amortized construction and decommissioning/restoration emissions of 110 MT CO_2e per year represent the total annual amortized GHG emissions of 232 MT CO_2e that would be generated by the project. This amount would also not exceed the NEPA threshold of 25,000 MT CO_2e per year. In addition, the amount of carbon savings that would be derived from implementation of the project, as opposed to implementation of a carbon-based power plant, is estimated at 808,115 MT CO_2e per year. Therefore, under NEPA, operation of the project would not result, either directly or indirectly, in a substantial adverse effect related to the generation of GHG emissions.

Climate change is anticipated to affect the frequency and intensity of extreme weather events, including causing large storm events and more severe droughts in western watersheds. The project site and its vicinity could experience an increase in the intensity of high rainfall and flood events, which could result in greater stormwater runoff and flash flooding, and an increase in soil erosion on-site and sedimentation on-site and downstream from the site. Implementation of a stormwater management plan would minimize or avoid the degradation of the project from increased runoff, especially during major storm events.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. Since Alternative B would construct approximately the same sized solar array field as the project, it would generate approximately the same quantities of GHG emissions and would involve the same construction, operation and maintenance, decommissioning and restoration activities as Alternative A.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no GHG impacts.

Cumulative Impacts

Alternative A – Proposed Action: Emissions of GHGs and their contribution to global climate change are considered a cumulative impact by definition. Therefore, the geographic extent of the project's cumulative area of GHG impact would be worldwide. As stated above, the project's annual operational emissions would be 122 MT CO_2e. Therefore, the annual operational emissions of 122 MT CO_2e plus the amortized construction and decommissioning/restoration emissions of 110 MT CO_2e per year represent the total annual amortized GHG emissions of 232 MT CO_2e that would be generated by the project. This amount would not exceed the NEPA threshold of 25,000 MT CO_2e per year. In addition, the amount of carbon

savings that would be derived from implementation of the project, as opposed to implementation of a carbon-based power plant, is estimated at 808,115 MT CO_2e per year. Therefore, under NEPA, operation of the project would not result, either directly or indirectly, in a substantial adverse effect related to the generation of GHG emissions.

In addition to the project's incremental GHG emissions, other cumulative projects in the Indian Wells Valley area listed in Table 3-5, *Cumulative Projects List*, in Chapter 3, *Project Description*, of the EIR/EA, largely consist of utility-scale solar power generation facilities, which would also result in carbon savings derived from implementation of these solar projects, as opposed implementation of a carbon-based power plants.

The project site and immediate vicinity contain only ephemeral drainages and washes, and surface waters occur only during substantial precipitation events, when surface runoff occurs. No perennial streams or other perennial waterways are on-site. The project would not rely on surface water for water supply during construction or operation, but would instead rely on groundwater for water supply during both construction and operation. Climate change is expected to result in some degree of reduction of precipitation, and periods of drought could increase, resulting in an overall reduction in the availability of water in the project area. With reduced precipitation within the project area and its vicinity, some degree of associated reduction in groundwater recharge from rainfall could occur but would is unlikely to be affected by the project because the project's demand would represent a small portion of the established safe yield of the basin.

Alternative B – Reduced Acreage Alternative: Cumulative impacts for Alternative B would be substantially the same as described for Alternative A since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A). Therefore, the level of construction, operation and maintenance, decommissioning and restoration activities would be approximately the same. Therefore, Alternative B would not cause or contribute to a substantial cumulative effect relating to GHG emissions.

Alternative C – No Action Alternative: The No Action Alternative would have no impact relating to GHG emissions since development of a solar project would not occur on the site and existing carbon sequestration would remain unchanged. Accordingly, the No Action Alternative would not cause or contribute to any cumulative impact relating to GHG emissions.

Residual Effects

Because no mitigation measures are required, residual impacts would be the same as direct, indirect, and cumulative impacts.

Paleontological Resources

This section is based in part on information provided in the August 2017 Cultural Resources Survey Report prepared for the project by SWCA Environmental Consultants. A full copy of the report is provided in Appendix E.

Applicable Laws, Regulations, Plans, and Standards

Laws, regulations, plans and standards that are applicable to paleontological resources are identified in Section 4.7, *Geology and Soils*, Subsection 4.7.3, *Regulatory Setting*, of the EIR/EA.

Affected Environment

As depicted and described in SWCA's Cultural Resources Survey Report provided Appendix E, of the EIR/EA. he majority of the project area is mapped as older Quaternary alluvium (Qoa), while a small section at the eastern-most margin is mapped as younger Quaternary alluvium (Qa). Older Quaternary alluvium dates to the Pleistocene (10,000 years–2.6 million years old) and consists of poorly bedded alluvial gravel and sand. Younger Quaternary alluvium dates to the Holocene (recent–10,000 years ago) and consists of alluvial silt, sand, and gravel (SWCA 2017). Older Quaternary alluvial deposits have produced numerous fossil finds throughout the Mojave Desert and are considered to have high sensitivity for paleontological resources. Due to their age, Younger Quaternary alluvium sediments are too young to preserve fossil resources and have low paleontological sensitivity. However, younger Quaternary alluvium sediments typically overlie the highly sensitive older Quaternary alluvium, and so ground-disturbing activities that exceed the depth of the younger sediments are at risk of impacting fossils that may be present in these deeper, sensitive sediments. The depth of the younger Quaternary alluvium has not been determined in the project site.

Environmental Consequences

Alternative A – Proposed Action: A cultural resources assessment was conducted for the project site that included a search of paleontological records (SCWA 2017). The records search conducted by the Natural History Museum of Los Angeles County and a literature review revealed a rich history of fossil finds in the geologic units in and around the project site. While the Young Alluvium found on the eastern portion of the site has a low paleontological sensitivity, the Old Alluvium that covers most of the project site and underlies the Young Alluvium has a record of preserving significant fossil specimens. The literature and map review, as well as the paleontological records search failed to indicate the presence of significant paleontological resources on site; however, geologic units underlying the project have a high paleontological sensitivity with respect to their potential to yield fossil remains. In the Old Alluvium., which is mapped across most of the project site, significant fossils could occur at or near the surface. Any ground disturbance within the project site could result in a potentially significant impact to paleontological resources. Potential impacts to paleontological resources would not be substantial with implementation of Mitigation Measures MM 4.7-5 through MM 4.7-7 because these measures require a paleontological resources awareness training program for all construction personnel, paleontological monitoring during construction, and a protocol for ceasing construction, and avoiding and evaluating paleontological resources if discovered during construction.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. Since Alternative B would construct approximately the same sized solar array field as the project, impacts to paleontological resources would be substantially the same as described for Alternative A. Therefore, construction, operation and maintenance, decommissioning and restoration activities would be the same as Alternative A.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no impact to paleontological resources.

Cumulative Impacts

Alternative A – Proposed Action: The geographic scope for cumulative effects to paleontological resources includes the north-central portion of the Antelope Valley that surrounds the area of the Proposed Action. Given similarities in geologic formations, this area is expected to contain similar types of paleontological resources. The temporal scope is in perpetuity because direct impacts to paleontological resources are permanent. Ground disturbance associated with the project, if not properly mitigated, could impact important paleontological resources. Potential impacts to paleontological resources include the loss of non-recoverable and nonrenewable significant fossils and associated scientific data. However, implementation of Mitigation Measures MM 4.7-5 through MM 4.7-7 will ensure that the project would not cause substantial adverse effects to paleontological resources. Most of the other projects within the cumulative scenario are solar and other renewable energy projects, and so would present similar risks to paleontological resources as the project to the extent they are proposed in areas of paleontological sensitivity. Authorization from the BLM and/or Kern County also would be required to implement the majority of the other potentially cumulative projects and it is reasonable to assume that these decision-making agencies would impose comparable protections on the development of those other projects as are recommended in the Mitigation Measures MM 4.7-5 through MM 4.7-7. With such protections in place, any adverse cumulative impacts to paleontological resources would not be substantial.

Alternative B – Reduced Acreage Alternative: The contribution of Alternative B to cumulative impacts to paleontological resources would be substantially the same as under Alternative A, since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A). Therefore, any adverse cumulative impacts of Alternative B to paleontological resources would not be substantial.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and the project would not contribute to cumulative impacts to paleontological resources.

Residual Effects

Once ground disturbance has been completed at the site, there no longer would be a risk to paleontological resources, and any residual impacts remaining after the implementation of mitigation would be minor.

Soils

This section is based in part on the August 2017, Desktop Geotechnical Investigation prepared for the project by Barr Engineering. A full copy of the report is provided in Appendix G of the EIR/EA.

Applicable Laws, Regulations, Plans, and Standards

Laws, regulations, plans and standards that are applicable to geologic and mineral resources are identified in Sections 4.7, *Geology and Soils*, Subsection 4.7.3, *Regulatory Setting*, and 4.12, *Mineral Resources*, Subsection 4.12.3, *Regulatory Setting*, of the EIR/EA.

Affected Environment

The United States Department of Agriculture (USDA) Soil Conservation Service, National Cooperative Soil Survey classifies soils throughout the country. According to the geotechnical report, the USDA soil units identified on the project site include the Arizo gravelly loamy sand, Cajon loamy sand, Hanford coarse sandy loam and gravelly sandy loam, and Ramona sandy loam (Barr 2017). These soils are well drained or excessively drained loams with moderate to high infiltration rates. As noted above, surficial deposits consist primarily of Quaternary alluvial deposits from coalescing alluvial fans extending out from the upper mountain regions to the north and northwest. The alluvial deposits generally consist of coarse sand, gravel, and cobble alluvial fan deposits that range from tens to hundreds of feet thick in the upper northern region of the site and thicken toward the south (Barr 2017). The alluvium tends to be coarse in drainage channels and areas closer to the mountains that become finer grained away from the channels and at the lower end of the alluvial fans.

Environmental Consequences

Alternative A – Proposed Action: Section 4.7, *Geology and Soils*, Subsection 4.7.4, *Impacts and Mitigation Measures*, of the EIR/EA, contains additional details about the environmental consequences of the project; key findings are summarized here. Site preparation activities for the construction of the project that would disturb surface soils include vegetation and debris removal, grading, excavation and trenching. Ground disturbance during project construction and decommissioning/restoration has the potential to result in substantial impacts related to soil erosion, sedimentation, and discharge of debris from the site if preventative mitigation measures are not implemented. As part of Mitigation Measure MM 4.7-3, grading would be minimized to the maximum extent feasible as part of project design. Project implementation would also be subject to a drainage plan that would minimize the potential for changes in on-site drainage patterns that could increase erosion and sedimentation (See Section 4.10, *Hydrology and Water Quality,* of the EIR/EA for more details). Because project construction would disturb well over an acre of ground, the project operator would also need to conform to the requirements of Kern County's National Pollutant Discharge Elimination System (NPDES) Program through the preparation of a stormwater pollution prevention plan (SWPPP) that would include erosion control and sediment control BMPs designed to prevent disturbed soils from moving off site.

Project operations may include the periodic cleaning of the solar panels with water. However, infrequent water application, the minimal amount of water applied (approximately 5 acre-feet per year) and the site's flat topography is not expected to generate quantities and velocities of runoff sufficient to substantially erode soils. No impacts to erosion are expected to occur during the operational phase of the project. Therefore, implementation of Mitigation Measures MM 4.7-3, and MM 4.7-4 are recommended to minimize erosion to the maximum extent feasible during pre-construction activities, such as grading and disking, and during project construction activities. Impacts during decommissioning/restoration are expected to be the same as anticipated for construction and the same mitigation measures recommended for construction are recommended for project decommissioning/restoration.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. Since Alternative B would construct approximately the same sized solar array field as the project, impacts to soils would be substantially the same as Alternative A. This reduction in site

acreage by approximately 4.4 acres would slightly reduce, but not demonstrably change, the potential for soil erosion impacts to affect the quality of the human environment.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no impacts to soils.

Cumulative Impacts

Alternative A – Proposed Action: The cumulative setting for soil erosion consists of existing, planned, proposed, and reasonably foreseeable land use conditions in the region. Individual projects are required to comply with applicable codes, standards, and permitting requirements (e.g., preparation of a SWPPP) to mitigate erosion impacts. Development of the project site has the potential to contribute to soil erosion and loss of topsoil during project activities. These potential impacts would be mitigated through the implementation of the SWPPP and BMPs during construction and decommissioning/restoration phases and, for the reasons discussed above, would not be substantial during operation and maintenance phase due to site conditions. Impacts associated with erosion are mitigated on a project-by project basis, such that the overall cumulative impact would be minimal. With implementation of Mitigation Measures MM 4.7-1 through MM 4.7-4, the project would not contribute to any cumulative impacts for soils, geologic, seismic hazards or related events. The project would have no impact to mineral resources, and so would not cause or contribute to any cumulative impact in this regard.

Alternative B – Reduced Acreage Alternative: Cumulative impacts for Alternative B would be substantially the same as described for Alternative A, since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A).

Alternative C – No Action Alternative: The No Action Alternative would have no impact relating to soils and would not cause or contribute to any cumulative impacts to this resource.

Residual Effects

Implementation of the SWPPP and BMPs would assure than any remaining residual impact relating soils would be minor.

Visual Resources

Applicable Laws, Regulations, Plans, and Standards

BLM uses Visual Resources Management (VRM) classifications to classify scenery based on the scenic quality, visual sensitivity, and distance zones (the distance from which the landscape is most commonly viewed). Each VRM class is defined by a specific management objective that describes the acceptable level of change to visual resources. Change in the resource is measured though implementation of the contrast rating procedure and by assessing change in visual resource inventory values. Contrast is measured by evaluating basic design elements (form, line, color, and texture) in accordance with the BLM's Handbook H-8431-1 Visual Resource Contrast Rating (BLM 1986). If the contrast rating reveals nonconformance of the Proposed Action or an alternative with assigned VRM class objectives, and mitigation measures are insufficient to bring it into compliance, then the design would need to be modified to the greatest extent

possible to achieve conformance. If a project cannot be mitigated and/or redesigned to meet the VRM class objectives, the application may be denied, or BLM may require the project to be modified or relocated.

According to the DRECP Gateway mapping tool, the project would occupy lands managed per VRM Class IV objectives. VRM Class IV areas are considered to have low visual value. The objective of VRM Class IV is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Affected Environment

The project site is located at the western edge of the Antelope Valley, in the southern central portion of Kern County. The aesthetic features of the Antelope Valley include the southeastern flank of the Tehachapi Mountains, characterized by terrain that gradually slopes form northwest to southeast. Land uses in the area include undeveloped land, residences, grazing, and wind energy farms. The Pacific Crest National Scenic Trail (commonly known as the Pacific Crest Trail or PCT) is located approximately 1 mile west of the project site's western border and approximately 1.8 miles to the north of the project site's northern border. The closest eligible scenic highway to the project site is Angeles Crest Highway (SR 2), which is approximately 46 miles to the south (Caltrans 2019). There is minimal scattered off-site fixed lighting in the project area from nighttime residential and street lighting, as well as blinking lighting from nearby wind turbines. Another minor source of nighttime lighting in the area is passing headlights from motor vehicles.

The project site is located on 383 acres of both privately and publicly owned land that is relatively flat with a gentle slope to the south. The project site is characterized as having native scrub vegetation, along with Joshua tree woodland habitat and non-native grasses (SWCA Environmental Consultants 2018). The nearest residence is approximately 1.2 miles west of the project site. There is one small, partially defined channel within the western portion of the site where an access road and solar arrays are proposed, although the majority of water reaches the project site via sheet flow (Aztec Engineering Group 2016). Portions of the project site are zoned for agriculture and grazing uses and the site has been used for agricultural practices in the past (HDR 2017). For additional details about the affected environment, see Section 4.1, *Aesthetics*, Subsection 4.1.2, *Environmental Setting*, of the EIR/EA.

Environmental Consequences

Alternative A – Proposed Action: Section 4.1, *Aesthetics*, Subsection 4.1.4, *Impacts and Mitigation Measures*, of the EIR/EA, contains all referenced figures showing key observation points (KOPs) and additional details about the environmental consequences of the project; key findings are summarized here. Visual simulations were prepared for the project to determine its effects on existing visual resources. Of the six KOPs that were selected within the project area, the project would only be visible from one location on the PCT, which is a National Scenic Trail (KOP 4), and from an existing intersection (KOP 1). While the project would be visible from KOP 4 along the PCT, the quality of scenic vistas from both of these KOPs is considered moderate to low given the existing solar facilities and wind turbines already visible from those locations. Although the project would add another industrial element to the view from all KOPs, the project's solar facilities would be consistent with the visual character of existing energy development in the area. Additionally, the view of the project from all KOPs would be partially obstructed by existing

wind turbines. Existing topography would block visibility of the project from the other four KOPs. Further, implementation of Mitigation Measure MM 4.1-1 through MM 4.1-6 would reduce impacts by requiring trash abatement, color-treating project facilities, maintaining natural vegetation, shielding and directing lighting downward, and minimizing glare.

Temporary lighting may be used during construction but would be designed to provide the minimum illumination needed to achieve work objectives, and would be directed downward and shielded (see Mitigation Measure MM 4.1-4) to focus illumination on the desired areas only and minimize light trespass.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. This reduction would not significantly reduce visual impacts when compared to Alternative A. Thus, impacts to visual resources would be substantially the same as Alternative A and mitigation measures MM 4.1-1 through MM 4.1-6 would be required.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged. No impact to visual resources would result.

Cumulative Impacts

Alternative A – Proposed Action: According to Table 3-5, *Cumulative Projects List*, in Chapter 3, *Project Description*, of the EIR/EA, several utility-scale solar and wind energy projects are proposed throughout the Antelope Valley within the project vicinity. These projects, in combination with the project, have the potential to impact the area's visual resources. The quality of the scenic vistas from the PCT, which are already considered moderate to low in part due to existing energy development and scattered residences, are not expected to be reduced substantially by multiple distant energy facilities. These projects would be consistent with the existing VRM Class IV classification and visual character of the area. Further, for four of the six KOPs from which photo simulations were prepared, existing topography at least partially blocks views of the low-lying valley in which the project and some of these energy projects would be located. The resulting cumulative effects on visual resources would not be substantial.

Alternative B – Reduced Acreage Alternative: Cumulative impacts for Alternative B would be substantially the same as described for Alternative A since Alternative B would construct approximately the same sized solar array field (approximately 4.4 acres smaller than Alternative A).Therefore, construction, operation and maintenance, decommissioning and restoration activities would be the same as Alternative A. Further, the project infrastructure and activities that would visible from KOPs 1 and 4 pursuant to the Proposed Action also would be visible as part of Alternative B.

Alternative C – No Action Alternative: The No Action Alternative would result in no impact to visual resources, and so would not cause or contribute to any cumulative impacts in this regard.

Residual Effects

Following the implementation of Mitigation Measures MM 4.1-1 through MM 4.1-6, any residual effects on visual resources would be minor.

Water Resources

This section is based, in part, on information provided in the September 2016 Preliminary Drainage Report, November 2016 Water Demand Memorandum prepared for the project by Aztec TYSPA Group, and August 2019 Water Supply Assessment prepared by AECOM. Full copies of these reports are provided in Appendices I-1 through I-3.

Applicable Laws, Regulations, Plans, and Standards

Laws, regulations, plans and standards that are applicable to water resources are identified in Section 4.10, *Hydrology and Water Quality*, Subsection 4.10.3, *Regulatory Setting*, of the EIR/EA.

Affected Environment

The project site is located in the Antelope Valley Hydrologic Unit (HU) in the southwestern corner of the Regional Water Quality Control Board's South Lahontan Hydrologic Region. The Antelope Valley HU covers approximately 1.5 million acres (2,400 square miles) in the southwestern part of the Mojave Desert in Southern California. The Antelope Valley HU is mostly located in Los Angeles County and Kern County, with a small part in San Bernardino County. Bounded by the San Gabriel Mountains to the south and southwest, the Tehachapi Mountains to the northwest, and a series of hills and buttes that generally follow the San Bernardino County Line to the east, the Antelope Valley HU forms a well-defined triangular point at its western edge. The Antelope Valley HU elevation ranges from 2,300 to 3,500 feet above mean sea level (amsl).

The Antelope Valley HU generally lacks defined natural and improved channels outside of the foothills, and is subject to unpredictable sheet flow patterns. In general, groundwater flows northeasterly from the mountain ranges to the dry lakes. Due to the relatively impervious nature of the dry lake soil and high evaporation rates, water that collects on the dry lakes eventually evaporates rather than infiltrating into the groundwater.

Within the Antelope Valley HU, the project site is located in the Willow Springs Hydrologic Area (HA). The drainage features associated with the Willow Springs HA are minor surface waters and washes that are not well defined. There is no active flowing water on the site. Most drainage flow originating in the study area infiltrates into the soil in the vicinity of the study area. During prolonged extreme storm events, water flows may reach Rosamond Lake. The site is located entirely within Flood Zone "X", areas of minimal flooding and no standing water (Aztec 2016a).

Groundwater in the Antelope Valley HU is used for both public water supply and local irrigation. The main aquifers in the Basin are gravels, sands, silts, and clays, all derived from granitic parent material from the surrounding mountains. Public-supply wells in the Basin are anywhere from 360 to 700 feet deep. Groundwater recharge in the Antelope Valley is primarily runoff from surrounding mountains, as well as direct infiltration from irrigation, sewer, and septic systems. Groundwater quality is generally good and suitable for domestic, agriculture and industrial uses although there have been reported concentrations of volatile organic compounds, semi volatile organic compounds, nitrates, pesticides and inorganics that exceed drinking water standards in several wells located throughout the Basin. Naturally occurring arsenic is also found in the Neenach subbasin in concentrations exceeding drinking water levels (AECOM 2019).

As described above, the project site is located within the Willow Springs subunit of the Basin, northeast of the Neenach subunits, which reportedly has groundwater wells that draw from depths ranging between 200 to 300 feet below surface level (Aztec 2016b). Water supply wells that could be sources of water supply for the project are located in the Oak Creek (Cal Portland Well) and Neenach (T09NR14W22A1 and T09NR14W22B1 wells) subbasins (AECOM 2019).

Environmental Consequences

Alternative A – Proposed Action: Potential impacts on water quality from erosion and sedimentation are expected to be localized and temporary during construction and decommissioning/restoration. Stormwater runoff from the project site does not discharge to waters of the United States (i.e., the project area drains to a terminal basin that is not hydrologically connected to a navigable waterway). Nonetheless, because the project would disturb more than 1 acre of land area and stormwater would not be contained on-site or discharge into a terminal drainage facility, the County would require the project proponent to prepare and implement a SWPPP for the project (see Mitigation Measure MM 4.7-4). The SWPPP would include BMPs to be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby drainages. As noted in Section 4.9, *Hazards and Hazardous Materials*, of the EIR/EA, Mitigation Measure MM 4.9-1 would require the project proponent to provide a Hazardous Materials Business Plan that would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction.

During the O&M phase, the project would be required to adhere to the Kern County Development Standards and Kern County Building Code provisions, which require site drainage plans that include development standards designed to protect water quality. Specifically, the project proponent would be required to prepare and submit a drainage plan to the Kern County Public Works Department for approval of post-construction structural and nonstructural BMPs that could include Low Impact Development (LID) features such as drainage swales for collection of runoff prior to off-site discharge. Routine structural BMPs are intended to address water quality impacts related to drainage that are inherent in development.

Although the Antelope Valley HU as a whole is still in an overdraft condition, the project site is located in the western portion of the basin in the Willow Springs subbasin where groundwater levels are rising. The total projected water demand for the project over 25 years is 315 acre-feet (AECOM 2019). Water required during construction would most likely be supplied from an existing off-site well on the California Portland Cement Company property (Cal Portland Well) located approximately 0.44 mile southeast of the project site although there are also wells located approximately 6.6 and 7 miles southeast of the site in the Neenach subbasin that could be a source of water supply (AECOM 2019). The project's operational water requirements would be relatively small (approximately 5 acre-feet per year) and as land use in the basin continues to be converted from higher water intensive uses such as agricultural to less demanding water uses such as renewable energy projects, water in storage appears to be recovering. The project's demand would represent a small portion of the established safe yield of the basin, and would not substantially deplete groundwater levels in comparison to existing conditions.

The project would include limited grading such that off-site flow that enters the site would continue to flow south through the site much as it does currently. According to the preliminary drainage study completed for the site, a poorly defined channel within the western portion of the site that loses definition completely as

it crosses the site. The project would require design and implementation of retention basins for each of the seven sub-drainage areas to capture high storm flows. With implementation of Mitigation Measure MM 4.10-1, the project design would include retention basins and other stormwater management features consistent with existing regulatory requirements that can minimize any erosion or sedimentation such that no adverse effects would occur.

Alternative B – Reduced Acreage Alternative: Alternative B would avoid disturbance within 4.4 acres of California Juniper Woodland located on-site. Avoidance of this area would reduce the project footprint by approximately 1 percent. This reduction would slightly, but not significantly, reduce water demand, drainage impacts, water quality impacts, erosion or sedimentation when compared to Alternative A. Alternative B impacts to water resources would be substantially the same as Alternative A and Mitigation Measures MM 4.10-1, MM 4.7-4 and MM 4.9-1 would be required.

Alternative C – No Action Alternative: Under the No Action Alternative, existing conditions would remain unchanged and there would be no impacts to water resources.

Cumulative Impacts

Alternative A – Proposed Action: The cumulative projects are all located within the Antelope Valley Hydrologic Unit. The Santa Clara Superior Court has established a safe threshold for water extraction from the Antelope Valley Groundwater Basin to be 110,000 acre-feet per year. A review of data available for several solar projects that have entered into the environmental compliance phase indicated that many of the cumulative scenario projects would not result in a net reduction in groundwater levels at their respective sites, because the proposed use would be less than existing use (frequently agriculture). Many of the other solar energy projects in the cumulative list have also replaced agricultural uses where greater water supply needs were necessary. As land use in the basin continues to be converted from higher water intensive uses such as agricultural to less demanding water uses such as renewable energy projects, water in storage appears to be recovering. Regardless, the adjudication of the basin means that water use will be managed by the Watermaster in accordance with the court judgement and it is expected that additional storage and recharge to the basin will result from adjudication requirements and regional water banking (AECOM 2019). The incremental water use by the project together with the incremental demands of other projects in the cumulative scenario would not result exceed the safe yield threshold for the basin.

As discussed above, the solar projects proposed in Kern County would be required to implement a SWPPP and associated BMPs to minimize potential for release of pollutants and sediment into surface water. Therefore, cumulative impacts associated with water quality degradation would not be substantial.

With respect to erosion, drainage, and flooding, the project would implement Mitigation Measure MM 4.10-1 and MM 4.7-4, which would minimize direct impacts on erosion, drainage, and flooding by requiring a final drainage plan and Soil Erosion and Sedimentation Control Plan. It is anticipated that other projects in the cumulative scenario would be required to implement similar measures to minimize erosion, drainage, and flooding related impacts because these projects are located on land under the jurisdiction of Kern County and would be beholden to the same County review and standards as the project. Therefore, cumulative impacts on erosion, drainage, and flooding are not anticipated to be substantial or adverse either in the short or long term.

Alternative B – Reduced Acreage Alternative: Cumulative impacts for Alternative B would be substantially the same as described for Alternative since Alternative B would construct approximately the

same sized solar array field (approximately 4.4 acres smaller than Alternative A). Therefore, construction, operation and maintenance, decommissioning and restoration activities would be the same as Alternative A.

Alternative C – No Action Alternative: The No Action Alternative would result in no impact to water resources, and so would not cause or contribute to any cumulative impact in this regard.

Residual Effects

The adherence to regulatory requirements and implementation of mitigation measures that require drainage control features be included as part of project design would substantially reduce the severity of potential adverse effects on water quality and hydrologic resources. Any residual impacts would be minor.

1.6 Consultation and Coordination and List of Preparers

The project is located on private land as well as public land administered by the BLM. Federal, state, and local agencies, including agencies with permitting authority over aspects of the project, have been and will continue to be consulted as part of the BLM's review of the project.

Consultation and Coordination

National Historic Preservation Act Section 106 Consultation

National Historic Preservation Act Section 106 consultation between the Bureau of Land Management and the State Historic Preservation Officer (SHPO) is occurring and the BLM has requested that the SHPO concur that there would be No Adverse Effects to any existing Historic Property, nor to any potentially eligible Historic Properties.

Endangered Species Act Section 7 Consultation

FESA directs all federal agencies to participate in conserving threatened and endangered species. Specifically, section 7(a)(1) of the FESA charges federal agencies to aid in the conservation of listed species, and section 7(a)(2) requires the agencies, through consultation with the USFWS, to ensure their activities are not likely to jeopardize the continued existence of listed species, or destroy or adversely modify their critical habitat. The project would not impact any federally listed threatened or endangered species (see Biological Resources discussion in Section 11.5). Specifically, email correspondence from BLM and the USFWS has stated that desert tortoise is considered absent from the project site.[2] Therefore, consultation under FESA Section 7 is not required for this project.

2 Bransfield 2016. Email from Ray Bransfield to Pauline Roberts on November 22, 2016.

List of Preparers

Though individuals have primary responsibility for preparing sections of this EA, the document is an interdisciplinary team effort. In addition, internal review of the document occurred throughout its preparation. Specialists at the BLM's field and district offices, state office, and Washington office reviewed the analysis and supplied information, as well as provided document preparation oversight.

TABLE 1-3: LIST OF PREPARERS

Name	Position	Primary Responsibility
BLM – Ridgecrest Office		
Paul Rodriguez	Realty Specialist	Project Management
Donald Storm	Archaeologist	Cultural and Paleontological Resources
Caroline Woods	Planning and Environmental Coordinator	NEPA Compliance
Martha Dickes	Visual Resources Specialist	Visual Resources
BLM – Moreno Valley		
Kim Marsden	District Botanist	Biological Resources
Environmental Science Associates and Consultant Team		
Cristina Gispert	Senior Managing Associate	Project Management
Janna Scott	Director	Project Director
Michael Bever	Cultural Resources Program Manager	Cultural Resources
Jaclyn Catino-Davenport	Senior Associate Biologist	Biological Resources
Eric Schniewind	Senior Technical Associate	Public Health and Safety, Water Resource, Geology, Mineral Resources
Maria Hensel	Associate	Environmental Analyst
Jeffery Goodson	Managing Associate	Air Quality, Noise, Climate Change
Jessie O'Dell	Associate	Socioeconomics and Environmental Justice
Jason Nielsen	Managing Associate	GIS Analysis

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