

CHAPTER 5.0

CUMULATIVE IMPACTS

5.0 CUMULATIVE IMPACTS

Every effort has been made in this cumulative analysis to present a thorough discussion and/or analysis of direct and indirect cumulative impacts based on available and accurate information. The cumulative impacts/effects of the majority of the fifteen resource areas examined in the EIR/EA are discussed at a qualitative level. Whenever possible, cumulative impacts are quantified using existing environmental documents or technical studies.

During the environmental review processes for both CEQA and NEPA, certain resource areas were determined to have no impact (or no adverse effect) and therefore no incremental effect that would be cumulatively considerable. Nevertheless the EIR/EA must still briefly describe the basis for concluding that the incremental effect is not cumulatively considerable or why the Proposed Action would not result in an adverse cumulative impact when combined with other cumulative projects. For the purposes of CEQA, "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of reasonably foreseeable projects. Likewise, under NEPA the "Cumulative impact" refers to the impact on the environment resulting from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

5.0.1 NEPA PROCESS

The purpose of the cumulative impact analysis under NEPA is to ensure that Federal decision-makers consider the full range of consequences of actions (the Proposed Action and alternatives, including the No Action/No Project Alternative). Assessing cumulative impacts begins early in the NEPA process, during internal and external scoping. In cases where, the proposed action and alternatives would have no direct or indirect effects on a resource, the cumulative impacts for the resource are not required to be analyzed.

When necessary to analyze, cumulative impacts are assessed based on geographic scope/context (spatial) and timeframe (temporal) boundaries.

5.0.1.1 GEOGRAPHIC SCOPE

The geographic scope is generally based on the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope often differs for each resource area. For example, if a proposal affects water quality and air quality, the appropriate cumulative effects analysis areas may be the watershed and the airshed. In some cases, defining the geographic scope may be subjective but should be rational and reasonable. The rationale for selecting the geographic scope is provided for each resource area.

5.0.1.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Timeframes, like geographic scope, can vary by resource and be somewhat subjective. For example, the timeframe for construction air quality impacts would be much shorter than the timeframe for re-establishing vegetation impacted during construction. The rationale for selecting the timeframe is provided for each resource area.

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5.0.1.3 EXISTING CUMULATIVE CONDITIONS

The cumulative impacts analysis considers past, present, and reasonably foreseeable future actions that would affect each resource area impacted within the geographic scope and the timeframe of the analysis. The cumulative impacts analysis considers other BLM actions, other Federal actions, and non-Federal (including private) actions (40 CFR 1508.7).

A. Past, Present and Reasonably Foreseeable Projects

The analysis of cumulative impacts takes into account the effects in common with other past, present, and reasonably foreseeable future actions. The analysis identifies past actions that are closely related either in time (temporal) or space (geographical proximity) to the Proposed Action (which includes: the 2,067 acre CSE Facility and private easements; and 4.25 miles of Gen-tie Line extending through BLM land); present actions ongoing concurrently at the time this EIR/EA was being prepared; and reasonably foreseeable future actions, such as projects for which there are existing decisions, funding, formal proposals, or reasonably foreseeable future actions which are highly likely to occur based on known opportunities or trends.

Varying degrees of information are available for projects in the cumulative list. For resource areas where quantitative information was available, a quantitative analysis is provided; however, if sufficient information was not available, a qualitative analysis is provided.

Table 5.0-1 provides a comprehensive listing of all reasonably foreseeable projects within the jurisdiction of BLM in the vicinity of the Proposed Action and **Table 5.0-2** identifies all foreseeable projects within the jurisdiction of Imperial County in the vicinity of the Proposed Action. Reasonably foreseeable projects are those for which an application has been submitted to the appropriate agency, are currently undergoing environmental review, or will be pursuing environmental review in the near future (1 to 2 years or less). Activity must be occurring in order for the project to be reasonably foreseeable. Projects which have started the application or environmental review process but have been stalled over six months are not considered reasonably foreseeable.

Together, **Table 5.0-1** and **Table 5.0-2** identify all projects that could contribute to a cumulative impact on the environment. Projects listed include renewable energy projects on BLM-managed lands and/or private lands, other BLM actions/activities that have submitted an application and an acceptable plan of development for the use of public lands, and projects identified by Imperial County and San Diego County. Both tables present the project name and owner, location, type, status, total acres, and a brief description of each project, to the extent available. Most of the projects listed in **Table 5.0-1** have been, are being, or would be required to undergo their own independent environmental review under NEPA or Council on Environmental Quality or both, as applicable. **Figures 5.0-1** and **5.0-2** show the location of each of the projects listed in **Tables 5.0-1** and **5.0-2**. Projects listed in **Table 5.0-1** are identified using a corresponding letter of the alphabet (e.g. A, B, C, etc) while projects listed in **Table 5.0-2** are identified with a number (e.g. 1, 2, 3, etc.).

For the Proposed Action, the cumulative scenario for each issue area includes all or a portion of the projects identified in **Table 5.0-1** and **Table 5.0-2**. Cumulative tables specific to each resource area are provided below. These tables provide details explaining why the project was considered as part of the cumulative analysis as well as the resulting impact.

With the exception of climate change, which is a global issue, the California desert is identified as the largest area within which cumulative effects could be assessed for all disciplines. However, within the desert region, the specific area of cumulative effect varies by resource. For each resource, the

geographic scope of analysis is based on the topographical surrounding of the project and the natural boundaries of the resource affected, rather than jurisdictional boundaries.

In addition, each project in a region would have its own implementation schedule, which may or may not coincide or overlap with the Proposed Action's schedule. This is a consideration for short-term impacts from the proposed project. However, to be conservative, the cumulative analysis assumes that all projects in the cumulative scenario are built and operating during the operating lifetime of the proposed Centinela Solar Energy Project.

The direct and indirect effects of the Proposed Action and each alternative (Alternative 1 - Double Circuit Gen-tie Line Structures, Alternative 2 - Reduced CSE Facility Site, Alternative 3 - Use Existing Electric Line Towers and 230-kV Line Looping and Undercrossing, and Alternative 4 – No Action/No Project) together with the effects of the other actions that have a cumulative effect, are analyzed for each resource or issue area. Because the project site for all of the action alternatives is essentially the same (Alternative 3 is slightly smaller and includes three fewer parcels and approximately 335 fewer acres), the action alternatives are discussed collectively rather than individually.

B. Renewable Energy Projects Included in the Cumulative Scenario

Numerous renewable energy projects have been proposed on BLM land, State land, and private land in California. All kinds of renewable energy projects (solar, wind, and geothermal) have requested use of BLM land, as well as State and private lands. Projects on BLM land are identified in **Table 5.0-1** while projects in Imperial County are identified in **Table 5.0-2**.

The large volume of renewable projects submitting applications to the BLM and Imperial County are competing for utility Power Purchase Agreements (PPAs). PPAs are needed in order to allow utilities to meet State-required Renewable Portfolio Standards. However, submittal of an application is not an automatic guarantee that the project will move forward and ultimately be constructed. Projects can fail to come to fruition for multiple reasons as noted below:

- Failure on the part of the developer to meet BLM information requirements. In some cases, new technologies are proposed which have not been implemented at large scales. As a result, preparing complete and detailed plans of development (PODs) is difficult. Likewise completing the required NEPA and Council on Environmental Quality (CEQ) can be time consuming and expensive for developers to undertake.
- Failure by the applicant to meet all regulatory and permitting requirements. As part of approval by the appropriate Lead Agency under NEPA and/or Council on Environmental Quality (generally the BLM and/or local jurisdiction), the project applicant must obtain all regulatory permits. Alternatively, the prescriptions required by the regulatory authorities must be incorporated into the Lead Agency's license, permit or right-of-way grant. Many renewable energy projects are in areas with sensitive species. The large size of these projects often presents permitting challenges with regard to endangered species and implementation of mitigation measures. A number of regulatory requirements can cause the project to stall and never move forward.
- Failure to obtain construction financing. Securing funding may occur early in the process or after project approval. However, obtaining financing can be challenging due to the variety of factors involved. The availability of financing is dependent on the status of competing projects as well as the laws and regulations related to renewable project investment. Time required for obtaining permits also plays into securing financing. If permits are delayed, financing may be lost.

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For the sake of being conservative, the cumulative analysis assumes that the projects identified in the cumulative scenario would be constructed because they are considered to be reasonably foreseeable (i.e. projects for which an application has been submitted to the appropriate agency, are currently undergoing environmental review, or will be pursuing environmental review in the near future (1 to 2 years or less)).

5.0.2 CEQA PROCESS

Under CEQA, a project may result in a significant adverse cumulative impact where its effects are cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (California Code of Regulations, Title 14, Section 15130). Cumulative impacts could result from the construction, operation and maintenance, and decommissioning phases of the proposed project/Proposed Action.

**TABLE 5.0-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION**

#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
A	"S" Line Upgrade 230-kV Transmission Line Project (Imperial Irrigation District) (CACA-13206)	Eighteen miles in length composed of various segments. Extending from approximately 10 miles southwest of the City of El Centro near Liebert Road and Wixom Road along I-8 and SR 86, then north terminating at the El Centro Switching Station on Dogwood Road near Villa Road in Imperial County.	The "S" Line route runs the Imperial Irrigation District/San Diego Gas & Electric Imperial Valley Substation on BLM lands. The Imperial Irrigation District proposes to upgrade approximately 18 miles of the 230-kV overhead electrical transmission line by installing (+/-) 285 new double-circuit steel poles (including all existing polymer horizontal insulators) to replace the existing wood poles supporting a single 230-kV circuit. The execution plan is to complete the pole replacement and upgrades in three poles. The "S" Line would be upgraded at distinct locations with an assigned order of importance on the basis of system outages, structural reliability, risk, construction feasibility, and costs.	Impacts to the burrowing owl, Yuma clapper rail, and flat-tailed horned lizard. These impacts would be reduced through implementation of mitigation measures.	For 18 miles of transmission line there are 108 acres of disturbance to BLM land (not all of this is BLM, 2,151 acres is on BLM land and the rest is on private land).	End review 12/17/2009; Mitigated Negative Declaration filed with mitigation measures. Right-of-way amended/ Renewed 03/2010.
B	Imperial Valley Solar (Stirling Energy Systems [SES] Two, LLC) (CACA-47740)	Approximately 6,500 acres in southwestern Imperial County in the Imperial Valley, 100 miles east of San Diego. The site is situated north of I-8, 14 miles west of El Centro, and four miles east of Ocotillo.	230-kV line (proposed in DEIS that is currently out on CEC website)-CACA-047740. Develop electric-generating facility with normal capacity of 709 megawatts using concentrated solar power. Constructed on approximately 6,500 acres (10 square miles). Construction done in two phases and will include operation and administration building,	Adverse impacts to visual resources which cannot be mitigated. All other impacts can be reduced after implementing mitigation measures. Biological resources impacts to 92.8 acres of Sonoran creosote brush scrub.	Impacts of 6,140 acres of BLM lands and 93 acres of Yuha Flat-tailed Horned Lizard Management Area. Impacts to 840 acres of California Department of	Application for Certification filed with California Energy Commission June 30, 2008. Application for Certification/POD determined adequate under minimal criteria. Notice of Intent

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**TABLE 5.0-1
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#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
			<p>maintenance building, water treatment system, yard tanks, control building, and utilities and services for ancillary facilities and structures.</p>	<p>Compensatory mitigation for 6,619.9 acres of Flat-tailed Horned Lizard suitable habitat. Loss of approximately 165 acres of waters of the U.S. and 840 acres of CDFG jurisdictional streambeds. Impacts to 328 known prehistoric and historical surface archaeological resources. Paleontological resources are documented and are likely. Drainage Erosion Sediment Control Plan would mitigate potential storm water and sediment project-related impacts. Potential surface and groundwater impacts. Conversion of approximately 6,500 acres of land. Mitigation is required.</p>	<p>Fish and Game jurisdictional streambeds. Impacts to 328 prehistoric and historical surface archaeological resources.</p>	<p>published October 17, 2008. The Final EIS published in July 2010 and the Record of Decision was signed on October 5, 2010. The project was sold to AES in February 2011. Received request for amendment.</p>

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LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION**

#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
C	Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation (SDG&E) (CACA-047658)	Imperial Valley to Penasquitos. Located in the Yuha Basin Area of Critical Habitat in the southwestern portion of Imperial County. Eight to nine miles southwest of the City of El Centro. Parallels the South West Powerlink 500-kV Line.	The project also includes new 230-kV and 138-kV transmission lines and a 230-kV substation and rebuilt 138-kV substation. The U.S. Bureau of Reclamation is the lead agency with BLM as a cooperating agency. Imperial Valley Substation is completely surrounded by BLM land (five miles of new transmission lines in the Yuha Desert). The project will be 120-foot wide and is proposed to extend northwest of the Imperial Valley Substation in the shortest route possible while retaining a buffer a minimum of 500 feet away from private land in the area.	Primary issues include cultural (historic properties, Native American lands, and archeological resources), biological (Flat-tailed horned lizard and Western Burrowing Owl), and paleontological (fossils). 7.65 acres of permanent impact. 12.2 acres of temporary impact. 770 acres of BLM land.	Impact to 180.1 acres of Yuha Flat-tailed Horned Lizard Management Area.	POWER Engineers Final Environmental Impact Statement (EIS) complete. Right-of-way authorized 02/2009. Construction began in the Ocotillo area in late Spring 2011. Most tower construction in the vicinity of Ocotillo on BLM lands is anticipated to be complete by the end of 2011, but stringing activity is anticipated to continue into 2012.
D	Ocotillo Sol (SDG&E) (CACA-051625)	The project is in Imperial County on approximately 100 acres of federal land directly adjacent to SDG&E's Imperial Valley substation.	SDG&E proposed photovoltaic solar field. Producing 15 to 18 megawatts of renewable energy.	To be determined in the Plan of Development (POD). 100 to 115 acres of impact to BLM land. This acreage will be determined precisely via the NEPA process.	Impacts to biological resources have yet to be assessed fully. Impacts to 100 to 115 acres of BLM lands.	Application submitted for transportation and utility systems. A draft Plan of Development has been submitted as of December 2010. Notice of Intent Published July, 2011

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**TABLE 5.0-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION**

#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
E	SDG&E Geotechnical Investigation (SDG&E) (CACA-51625-01)	The project is in Imperial County on approximately 1 acre of federal land directly adjacent to SDG&E's Imperial Valley substation.	Multiple boreholes to determine the quality and compaction of the soil.	N/A	Impacts to biological resources have yet to be assessed fully. Impacts to 1 acre of BLM lands.	EA out for Public comment and Review ends August 1, 2011.
F	North Gila to Imperial Valley #2 (Southwest Transmission Partners) (CACA-51575)	Between North Gila Substation in Yuma County, Arizona and the Imperial Valley Substation in Imperial County. The project will follow the same route as the existing Southwest Powerlink 500-kV line.	The project is a double-circuit 500-kV line extending from the east to the Imperial Valley Substation. The project would provide high-voltage transmission capacity in the southeastern U.S. to facilitate the development and interconnection of renewable energy. The total right-of-way will be approximately 1,903 acres of BLM Land. The project will be approximately 75 miles long.	Visual impacts would be minimized to the extent possible by locating the structures of the new line adjacent to and with the same spacing as existing structures. Impacts to biological resources will result. 13,881.02 acres of BLM land.	Impacts to 450 acres of BLM Land and 3 acres of Yuha Flat-tailed Horned Lizard Management Area.	Southwest Transmission Partners is preparing a Plan of Development. NEPA analysis not started.
G	Dixieland Connection to Imperial Irrigation District Transmission System (Imperial Irrigation District) (CACA-50661)	Follows the 230-kV lines from the international border extending north. Approximately ten to twelve miles southwest of the City of El Centro, Imperial County.	Interconnection of Imperial Irrigation District's "S" Line from the Imperial Irrigation District Substation to the Imperial Valley Substation Route.	Lies in the Yuha Basin Area of Critical Environmental Concern in the Yuha Desert Management Area for flat-tailed horned lizards and Western burrowing owl (impacts will be mitigated). Potential impacts to cultural and paleontological	20 acres of impacts to flat-tailed horned lizard and Western burrowing owl. 34.2 acres of land disturbed.	Application filed. Mitigated Negative Declaration, November 2010.

**TABLE 5.0-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION**

#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
				resources.		
H	Solar Reserve Imperial Valley (Solar Reserve) (CACA-49884)	Approximately 2,000 acre site on lands managed by the BLM. The site is in Imperial County approximately 35 miles east of the Imperial Valley Substation and approximately four miles east of Calexico.	The project consists of a 100-megawatt solar power tower approximately 654-feet tall capable of generating power 24-hours per day. The project include construction of a 35-mile long 230-kV transmission line within both the East Valley Utility Corridor L and the West Valley Utility Corridor N.	Flat-tailed horned lizard, burrowing owl, Yuma clapper rail.	N/A	Application received April 24, 2008. In process.
*	Imperial Solar Energy Center South (CSOLAR Development, LLC) (CACA-051645)	The project is located in Imperial County 8 miles southwest of the city of El Centro and south of the community of Seeley in the unincorporated Mt. Signal area. The proposed access road traverses both BLM lands and private land, and is located on the west side of the Westside Main Canal. The proposed transmission lines and a portion of the access road would be located within the Yuha Desert, and within BLM's Utility Corridor "N" of the California Desert Conservation Area Plan.	CSOLAR Development, LLC West proposed solar energy facility consisting of three primary components: 1) the construction and operation of a 200 Megawatt Imperial Solar Energy Center South solar energy facility; 2) the construction and operation of electrical transmission lines that would connect the solar power facility to the existing Imperial Valley Substation; and, 3) widen an existing access road for ingress and egress to the solar facility across BLM and private lands located along the west side of the Westside Main Canal. As part of the project, the facility would interconnect to the utility grid at the 230-kV side of the Imperial Valley Substation via a 230-kV	The proposed 120-foot right-of-way for the electrical transmission line corridor and an existing dirt access road that would be widened by five feet to provide secondary access are both located in the Yuha Basin Area of Critical Environmental Concern in the Yuha Desert Management Area for flat-tailed horned lizards. Potential impacts to cultural and paleontological resources.	Impacts to 3.0 acres of disturbed lands under the jurisdiction of BLM.	Final EIR/EA, April 2011. *This project is also included in Table 5.0-2 as project #4 as it was evaluated under both NEPA and CEQA.

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LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION**

#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
			electrical transmission line and associated access.			
*	Imperial Solar Energy Center West (CSOLAR Development, LLC) (CACA-051644)	Imperial County 8 miles southwest of the City of El Centro and south of the community of Seeley, in the unincorporated Mt. Signal area. Follows the 230-kV lines from the international border going north alignment.	The project consists of 2 primary components: (1) construct and operate 250-MW Imperial Solar Energy Center West solar energy facility on 1,100 acres of previously disturbed private farm land; and (2) construct and operate electrical transmission lines that would connect the solar facility to the existing Imperial Valley substation. The proposed 230-kV line (follows the Dixieland Line alignment) will cross 0.5 mile of BLM land and then aligns to the existing Southwest Powerlink.	Proposed right-of-way lies within the BLM managed Yuha Basin ACEC and Yuha Desert Management Area for the flat-tailed horned lizard. Will fully mitigate impacts. Permanently impact 9 acres of BLM land (use existing and joint access to minimize impacts) and encumber 64.4 acres of BLM land.	Impacts to 13.6 acres of BLM Land and 3 acres of Yuha Flat-tailed Horned Lizard Management Area.	Draft Plan of Development complete 1/25/10. Draft EIR/EA November 2010. ROW grant authorized on September 27, 2011. *This project is also included in Table 5.0-2 as project #3 as it was evaluated under both NEPA and CEQA.

**TABLE 5.0-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION**

#	Project Name	Size/Location	Description of Project	Impacts	Assumptions	Status
*	Mount Signal Solar Farm I (82LV-8ME, LLC) (CACA-052325)	Located on 1,375 acres of privately owned farmland in the Imperial Valley located 2.5 to 7.5 miles west of Calexico in southern Imperial County. Right-of-Way is located within BLM lands.	Project would create 200 megawatts of electricity using a solar thermal generating station with a biomass generation component. Proposed transmission line route would parallel existing 230-kV lines and share transmission line with Imperial Solar Energy Center South project.	Lies in the Yuha Basin Area of Critical Environmental Concern in the Yuha Desert Management Area for flat-tailed horned lizards and Western burrowing owl (impacts will be mitigated). Potential impacts to cultural and paleontological resources.	N/A	Application filed. Notice of Preparation, July, 2011. *This project is also identified in Table 5.0-2 as project #5 as it was evaluated under both NEPA and CEQA.

Source: BLM, 2011.

Notes:

N/A = Not Available.

TABLE 5.0-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION IMPERIAL COUNTY AND NEARBY CITIES AND COMMUNITIES

#	Project Name	Location	Project Description	Status
1	Linda Vista	City of El Centro on the west side of Clark Road and I-8 and McCabe Road.	The Linda Vista project is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school.	EIR in process.
2	County Center II Expansion/County and Imperial County Office of Education	Southwest corner of McCabe Road and Clark Road (8th Street in the City of El Centro).	Mixed-use project consisting of a commercial center, expansion of the Imperial County Office of Education, a Joint-use Teacher Training and Conference Center, Judicial Center, County Park, Jail Expansion, County Administrative Complex, Public Works Administration, and a County Administration Complex.	EIR approved in 2009.
3*	Imperial Solar Energy Center West	Imperial County eight miles southwest of the City of El Centro and south of the community of Seeley, in the unincorporated Mt. Signal area. The proposed 230-kV line will follow the Dixieland Line alignment.	The project consists of two primary components: 1) construct and operate 250-megawatt Imperial Solar Energy Center West solar energy facility on approximately 1,100 acres of previously disturbed private farmland; and 2) construct and operate electrical transmission lines that would connect the solar facility to the existing Imperial Valley Substation. The proposed 230-kV line will cross one-half mile land managed by the BLM and then extend to the existing Southwest Powerlink.	Draft EIR/EA November 2010. Pending publication of EIR late July/early August 2011. ROW grant authorized on September 27, 2011. *This project is also identified in Table 5.0-1 as it was evaluated under both CEQA and NEPA.
4*	Imperial Solar Energy Center South	Located in the Mt. Signal area of unincorporated Imperial County, approximately eight miles west of the City of Calexico, and eight miles southwest of the City of El Centro.	The proposed solar energy facility consists of three primary components: 1) the construction and operation of a 2000megawatte Imperial Solar Energy Center South solar energy facility; 2) the construction and operation of electrical transmission lines that would connect the solar power facility to the existing Imperial Valley Substation; and, 3) the improvement and use of an existing dirt access road, a portion of which traverses BLM lands. As part of the project, the facility would interconnect to the utility grid at the	Final EIR/EA, April 2011. EIR approved by Board of Supervisors. Finding of No Significant Impact, July 2011, Record of Decision, July 2011. *This project is also identified in Table 5.0-1 as it was evaluated under both

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LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION IMPERIAL COUNTY AND NEARBY CITIES AND COMMUNITIES

#	Project Name	Location	Project Description	Status
			230-kV side of the Imperial Valley Substation via a 230-kV electrical transmission line and associated access.	CEQA and NEPA.
5*	Mount Signal Solar Farm I	Approximately six miles west of the City of Calexico, California in southern Imperial County. The project is generally between Kubler Road to the north and the US-Mexico border to the south, and between Pulliam Road to the west and Hammers Road to the east.	The solar array field will encompass a total of 1,431 acres on ten parcels of privately owned, undeveloped agricultural land. This particular project site is anticipated to generate up to 200-megawatts of energy. The project site includes the following Assessor Parcel Numbers: 052-210-013; 052-210-016; 052-210-034; 052-210-035; 052-210-036; 059-130-001; 059-130-002; 059-130-004; 059-130-005; and 052-190-012. The project site would connect to a shared 230-kilovolt overhead transmission line which may be shared with one or more neighboring solar project(s).	Initial Study and Notice of Preparation issued July, 2011. *This project is also identified in Table 5.0-1 as it was also evaluated under both CEQA and NEPA.
6	Campo Verde	Seven miles southwest of the City of El Centro, California, south of Interstate 8 and west of Drew Road.	The proposed project is a photovoltaic solar generating facility on a 2,267-acre site which is private land currently used for agriculture. There is no direct mention of the site's generation capacity, but the size of the project would suggest a 250-megawatt plant.	CUP Application Received/EIR to be prepared fall 2011.
7	Mayflower Solar Farm Project	Approximately five-and-a-half miles south southeast of the town of Calipatria.	The project is a nominal 50-megawatt alternating current solar photovoltaic energy generation project on approximately 482 acres.	CUP Application received June 24, 2011.
8	Arkansas Solar	Approximately two-and-a-half miles east of the town of Calipatria.	The project is a nominal 50-megawatt alternating current solar photovoltaic energy generation project on approximately 481 acres.	CUP Application received June 24, 2011.
9	Sonora Solar	Approximately four-and-a-half miles north northeast of the town of Calipatria.	The project is a nominal 50-megawatt alternating current solar photovoltaic energy generation project on approximately 488 acres.	CUP Application received June 27, 2011.
10	Alhambra Solar	Approximately three-and-a-half miles south southeast of the	The project is a nominal 50-megawatt alternating current solar photovoltaic energy generation	CUP Application received June 24, 2011.

TABLE 5.0-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION IMPERIAL COUNTY AND NEARBY CITIES AND COMMUNITIES

#	Project Name	Location	Project Description	Status
		town of Calipatria	project on approximately 482 acres.	
11	Acorn Greenworks	Approximately 10 miles southwest of the City of El Centro just west of the Westside Main Canal.	The project is a 150-megawatt alternating current solar photovoltaic project with 5,280 feet of transmission line. The project site is comprised of seven parcels (Assessor's Parcel Number 051-380-032, 033, 052-170-027, 072, 073, 01 & 051-390-023) on 693 acres.	CUP Application received June 30, 2011. Request for Proposals July, 2011.
12	Calexico I-A	Approximately six miles west of the City of Calexico, California in southern Imperial County. The project is generally between Kubler Road to the north and the US-Mexico border to the south, and between Pulliam Road to the west and Hammers Road to the east.	This project site will be developed in two phases: Phase I-A and Phase I-B. The solar array field will encompass a total of 1,332 acres on privately owned, undeveloped agricultural land within nine parcels (three included as part of Phase I-A: Assessor's Parcel Number 052-210-001; 052-210-002; 052-210-015.). Each phase would apply for its own Conditional Use Permit and each phase is intended to generate up to 100-megawatts; however, each phase may produce up to 200-megawatts (total for both phases combined will not exceed 200-megawatts). Each phase would have an operations and maintenance building and onsite substation. The project site would connect to a shared 230-kV overhead transmission line with one or more neighboring solar project(s).	Initial Study and Notice of Preparation issued July, 2011.
13	Calexico I-B	Approximately six miles west of the City of Calexico, California in southern Imperial County. The project is generally between Kubler Road to the north and the US-Mexico border to the south, and between Pulliam Road to the west and Hammers Road to the east.	This project site will be developed in two phases: Phase I-A and Phase I-B. The solar array field will encompass a total of 1,332 acres on privately owned, undeveloped agricultural land within nine parcels (six included as part of Phase I-B: Assessor's Parcel Number 052-190-011; 052-210-014; 052-210-037; 052-210-038; 052-210-039; and 052-210-018). Each phase would apply for its own Conditional Use Permit and each phase is intended to generate up to 100-megawatts; however, each	Initial Study and Notice of Preparation issued July, 2011.

TABLE 5.0-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION IMPERIAL COUNTY AND NEARBY CITIES AND COMMUNITIES

#	Project Name	Location	Project Description	Status
			phase may produce up to 200-megawatts (total for both phases combined will not exceed 200-megawatts).Each phase would have an operations and maintenance building and onsite substation. The project site would connect to a shared 230-kV overhead transmission line with one or more neighboring solar project(s).	
14	Calexico II-A	Approximately six miles west of the City of Calexico, California in southern Imperial County. The project is generally between Kubler Road to the north and the US-Mexico border to the south, and between Pulliam Road to the west and Hammers Road to the east.	This project site will be developed in two phases: Phase II-A and Phase II-B. The solar array field will encompass a total of 1,465 acres on privately owned, undeveloped agricultural land within ten parcels (five included as part of Phase II-A: Assessor’s Parcel Number 059-110-006; 059-110-008; 059-130-003; 059-110-003; 059-110-007). Each phase would apply for its own Conditional Use Permit and each phase is intended to generate up to 100-megawatts; however, each phase may produce up to 200-megawatts (total for both phases combined will not exceed 200-megawatts). Each phase would have an operations and maintenance building and onsite substation. The project site would connect to a shared 230-kV overhead transmission line with one or more neighboring solar project(s).	Initial Study and Notice of Preparation issued July, 2011.
15	Calexico II-B	Approximately six miles west of the City of Calexico, California in southern Imperial County. The project is generally between Kubler Road to the north and the US-Mexico border to the south, and between Pulliam Road to the west and Hammers Road to the	This project site will be developed in two phases: Phase II-A and Phase II-B. The solar array field will encompass a total of 1,465 acres on privately owned, undeveloped agricultural land within ten parcels (five included as part of Phase II-B: Assessor’s Parcel Numbers 052-180-043; 052-180-044; 052-180-022; 052-180-050; and 052-180-051. Each phase would apply for its own Conditional Use Permit and each phase is intended to generate	Initial Study and Notice of Preparation issued July, 2011.

TABLE 5.0-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION IMPERIAL COUNTY AND NEARBY CITIES AND COMMUNITIES

#	Project Name	Location	Project Description	Status
		east.	up to 100-megawatts; however, each phase may produce up to 200-megawatts (total for both phases combined will not exceed 200-megawatts).Each phase would have an operations and maintenance building and onsite substation. The project site would connect to a shared 230-kV overhead transmission line with one or more neighboring solar project(s).	

Source: County of Imperial, 2011.

5.1 VISUAL RESOURCES

Visual resources were analyzed using the BLM's Visual Resource Management (VRM) System (described in Section 3.1). BLM requires that this system be used for analyzing visual resources on BLM-administered lands. For consistency, the VRM System was also used to analyze visual resources for components of the project on non-BLM lands (i.e. land in Imperial County) as it evaluates both the existing visible physical environmental setting and the anticipated visual change introduced by the proposed project/Proposed Action or an alternative to the view in the context of viewer sensitivity.

The Proposed Action falls into Visual Resource Inventory (VRI) Class III based on its Scenic Quality Classification of C, High Visual Sensitivity Level and Viewing Distance Zone of Foreground/Middle ground (F/M). The objective of Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. The project site has a High Visual Sensitivity Level based on number of viewers traveling along SR 98 and area roadways (45,000 or more per year). The project site in the Key Observation Points is viewed from a viewing distance zone of Foreground/Midground (less than three to five miles from the viewing location). This zone defines the area in which landscape details transition from readily perceived to outlines and patterns) (BLM, 2010 p. B-13 and A-39).

A cumulative impact to visual resources would occur in a situation where the Proposed Action or an alternative occupies the same field of view as other built facilities or impacted landscapes. If the change caused by the addition of the Proposed Action or an alternative to the visible landscape character is perceived as adverse, then a cumulative impact to visual resources would occur. Likewise, if a viewer perceives that the general visual quality or landscape character of a localized or regional area (such as the eastern Yuha Desert or the parcels comprising the project site) is diminished by the proliferation of visible structures or construction effects, a cumulative impact to visual resources could also occur.

The potential exists for substantial future development to occur along the SR 98 corridor and in the southern Imperial Valley as a whole. A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.1-1** and **Table 5.1-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**.

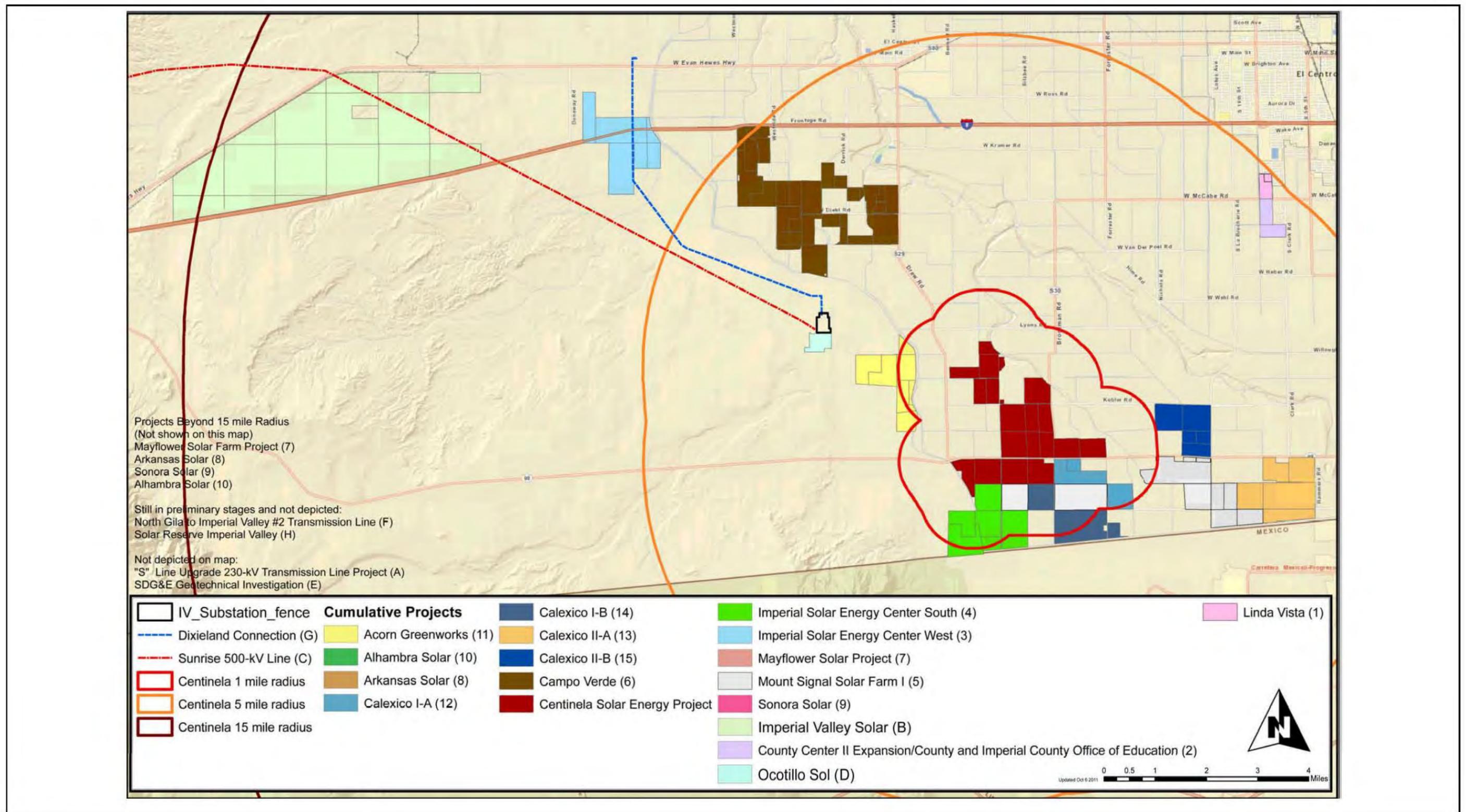
5.1.1 GEOGRAPHIC SCOPE

Cumulative impacts to visual resources could occur if implementation of the proposed Centinela Solar Energy Project would combine with visual impacts of other local or regional projects. The Proposed Action or an alternative is potentially associated with two types of cumulative impacts:

- Local cumulative impacts within the immediate project viewshed (projects within the background viewshed distance of 5 to 15 miles), including existing and reasonably foreseeable future projects in the eastern Yuha Desert basin, SR98 through the project site and I-8 to the north.
- Regional cumulative impacts beyond the immediate project viewshed (15 miles or more from the project site), including the existing and reasonably foreseeable future solar development projects (a) along the I-8 corridor (generally extending southwest through the southern Imperial Valley); and (b) in the vicinity of the Salton Sea, north of the project site. These projects, while not within the same field of view as the proposed project would, in combination with the proposed project, contribute to

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5.0 CUMULATIVE IMPACTS



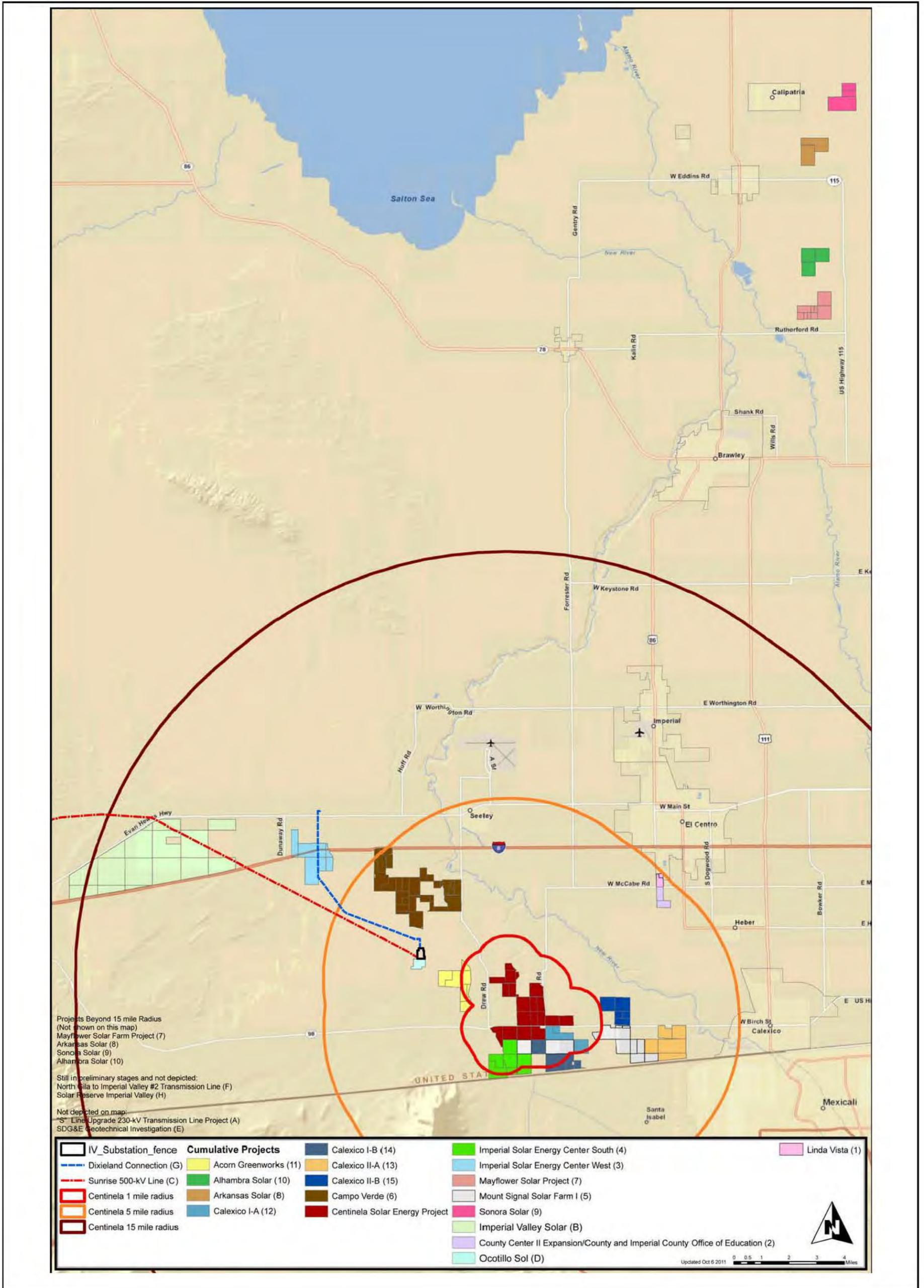
Source: Imperial County GIS, 2011

FIGURE 5.0-1

CUMULATIVE PROJECTS MAP (WITHIN 1-, 5-, AND 15-MILE RADIUS)

5.0 CUMULATIVE IMPACTS

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Source: Imperial County GIS, 2011

FIGURE 5.0-2
CUMULATIVE PROJECTS MAP (AREAS BEYOND 15-MILE RADIUS)

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a sense of industrialization or urbanization of the existing landscape character to travelers along I-8 and through the southwestern Imperial Valley.

5.1.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to visual resources would occur during the construction and decommissioning periods in association with the addition of construction equipment to the landscape. Long-term impacts to visual resources would occur as a result of any alterations to the viewshed which would occur as a result of the presence of the project over its operational life (approximately 30+ years).

5.1.3 EXISTING CUMULATIVE CONDITIONS

5.1.3.1 Past, Present and Reasonably Foreseeable Projects

The existing cumulative conditions includes past, present, and reasonably foreseeable future actions that would affect the viewshed of the proposed project/Proposed Action. Past and present projects represent those that have been developed and are currently operational or projects that are currently under construction and will be operational in the near future (1 to 2 years or less). **Table 5.0-1** provides a listing of past, present and reasonably foreseeable projects on BLM lands. The list is comprised of solar energy projects and associated BLM-authorized actions/activities. **Table 5.0-2** includes proposed or approved projects in Imperial County as well as nearby incorporated cities, and other actions/activities that the Lead Agencies consider reasonably foreseeable. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. The impacts of these projects were considered in the cumulative impacts analysis even if environmental review has not been completed.

Table 5.1-1 and **Table 5.1-2** identify the distance of each project from the proposed project (CSE Facility site and Gen-tie Line) as well as a discussion of whether the project was included in the cumulative analysis and any resulting cumulative impacts.

Existing cumulative conditions consist of the past and present projects and actions that have affected, and will affect, landscape character in the local (projects within the background viewshed distance of 5 to 15 miles) and regional cumulative study area (15 miles or more from the project site).

A. Past and Present Locally Cumulative

To date, limited development has occurred in proposed project's viewshed (extending out 15 miles). Five projects that are either recently built or under construction within the viewshed of the proposed Centinela Solar Energy Project (locally cumulative projects) include:

- "S" Line Upgrade 230-kV Transmission Line Project (under construction, estimated completion December 2015)
- Sunrise Powerlink 500-kV Transmission Line (under construction, estimated completion December 2012)
- Linda Vista
- County Center II Expansion/County and Imperial County Office of Education
- Imperial Solar Energy Center South

The three solar-related projects share similar industrial characteristics with the proposed project/Proposed Action or an alternative and would be visible within the same field of view as the proposed project. The “S” Line Upgrade 230-kV Transmission Line Project, Sunrise Powerlink, and Imperial Solar Energy Center South, in conjunction with the Proposed Action or an alternative would contribute to the conversion of rural and agricultural landscapes to landscapes with prominent industrial character (complex industrial forms and lines and surface textures and colors not found in rural agricultural landscapes). The Imperial Solar Energy Center South project would border a portion of the southern boundary of the project site, continuing the pattern of solar development south of the project site.

The Linda Vista project and County Center II Expansion/County and Imperial County Office of Education would expand development in the City of Calexico, but would not share industrial characteristics (complex forms and lines) similar to the Proposed Action or an alternative.

In each case, the areas affected by development of these projects in the vicinity of the Proposed Action are not particularly scenic and do not have high aesthetic quality. Therefore, the project’s contribution to cumulative impacts to visual resources is minimal both individually (each project plus the Proposed Action or an alternative) and collectively (all five projects) on a locally cumulative basis.

B. Reasonably Foreseeable Locally Cumulative

Table 5.1-1 provides a listing of reasonably foreseeable projects, including other proposed or approved solar energy projects, various BLM-authorized actions/activities. **Table 5.1-2** identifies proposed or approved projects within the County’s jurisdiction, and other actions/activities that the Lead Agencies consider reasonably foreseeable. Most of these projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval.

**TABLE 5.1-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
A	<p>“S” Line Upgrade 230-kV Approximately four miles north of the project site.</p>	<p>Yes. “S” Line Upgrade 230-kV Transmission Line Project is within the Background view-shed (5 to 15 miles).Construction is on-going and expected completion is 2015.</p>	<p>The overall visual quality of the area is considered low to moderate. While the addition of vertical metal towers and miles of linear overhead transmission lines to the landscape would alter existing views, no scenic vistas or areas with a high visual aesthetic would be affected. The Proposed Action in combination with the “S” Line Upgrade would not have an adverse cumulative impact based on distance and overall visual quality of the area.</p>
B	<p>Imperial Valley Solar Approximately 10 miles northwest of project site.</p>	<p>Yes. Imperial Valley Solar is within the Background view-shed (5 to 15 miles).While no construction is proposed at this time, the project is reasonably foreseeable as the Applicant has submitted an Application to the BLM for an Amendment to right-of-way grant for a Change of Technology.</p>	<p>The Imperial Valley Solar project is in the background viewshed and would not affect views in the vicinity of the proposed project site. The Proposed Action in combination with the Imperial Valley Solar would not have an adverse cumulative impact based on distance and overall visual quality of the area.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. Sunrise 500-kV Line is within the Background viewshed (5 to 15 miles).The project is currently under construction and would be completed by the end of 2012.</p>	<p>The Sunrise 500-kV Line would parallel the same alignment as the South West Powerlink 500-kV Line. The Sunrise 500-kV Line would increase the amount of towers and transmission line infrastructure visible in the background viewshed of the project site but would not obstruct any scenic vistas or adversely affect the low to moderate visual quality of the area. The Proposed Action in combination with the Sunrise 500-kV Line would not have an adverse cumulative impact based on distance and overall visual quality of the area.</p>

**TABLE 5.1-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
D	<p>Ocotillo Sol</p> <p>2.5 to 5 miles northwest of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. Ocotillo Sol is within Foreground/Middle-ground of project viewshed (3.5 miles or less).</p>	<p>The Ocotillo Sol project is beyond the Background viewshed and would not affect views in the vicinity of the proposed project site. While the overall visual character of the region would be changed from desert to industrial, the existing visual quality of the area is considered low to moderate. The Proposed Action in combination with the Ocotillo Sol project would not have an adverse cumulative impact based on distance and overall visual quality of the area.</p>
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>No. Although SDG&E – Geotechnical Investigation is within the Foreground/Middle-ground of project viewshed (3.5 miles or less). Borehole testing is expected to last no longer than one week in September 2011.</p>	<p>The duration of the SDG&E – Geotechnical Investigation would be temporary and not result in a long-term adverse impact to visual quality in the vicinity of the project site.</p>
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. A segment of the North Gila to Imperial Valley #2 Transmission Line would be within the Foreground/Middle-ground of project viewshed (3.5 miles or less) in the area surrounding the Imperial Valley Substation.</p>	<p>The North Gila to Imperial Valley #2 Transmission Line would parallel the existing 500-kV transmission line to the east of the Imperial Valley Substation. The additional line would increase the amount of towers and transmission line infrastructure visible in both the foreground/middle-ground (near the northern portion of the project site) and the background viewshed (5 to 15 miles) of the project site. However, the project site is in an area lacking a high visual aesthetic with overall low to moderate visual quality. Likewise, the North Gila to Imperial Valley #2 Transmission Line would not obstruct any scenic vistas or damage visual resources in the vicinity of the project site. The Proposed Action in combination with the North Gila to</p>

**TABLE 5.1-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
			Imperial Valley #2 Transmission Line project would not have an adverse cumulative impact based on distance and overall visual quality of the area.
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. Both the proposed Gen-tie Line and the Dixieland Connection would connect to Imperial Valley Substation would be within the Foreground/Middle-ground viewshed (3.5 miles or less) in the area surrounding the Imperial Valley Substation.</p>	<p>The project site is in an area lacking a high visual aesthetic (low to moderate visual quality).The Dixieland Connection to Imperial Irrigation District Transmission System project would not obstruct any scenic vistas in the vicinity of the project site. The Proposed Action in combination with the Dixieland Connection to Imperial Irrigation District Transmission System would not have an adverse cumulative impact based on the overall visual quality of the area.</p>
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>Yes. Both the proposed Gen-tie Line and 230-kV line proposed as part of the Solar Reserve Imperial Valley project would connect to the Imperial Valley Substation and are within the Background view-shed (5 to 15 miles) in the area surrounding the Imperial Valley Substation. No construction is anticipated until 2014 but is considered reasonably foreseeable because application is in process.</p>	<p>The project site is in an area lacking a high visual aesthetic (low to moderate visual quality).The Solar Reserve Imperial Valley project would not obstruct any scenic vistas in the vicinity of the project site. The Proposed Action in combination with the Solar Reserve Imperial Valley would not have an adverse cumulative impact based on overall visual quality of the area.</p>

**TABLE 5.1-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
1	<p>Linda Vista</p> <p>Approximately eight miles northeast of project site.</p>	<p>Yes. Located in the Background viewshed (5 to 15 miles).Based on the scale of the project, its low profile structures and distance, Linda Vista would not be visible from the project site, but would change the character of the region through development of previously vacant land.</p>	<p>The Linda Vista project would change the existing character of the site from vacant to a residential development. The project’s location in the City of El Centro represents an expansion of the existing urban pattern of the city. The Proposed Action in combination with the Linda Vista project would not have an adverse cumulative impact based on distance between the two projects and overall visual quality of the area.</p>
2	<p>County Center II Expansion/County and Imperial County Office of Education</p> <p>Approximately six-and-a-half miles northeast of project site.</p>	<p>Yes. Located in the Background viewshed (5 to 15 miles).Based on the scale of the project, its low profile structures and distance, the County Center II Expansion/County and Imperial County Office of Education would not be visible from the project site but would change the character of the region through development of previously vacant land.</p>	<p>The County Center II Expansion/County and Imperial County Office of Education is a small scale project that would expand existing civic uses in the City of El Centro. The proposed project would expand existing development patterns already emerging in this portion of the city. The Proposed Action in combination with the County Center II Expansion/County and Imperial County Office of Education would not have an adverse cumulative impact based on distance between the two projects and overall visual quality of the area.</p>
3	<p>Imperial Solar Energy Center West</p> <p>Approximately nine miles northwest of project site.</p>	<p>Yes. Transmission lines may be visible in the Background viewshed (5 to 15 miles).</p>	<p>Although the Imperial Solar Energy Center West project would add additional overhead transmission lines to the background viewshed of the project site, no scenic vistas would be obstructed. The Proposed Action in combination with Imperial Solar Energy Center West would not have an adverse cumulative impact based on distance between the two projects and overall visual quality of the area.</p>

**TABLE 5.1-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
4	<p>Imperial Solar Energy Center South</p> <p>Adjacent to southern boundary of project site.</p>	<p>Yes. The Imperial Solar Energy Center South is in the Foreground/Middleground viewshed (3.5 miles or less) immediately adjacent to the southern boundary of the project site.</p>	<p>The Imperial Solar Energy Center South project would convert rural agricultural lands to a solar facility similar to the proposed project. Although the character of the site and surrounding areas would change, including areas adjacent to the project site, no scenic vistas or areas with high aesthetic qualities would be adversely impacted. The Imperial Solar Energy Center South project would extend the change in character of the area surrounding the project site from agricultural to solar facility similar to the changes associated with the proposed project. The Proposed Action in combination with Imperial Solar Energy Center South would not have an adverse cumulative impact based on the overall visual quality of the area.</p>
5	<p>Mount Signal Solar Farm I</p> <p>Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.</p>	<p>Yes. Mount Signal Solar Farm I is in the Foreground/Middleground viewshed (3.5 miles or less).</p>	<p>Although the Mount Signal Solar Farm I project would add a large solar facility to the Foreground/Middle-ground viewshed of the project site, no scenic vistas would be obstructed. The overall visual quality of the area is not of high aesthetic quality so while the conversion of the area in the vicinity of the proposed project site from rural agricultural to solar facility would be noticeable, visual quality would not be dramatically degraded. The Proposed Action in combination with the Mount Signal Solar Farm I would not have an adverse cumulative impact based on the overall visual quality of the area.</p>

**TABLE 5.1-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
6	Campo Verde Approximately two miles northwest of the northern-most portion of the project site.	Yes. Campo Verde is in the Foreground/Midground viewshed (3.5 miles or less).	Although the Campo Verde project would add a large solar facility to the Foreground/Middle-ground viewshed of the project site, no scenic vistas would be obstructed. Agricultural lands between the project site and the Campo Verde project would provide a buffer between the two projects. Furthermore, the overall visual quality of the area is not of high aesthetic quality. The Proposed Action in combination with Campo Verde would not have an adverse cumulative impact based on the overall visual quality of the area.
7	Mayflower Solar Farm Project Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. The Mayflower Solar Farm Project is outside of the Background viewshed of 5 to 15 miles. However, it is a reasonably foreseeable solar project that has submitted an application and currently is undergoing environmental review with Imperial County.	The Mayflower Solar Farm Project is outside the background viewshed of the project site. However, development of the Mayflower Solar Farm Project but would change the rural agricultural and undeveloped character of the overall region and the northern Imperial Valley. This area is sparsely populated but would be altered by the introduction of a solar facility and change the overall aesthetic of the region to facilities which appear industrial in nature. The Proposed Action in combination with Campo Verde would not have an adverse cumulative impact based on the overall visual quality of the area.
8	Arkansas Solar Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. Arkansas Solar is outside of the Background viewshed of 5 to 15 miles. However, it is a reasonably foreseeable solar project that has submitted an application and currently is undergoing environmental review with Imperial County.	The Arkansas Solar Project is outside the background viewshed of the project site. However, development of the Mayflower Solar Farm Project but would change the rural agricultural and undeveloped character of the overall region and the northern Imperial Valley. This area is sparsely populated but would be altered by the introduction of a solar facility and change the overall aesthetic of the region to facilities which appear industrial in nature. The Proposed Action in combination with Arkansas Solar would not have an adverse cumulative impact based on distance between the two projects and the overall visual quality of the area.

**TABLE 5.1-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
9	<p>Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. Sonora Solar is outside of the Background viewshed of 5 to 15 miles. However, it is a reasonably foreseeable solar project that has submitted an application and currently is undergoing environmental review with Imperial County.</p>	<p>The Sonora Solar Project is outside the background viewshed of the project site. However, development of the Mayflower Solar Farm Project but would change the rural agricultural and undeveloped character of the overall region and the northern Imperial Valley. This area is sparsely populated but would be altered by the introduction of a solar facility and change the overall aesthetic of the region to facilities which appear industrial in nature. The Proposed Action in combination with Sonora Solar would not have an adverse cumulative impact based on distance between the two projects and the overall visual quality of the area.</p>
10	<p>Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. Alhambra Solar is outside of the Background viewshed of 5 to 15 miles. However, it is a reasonably foreseeable solar project that has submitted an application and currently is undergoing environmental review with Imperial County.</p>	<p>The Alhambra Solar Project is outside the background viewshed of the project site. However, development of the Mayflower Solar Farm Project but would change the rural agricultural and undeveloped character of the overall region and the northern Imperial Valley. This area is sparsely populated but would be altered by the introduction of a solar facility and change the overall aesthetic of the region to facilities which appear industrial in nature. The Proposed Action in combination with Alhambra Solar would not have an adverse cumulative impact based on distance between the two projects and the overall visual quality of the area.</p>
11	<p>Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	<p>Yes. Acorn Greenworks is in the Foreground/Midground viewshed less than one mile west of the northwest boundary of the project site (3.5 miles or less).</p>	<p>Although the Acorn Greenworks project would add a large solar facility with overhead transmission line to the Foreground/Midground viewshed of the project site and change the character from rural and agricultural to industrial, no scenic vistas would be obstructed. Agricultural lands between the project site and the Acorn Greenworks project would provide a buffer between the two projects. Furthermore, while a visual change would occur, the overall visual quality of the area is not of high aesthetic quality and</p>

**TABLE 5.1-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
			no scenic resources would be adversely impacted. The Proposed Action in combination with Acorn Greenworks would not have an adverse cumulative impact based on distance between the two projects and the overall visual quality of the area.
12	Calexico I-A Immediately adjacent to southern and eastern portions of the project site	Yes. Calexico I-A is in the Foreground/Middle-ground viewshed immediately adjacent to the southern and eastern boundaries of the project site (3.5 miles or less).	The Calexico I-A project would convert rural agricultural lands to a solar facility similar to the proposed project. Although the character of the site and surrounding areas would change, including southern and eastern areas adjacent to the proposed site, no scenic vistas or areas with high aesthetic qualities would be lost. The Calexico I-A project would extend the change in character of the area surrounding the project site from agricultural to solar facility similar to the changes associated with the proposed project. The Proposed Action in combination with Calexico I-A would not have an adverse cumulative impact based on the overall visual quality of the area.
13	Calexico I-B Immediately adjacent to southern portion of project site.	Yes. Calexico I-B is in the Foreground/Middle-ground viewshed immediately adjacent to southern portion of project site (3.5 miles or less).	The Calexico I-B project would convert rural agricultural lands to a solar facility similar to the proposed project. Although the character of the site and surrounding areas would change, including the southern areas adjacent to the proposed site, no scenic vistas or areas with high aesthetic qualities would be lost. The Calexico I-B project would extend the change in character of the area surrounding the project site from agricultural to solar facility similar to the changes associated with the proposed project. The Proposed Action in combination with Calexico I-B would not have an adverse cumulative impact based on the overall visual quality of the area.
14	Calexico II-A Approximately three miles southeast of	Yes. Calexico II-A is in the Foreground/Middle-ground viewshed approximately three miles southeast of eastern portion of project site (3.5	Although the Calexico II-A project would add a large solar facility to the Foreground/Middleground viewshed of the project site, no scenic vistas would be obstructed. Agricultural lands between the project site and the Calexico II-A project would provide a buffer

**TABLE 5.1-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO VISUAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Visual Resources
	eastern portion of project site.	miles or less).	between the two projects. Furthermore, the overall visual quality of the area is not of high aesthetic quality. The Proposed Action in combination with Calexico II-A would not have an adverse cumulative impact based on the overall visual quality of the area.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. Calexico II-B is in the Foreground/Midleground viewshed approximately one mile east of eastern portion of project site (3.5 miles or less).	Although the Calexico II-B project would add a large solar facility to the Foreground/Midleground viewshed of the project site, no scenic vistas would be obstructed. Agricultural lands between the project site and the Calexico II-B project would provide a buffer between the two projects. Furthermore, the overall visual quality of the area is not of high aesthetic quality. The Proposed Action in combination with Calexico II-B would not have an adverse cumulative impact based on the overall visual quality of the area.

Even if environmental review has not been completed for the cumulative projects described in **Table 5.1-1**, their effects were considered in the cumulative impacts analyses in this EIR/EA. Thirteen reasonably foreseeable locally cumulative projects that would be within the viewshed of the Proposed Action or an alternative include:

- Imperial Valley Solar
- Ocotillo Sol
- North Gila to Imperial Valley #2 Transmission Line
- Dixieland Connection to Imperial Irrigation District Transmission System
- Solar Reserve Imperial Valley
- Imperial Solar Energy Center West
- Mount Signal Solar Farm I
- Campo Verde
- Acorn Greenworks
- Calexico I-A
- Calexico I-B
- Calexico II-A
- Calexico II-B

These thirteen solar energy projects would share similar industrial characteristics with the Proposed Action or an alternative with variations in size (both acreage of solar field and number of megawatts generated) and length, configuration and structure of transmission lines (linear feet vs. miles, single-circuit vs. double-circuit, pole vs. lattice). The areas affected by development of these projects in the vicinity of the proposed project site are not particularly scenic and do not have high aesthetic quality. Transmission line components of the projects would have at least a portion that would extend through Utility Corridor N on BLM land. This corridor is specifically designated for electrical transmission lines. While these features would be visible, no highly scenic vistas would be obstructed. Likewise, the change in character or land use from rural agricultural and undeveloped lands to solar facilities, while noticeable, would not adversely impact scenic views or compromise highly scenic landscapes. Therefore, the contribution of the Proposed Action or an alternative to cumulative impacts to visual resources is less than cumulatively considerable both individually (each project plus the Proposed Action or an alternative) and collectively (all thirteen projects plus the Proposed Action or an alternative) on a locally cumulative basis.

C. Past and Present Regionally Cumulative

No past and present regionally cumulative projects are included in the cumulative list of projects.

D. Reasonably Foreseeable Regionally Cumulative

On a regional scale, six reasonably foreseeable projects would, along with the Proposed Action or an alternative, contribute to the sense of industrialization of the landscape in the northern and southern Imperial Valley and would contribute to the conversion of undeveloped vacant, rural, and agricultural parcels of land to landscapes with a prominent industrial character. These projects include:

- Mayflower Solar Farm Project
- Arkansas Solar
- Sonora Solar
- Alhambra Solar

- North Gila to Imperial Valley #2 Transmission Line
- Solar Reserve Imperial Valley

All six solar projects would share similar industrial characteristics with the Proposed Action or an alternative in terms of having PV panels, towers and overhead transmission lines. While these sites are well over 15 miles from the project site, they would contribute to the change in the overall character of the Imperial Valley. Typically, solar projects and supporting facilities (such as transmission lines) are in unpopulated areas. This portion of the County, east of the Yuha Desert, is primarily flat and lacking any significant aesthetic features. Likewise the areas further north, to the east of the Salton Sea are not considered highly scenic. Therefore, the project's contribution to cumulative impacts to visual resources is minimal both individually (each project plus the Proposed Action or an alternative) and collectively (all thirteen projects plus the Proposed Action or an alternative) on a regionally cumulative basis.

5.1.4 CUMULATIVE VISUAL RESOURCE IMPACTS

5.1.4.1 Direct and Indirect Impacts

A. Construction

If construction at the thirteen local cumulative project locations were to occur at the same time as the Proposed Action or an alternative, construction activities, equipment and night lighting from these sites would combine with construction activities occurring on the proposed project site. Likewise, if the thirteen local cumulative projects were to occur consecutively before or after construction of the Proposed Action or an alternative, cumulative impacts to visual resources would also occur. Overall, construction of the Proposed Action or an alternative in combination with construction other cumulative projects in the project vicinity (Foreground/Midground, 3.5 miles or less and Background 15 to 5 miles) would lead to the presence of heavy equipment, dust, fencing, materials and supplies in the local project region for several years. Thus, the Proposed Action or an alternative would contribute cumulatively to direct visual impacts on a temporary basis. Following construction, the equipment and associated supplies would be removed.

B. Operations and Maintenance

Local Cumulative Area

Industrial projects, such as the proposed Centinela Solar Energy Project, include large, highly visible structural elements. The inclusion of tower structures and acres of PV panels differ from residential or commercial developments in terms of potential visibility and visual character. Several solar energy projects would share many of the same characteristics of the Proposed Action or an alternative and would be within the same field of view as the Proposed Action or an alternative. These projects would exhibit similar structural form, structural complexity, and industrial character as project. The projects include:

- "S" Line Upgrade 230-kV Transmission Line Project (under construction, estimated completion December 2015)
- County Center II Expansion/County and Imperial County Office of Education
- Dixieland Connection to Imperial Irrigation District Transmission System
- Sunrise Powerlink 500-kV Transmission Line (under construction, estimated completion December 2012)

5.0 CUMULATIVE IMPACTS

- Imperial Solar Energy Center South
- Imperial Valley Solar
- Ocotillo Sol
- North Gila to Imperial Valley #2 Transmission Line
- Solar Reserve Imperial Valley
- Imperial Solar Energy Center West
- Mount Signal Solar Farm I
- Linda Vista
- Campo Verde
- Acorn Greenworks
- Calexico I-A
- Calexico I-B
- Calexico II-A
- Calexico II-B

The Proposed Action or an alternative, in combination with the 18 other locally cumulative projects, would result in a moderate increase in industrial character and solar facility prominence in the vicinity of the project site. In each case, the Proposed Action or an alternative, in combination with the individual cumulative projects, would result in a perceived increase in industrialization of the landscape but would not otherwise compromise aesthetically distinctive or highly scenic resources. The Acorn Greenworks project, Campo Verde and Imperial Solar Energy Center South would all border the Yuha Basin Area of Critical Environmental Concern (ACEC). Likewise, associated electrical transmission infrastructure in Utility Corridor N would also align through the Yuha Basin ACEC. The reasonably foreseeable projects along the I-8 corridor include Imperial Solar Energy Center West, Imperial Valley Solar and Campo Verde. In addition to the proposed project, Calexico II-A, Calexico II-B and Mount Signal Solar Farm I would all border the SR 98 corridor. All of these projects would contribute to the sense of industrialization of the landscape in the southern portion of the Imperial Valley. Visual quality of the area would be drastically altered from undeveloped desert and rural agricultural land to electrical towers and thousands of acres of solar fields. The introduction of these facilities represents a substantial visual contrast from the current undeveloped nature of the area. The resulting alteration would result in direct cumulative impacts to visual resources on a local level during operations and maintenance.

Regional Cumulative Area

The cumulative contribution of the Proposed Action or an alternative must also be considered in combination with reasonably foreseeable projects within the larger context of the Imperial Valley. All of the projects identified in **Table 5.1-1** and **Table 5.1-2** would change the overall character of the region as they are in the Imperial Valley. Several projects are to the north near the Salton Sea, one is 30 miles east of the Imperial Valley Substation and a transmission line is proposed that would extend from Yuma County in Arizona to the Imperial Valley Substation. These projects include:

- Mayflower Solar Farm Project
- Sonora Solar
- North Gila to Imperial Valley #2 Transmission Line
- Arkansas Solar
- Alhambra Solar
- Solar Reserve Imperial Valley

All of these solar projects, in addition to the Proposed Action or an alternative, would contribute to the conversion of natural desert landscape and rural agricultural lands to landscapes with prominent industrial character (complex industrial forms and lines and surface textures and colors not found in natural desert landscapes). However, no existing highly scenic views or aesthetically unique or distinctive landscape would be forfeited by the introduction of these types of projects. The project

represents conversion from a natural environment of agricultural fields to built environment with an industrial character. The area is unpopulated and no residents would be subject to alteration of views in association with the proposed solar projects. Therefore, there would be a weak direct cumulative impact to visual resources from the combination of the Proposed Action or an alternative and the reasonably foreseeable projects listed above, both individually (each project plus the Proposed Action or an alternative) and collectively (all projects plus the Proposed Action or an alternative) on a regional basis during operations and maintenance.

C. Decommissioning

At the end of the proposed project/Proposed Action's useful life approximately 30+ years in the future, it would be decommissioned and dismantled. Cumulative impacts associated with decommissioning of the proposed project or an alternative would include the removal and disposal of Gen-tie Line structures and wiring on BLM land, as well as all towers, wiring, PV panels, inverter structures and common services area facilities on private lands. Following decommissioning, the Applicant proposes that the CSE Facility site be reclaimed for agricultural uses. An Agricultural Reclamation Plan identifying procedures for returning the CSE Facility site to a condition to support agriculture would be submitted to the Imperial County Department of Planning and Development Services by the Applicant. The Agricultural Reclamation Plan, when implemented, would result in visual recovery of lands disturbed by decommissioning to agricultural uses. The Applicant is required to develop and implement a Reclamation Plan to address Gen-tie Line disturbances on BLM land. This Reclamation Plan would be approved by BLM prior to the initiation of construction of the Gen-tie Line on BLM and must address in detail the removal of Gen-tie Line equipment and restoration of affected areas that will occur at the end of the life of the project. The termination and restoration procedures will attempt to restore and reclaim the landscape as near to original conditions as practicable.

In the interim, the complete removal of the facility would leave a prominent direct (at the time of decommissioning) and indirect (continuing into the future) visual impact over the entire CSE Facility site due to the contrast created between graded, disturbed soil areas and the surrounding agricultural fields. Visual recovery from land disturbance of closure and decommissioning would likely occur only over several years. Therefore, decommissioning and restoration would not immediately eliminate the Proposed Action or an alternative's contribution to local and regional cumulative impacts on visual resources. Temporary direct and indirect cumulative visual impacts would occur until re-vegetation of the area is established.

5.1.4.2 CEQA Significance Determinations

The contribution of the proposed project to the visible industrialization of the desert landscape and rural agricultural character of the project area would constitute a less than significant visual impact when considered in the context of existing cumulative conditions and reasonably foreseeable projects. In addition, the wide-sweeping visual changes would have cumulative impacts in both the local project viewshed and the regional context that encompasses the Yuha Desert and the Imperial Valley.

Note, criterion 2 was scoped out as part of the Initial Study and is not discussed below.

Adverse effect on Scenic Vista

- 1) Have a substantial adverse effect on a scenic vista.

As described in the Affected Environment discussion of Section 3.1 and in Environmental Consequences (subsection 4.1.3 of Section 4.1) of Visual Resources, no designated scenic vistas were identified in the

project area. In addition, the overall character of the southern portion of Imperial County is largely undeveloped and rural in nature. No highly scenic areas are in this portion of the Imperial Valley. Likewise, the eastern portion of the Yuha Desert in the vicinity of the project site is not highly scenic. Utility Corridor N in the Yuha Basin Area of Critical Environmental Concern (ACEC) currently dominates the visual landscape in this portion of the Yuha Desert. The proposed project would add to the infrastructure currently within this utility corridor, but is considered an allowed use. While the presence of infrastructure within this corridor is visible and provides the most prominent vertical and horizontal overhead features, no scenic views are obstructed. Thus, the Proposed Action's contribution to cumulative visual impacts in the Yuha Desert would be less than cumulatively considerable under CEQA.

The proposed project would also be visible in the same field of view as the reasonably foreseeable locally cumulative projects identified in the previous section. The proposed project plus the reasonably foreseeable projects would contribute to the conversion of rural agricultural lands to areas with prominent industrial character (complex industrial forms and lines and surface textures and colors not found rural agricultural landscapes). However, the project site is not a designated scenic vista, nor has the Imperial County General Plan designated the project site as an important visual resource (Imperial County, 2008). SR 98 is not designated as a state scenic highway. Thus the Proposed Action's contribution to cumulative visual impacts in the Imperial Valley would be less than cumulatively considerable under CEQA.

Degrade Existing Visual Character or Quality of the Site

- 3) Substantially degrade the existing visual character or quality of the site and its surroundings.

The proposed project, in conjunction with both the existing and reasonably foreseeable locally cumulative projects, would introduce prominent structures with industrial character into the foreground view from SR 98 (KOP # 3 and #6), and foreground and background views from surrounding roadways (Brockman Road KOP #1, 2, 4 and Fisher Road, KOP #5). The resulting visual change would substantially alter the existing rural agricultural character of the site. However, the overall area is not considered highly scenic. In addition, the area is unpopulated with the primary viewers being travelers along SR 98 and I-8. Views for travelers occurs for a limited duration. While some foreground views may be dominated by solar infrastructure, distant views of mountain ranges to the west would still be visible. Thus, the Proposed Action's contribution to cumulative impacts to degradation of existing visual character would be considered less than cumulatively considerable under CEQA.

New Source of Substantial Light or Glare

- 4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The proposed project, in conjunction with both existing and reasonably foreseeable cumulative projects, is not expected to create a new source of substantial light that would adversely affect nighttime views in the area. While the proposed project would introduce some nighttime light, the project would be designed to avoid a substantial change in illumination in the existing night sky environment (refer to discussion under subsection 4.1.3 in Section 4.1).

With regard to glare, the PV modules proposed as part of the project would use anti-reflective coatings to increase conversion efficiency and would not create a source of glare during sunlight hours. No materials are proposed that would reflect glare upwards. Each individual project is subject to review at the County level as well as by the Federal Aviation Administration to determine if any safety issues with regard to glare would occur for motorists or aircraft. Mitigation for other reasonably foreseeable

projects, if necessary, would be required on a project-by-project basis. Therefore, the proposed project's contribution to light and glare is considered less than cumulatively considerable under CEQA.

5.1.4.3 NEPA IMPACT ANALYSIS

The Proposed Action or an alternative would contribute cumulatively to direct visual impacts on a temporary basis. Following construction, the equipment and associated supplies would be removed. The Proposed Action or an alternative, in combination with the 18 other locally cumulative projects, would result in a moderate increase in industrial character and solar facility prominence in the vicinity of the project site during operations and maintenance. On a regional basis, there would be a weak direct cumulative impact to visual resources from the combination of the Proposed Action or an alternative and the reasonably foreseeable projects listed above, both individually (each project plus the Proposed Action or an alternative) and collectively (all projects plus the Proposed Action or an alternative) during operations and maintenance.

It is not possible to predict the timing of decommissioning of other cumulative projects. However, decommissioning and restoration the project site would eliminate the Proposed Action or an alternative's contribution to local and regional cumulative impacts on visual resources. It should be noted that restoration would occur over a period of time as vegetation is re-established. Until the vegetation is established, temporary direct and indirect cumulative visual impacts would occur.

5.2 LAND USE AND SPECIAL DESIGNATIONS

A cumulative impact to land use would occur in a situation where the proposed project/Proposed Action or an alternative, in combination with other cumulative projects, would result in conflicts with applicable plans, policies or regulations or result in incompatibilities with surrounding areas. With regard to Special Designations on lands managed by the BLM, a cumulative impact would occur if the Proposed Action or an alternative, in combination with other cumulative projects, would compromise management practices in the Yuha Basin Area of Critical Environmental Concern. The ACEC special designation is intended to protect and prevent damage to historic, cultural, or scenic values through management of activities and uses allowed within this special designation.

5.2.1 GEOGRAPHIC SCOPE

The geographic scope for the analysis of cumulative impacts related to land use is the area within a 15-mile radius of the project site. This distance was determined based on capturing projects within a reasonable distance of the project site. While additional solar projects are further north, to the south and southeast of the Salton Sea, there is an intervening area of approximately 10 to 12 miles in between the 15-mile radius and this group of solar energy projects. Based on the distance separating the next nearest solar projects, a 15-mile radius was determined to be a reasonable distance for cumulative projects relative to land use. Cumulative impacts could result from conflict with any applicable land use plan, policies, or regulation adopted for the purposed of avoiding or mitigating environmental impacts. Therefore, this analysis includes solar energy projects in Imperial County which may incur similar impacts to existing on-site land uses and surrounding areas, and would also have to undergo a similar consistency analysis for plans, policies, and regulations as the proposed Centinela Solar Energy Project.

The Yuha Basin Area of Critical Environmental Concern (ACEC) is a special designation identified on the California Desert Conservation Area Plan (CDCA) (BLM, 1980). A portion of the project site (Gen-tie Line on BLM land in Utility Corridor N) is in the Yuha Basin ACEC. Due to the presence of this special designation area and the Proposed Action or an alternative's potential contribution to cumulative

impacts on this area, the geographic scope of analysis with regard to special designations is one-mile on either side of the eastern boundary of the Yuha Basin ACEC. Locations most likely to be affected within the special designation area would be included within a one-mile on either side of the eastern boundary of the Yuha Basin. Beyond this one-mile radius, potential impacts associated with short-term fugitive dust, noise, and visual disturbance would be greatly reduced. Potential cumulative impacts could occur for the entire duration of the Proposed Action or an alternative, from the initiation of construction to the conclusion of facility decommissioning.

5.2.2 TIMEFRAME

The timeframe refers to the duration over which impacts associated with land use and special designations would occur: short-term or long-term. Short-term impacts to land use and special designations would occur during the construction and decommissioning period. Long-term impacts associated with land use and special designations would occur as a result of developing a solar facility on the project site and the resulting change in land use to accommodate the project over its operational life (approximately 30+ years).

5.2.3 EXISTING CUMULATIVE CONDITIONS

5.2.3.1 Past, Present and Reasonably Foreseeable Projects

The existing cumulative conditions include past, present, and reasonably foreseeable future actions that could conflict with existing land use patterns or special designations. Past and present projects represent those that have been developed and are currently operational or projects that are currently under construction and will be operational in the near future (1 to 2 years or less). Reasonably foreseeable projects are those for which an application has been submitted to the appropriate agency, are currently undergoing environmental review, or will be pursuing environmental review in the near future (1 to 2 years or less). Activity must be occurring in order for the project to be reasonably foreseeable. Projects which have started the application or environmental review process but have been stalled over six months are not considered reasonably foreseeable.

Table 5.2-1 provides a listing of current and reasonably foreseeable projects on BLM lands. The list is comprised of solar energy projects and associated BLM-authorized actions/activities. **Table 5.2-2** includes proposed or approved projects in Imperial County as well as nearby incorporated cities, and other actions/activities that the Lead Agencies consider reasonably foreseeable. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. The impacts of these projects were considered in the cumulative impacts analysis even if environmental review has not been completed. **Table 5.2-1** and **Table 5.2-2** summarizes the cumulative projects that would have potential to combine with the Proposed Action or an alternative and result in cumulative impacts to land use and special designations

A. Land Use

Past and present projects occurring in the vicinity of the proposed project site on private lands primarily include agricultural operations. Overall, the project area consists of undeveloped land used for agriculture, open space land and desert. Cumulative projects identified in **Table 5.2-1** and **Table 5.2-2** have the potential to combine with Proposed Action or an alternative and result in cumulative impacts to land use. Of the cumulative projects listed in these tables and identified on **Figure 5.0-1**, the following is a list of reasonably foreseeable projects which comprise the cumulative conditions for land use:

- Imperial Solar Energy Center South
- Mount Signal Solar Farm I
- Calexico I-A
- Calexico I-B
- Calexico II-A
- Calexico II-B
- Acorn Greenworks
- Campo Verde
- Imperial Solar Energy Center West
- Imperial Valley Solar
- Linda Vista
- County Center II Expansion/County and Imperial County Office of Education

B. Special Designations

Projects on lands under the jurisdiction of the BLM include multiple solar energy projects as well as electrical transmission facilities in Utility Corridor N. The Yuha Basin is designated Multiple-Use Class M (Moderate Use). This Class provides for a wide variety of present and future uses such as mining, livestock grazing, recreation, energy and utility development. Class M management is also designed to conserve desert resources and to mitigate damage to those resources which permitted uses may cause (BLM, 1980, p. 15). Multiple-Use Class M is consistent with ACEC Goal 2: Provide for other uses in the designated areas compatible with the protection and enhancement of the significant natural and cultural resources (BLM, 1980, p. 123).

Past and ongoing development of electrical transmission facilities on lands managed by the BLM is allowed within Utility Corridor N. Designated utility corridors support joint-use corridors for transmission facilities and minimize multiple, separate right-of-ways through the Yuha Basin ACEC. However, past and ongoing development on BLM lands within the Yuha Basin ACEC has resulted in alterations to the natural landscape. Air quality, noise and visual changes have occurred within this special designation to accommodate existing electrical transmission projects. Temporary air quality and noise impacts have been, and continue to be, reduced through mitigation measures. However, long-term impacts to visual resources in this special designation remain (i.e. electrical towers and overhead linear transmission lines).

Multiple existing and proposed electrical transmission projects could contribute to the cumulative conditions for the Yuha Basin ACEC special designation with regard to short-term construction air quality, noise and visual resources impacts. Consideration of the following present and reasonably foreseeable projects identified in **Table 5.2-1** and **Table 5.2-2** and shown on **Figure 5.0-1** was used to develop this analysis of cumulative effects for the Yuha Basin ACEC special designation:

- “S” Line Upgrade 230-kV Transmission Line Project (Currently under construction. Estimated completion December, 2015)
- Imperial Valley Solar (Application submitted to BLM for amendment to right-of-way grant for Change of Technology. No planned construction.)
- Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation (Currently under construction. Estimated completion, December 2012).
- Ocotillo Sol (Construction anticipated to begin in 2013)
- North Gila to Imperial Valley #2 (Construction anticipated to begin in 2014)
- Dixieland Connection to Imperial Irrigation District Transmission System (Construction anticipated to begin in 2012; completion anticipated mid-2013)
- Solar Reserve Imperial Valley (Construction to begin in 2014)

These projects were selected based on the location within one-mile on either side of the eastern border of the Yuha basin ACEC. Moreover, all of these projects would have a segment of transmission line within Utility Corridor N within the Yuha Basin ACEC. In addition, the solar field sites for Imperial Valley Solar, Imperial Solar Energy Center West, Campo Verde, Acorn Greenworks, Imperial Solar Center South and the Proposed Action or an alternative would all border the Yuha Basin ACEC. These reasonably foreseeable projects could combine with potential impacts of the Proposed Action or an alternative to affect the Yuha Basin ACEC special designation within the geographic extent of this cumulative analysis.

All but one of the cumulative projects listed above (Imperial Valley Solar) have the potential of combining impacts with the Proposed Action or an alternative, as construction schedules would overlap. The CSE Facility site is planned to be constructed over 22 to 28 months with construction of the initial phase estimated to begin in the fourth quarter of 2011 or first quarter 2012. Operations and maintenance of the above projects are also anticipated to overlap the 30+ year life of the Proposed Action or an alternative. Therefore, effects of these projects were considered in the cumulative impacts analyses below.

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**TABLE 5.2-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
A	<p>“S” Line Upgrade 230-kV</p> <p>Approximately four miles north of the project site.</p>	<p>Yes. A segment of the “S” Line Upgrade 230-kV Transmission Line Project would be within the same utility corridor (Utility Corridor N) as the proposed Gen-tie Line (within one-mile on the western side of the eastern boundary of the Yuha Basin ACEC).</p>	<p>The “S” Line Upgrade 230-kV Transmission Line Project is included in the “Land Use Activities” category of Transmission Lines as identified in Table 1, Multiple-Use Class Guidelines, of the CDCA Plan. Transmission lines are allowed within designated corridors on BLM lands (BLM, 1980, p. 15).A portion of the “S” Line Upgrade 230-kV Transmission Line Project would align through Utility Corridor N (BLM, 1985, p. 20).Because the “S” Line Upgrade 230-kV Transmission Line Project and the proposed Gen-tie Line are allowed uses within this corridor, a Plan Amendment to the CDCA Plan is not needed and no land use impact would occur. Likewise, the Gen-tie Line and S” Line Upgrade 230-kV Transmission Line Project would be confined to Utility Corridor N. Therefore, minor changes to the Yuha Basin ACEC special designation would occur with no adverse impacts.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. The Imperial Valley Solar project is on BLM land.</p>	<p>The Imperial Valley Solar project is not in a BLM Area of Critical Environmental Concern. Thus, no impact to a special designation would occur.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site.</p>	<p>Yes. The Sunrise 500-kV Line would extend northwest from the Imperial Valley Substation. The substation is also the point of interconnection for the proposed Gen-tie Line. A segment of the Sunrise 500-kV Line would be</p>	<p>The Sunrise 500-kV Line is included in the “Land Use Activities” category of Transmission Lines as identified in Table 1, Multiple-Use Class Guidelines, of the CDCA Plan. Transmission lines are allowed within designated corridors on BLM lands (BLM, 1980, p. 15).A segment approximately 10 miles long would align northwest through Utility Corridor N from the Imperial Valley</p>

**TABLE 5.2-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
		within Utility Corridor N as would the proposed Gen-tie Line (within one-mile on western side of the eastern boundary of the Yuha Basin ACEC).	Substation. Because the Sunrise 500-kV Line and the proposed Gen-tie Line are allowed uses in a designated utility corridor, a Plan Amendment to the CDCA Plan is not needed and no land use impact would occur. Likewise, the proposed Gen-tie Line and the Sunrise 500-kV Line would be confined to Utility Corridor N. Therefore, minor changes to the Yuha Basin ACEC special designation would occur with no adverse impacts.
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	Yes. Ocotillo Sol is within the 15-mile radius considered for cumulative projects.	Ocotillo Sol proposes a photovoltaic solar field within Utility Corridor N directly south of the Imperial Valley Substation. This is a land use that may be allowed after NEPA requirements are met for uses proposed in Utility Corridor N. The proposed land use would require a CDCA Plan amendment.
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	No. The proposed SDG&E Geotechnical Investigation would occur over a period of one week with no long term change to land use patterns.	The duration and scope of the SDG&E Geotechnical Investigation (i.e. bore holes for soil testing) would occur within Utility Corridor N in the Yuha Basin ACEC. The limited scope and duration of the project, combined with adherence to BLM protocols have no impact on land use or the Yuha Basin ACEC special designation.

**TABLE 5.2-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. A segment of the North Gila to Imperial Valley #2 Transmission Line is within Utility Corridor N which would be shared by the proposed Gen-tie Line (within one-mile on western side of the eastern boundary of the Yuha Basin ACEC).</p>	<p>The North Gila to Imperial Valley #2 Transmission Line would parallel the existing SDG&E 500-kV transmission line to the east of the Imperial Valley Substation thereby resulting in less than significant impacts to land use by following similar alignments. Likewise, transmission lines are an allowed use within Utility Corridor N. Therefore, the North Gila to Imperial Valley #2 Transmission Line would result in minor changes to the Yuha Basin ACEC special designation with no major adverse impacts.</p>
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. Both the proposed Gen-tie Line and the Dixieland Connection would connect to Imperial Valley Substation and are within Utility Corridor N (within one-mile on western side of the eastern boundary of the Yuha Basin ACEC).</p>	<p>A segment of the Dixieland Connection approximately five miles in length is in the Yuha Basin ACEC. However, the alignment is also confined to Utility Corridor N which is a designated corridor for transmission lines. Therefore, minor changes to the Yuha Basin ACEC special designation would occur with no major adverse impacts.</p>

**TABLE 5.2-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
1	Linda Vista Approximately eight miles northeast of project site.	Yes. The Linda Vista project is within the 15-mile radius of project site.	Based on distance from the project site, no land use conflicts would occur between the Linda Vista project and the Proposed Action. This project is not within a BLM special designation and no impact would occur in this regard.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The County Center II Expansion/County and Imperial County Office of Education project is within the 15-mile radius of project site.	Based on distance from the project site, no land use conflicts would occur between the County Center II Expansion/County and Imperial County Office of Education project and the Proposed Action. This project is not within a BLM special designation and no impact would occur in this regard.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. The Imperial Solar Energy Center West is within the 15-mile radius of project site on land within Imperial County with an electrical transmission line extending through BLM land within the Yuha Basin ACEC.	Although the Imperial Solar Energy Center West project would border the Yuha Basin ACEC and construct additional overhead transmission lines within Utility Corridor N, the project is consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. The Imperial Solar Energy Center West project site would be visible from the Yuha Basin ACEC and would alter existing views east from agricultural land to a solar facility. However, no scenic resources are in this area and solar projects are an allowed use with a Conditional Use Permit on land zoned for agriculture. Therefore, minor changes would occur with regard to land use and special designations.

**TABLE 5.2-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
4	<p>Imperial Solar Energy Center South</p> <p>Adjacent to southern boundary of project site.</p>	<p>Yes. The Imperial Solar Energy Center South is within the 15-mile radius of project site on land within Imperial County with an electrical transmission line extending through BLM land within the Yuha Basin ACEC.</p>	<p>Although the Imperial Solar Energy Center South project would border the Yuha Basin ACEC and construct additional overhead transmission lines within Utility Corridor N, the project is consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. The Imperial Solar Energy Center South project site would be visible to the east from southeastern corner of the Yuha Basin ACEC. The project would alter existing views east from agricultural land to a solar facility. The proposed solar project is allowed on land zoned for agriculture in Imperial County with a Conditional Use Permit. Therefore, minor changes would occur with regard to land use and special designations.</p>
5	<p>Mount Signal Solar Farm I</p> <p>Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.</p>	<p>Yes. The Mount Signal Solar Farm I project is within the 15-mile radius of project site on land within Imperial County. The project would connect to a shared 230-kilovolt overhead transmission line extending through BLM land within the Yuha Basin ACEC.</p>	<p>The Mount Signal Solar Farm I project would develop a large solar project on agricultural lands in Imperial County. Solar energy electrical generators, electrical power generating plants, substations, and facilities for the transmission of electrical energy are allowed as conditional uses in Agricultural zones. With approval of a Conditional Use Permit, no conflicts with land use plans or policies would occur. The extension of electrical transmission lines into Utility Corridor N of the Yuha Basin ACEC is also allowed with a grant of right-of-way from BLM. Locating electrical infrastructure within designated utility corridors would minimize multiple right-of-ways within the Yuha Basin ACEC. Therefore, less than significant impacts would occur to this special designation.</p>

**TABLE 5.2-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
6	<p style="text-align: center;">Campo Verde</p> <p>Approximately two miles northwest of the northern-most portion of the project site.</p>	<p>Yes. The Campo Verde project is within the 15-mile radius of the project site on land within Imperial County with the southwestern corner of the project site bordering the Yuha Basin ACEC. The project is anticipated to have electrical transmission facilities extending into Utility Corridor N to connect to the Imperial Valley Substation.</p>	<p>The Campo Verde project would develop a large solar project on agricultural lands in Imperial County bordering the eastern boundary of the Yuha Basin ACEC. Solar energy electrical generators, electrical power generating plants, substations, and facilities for the transmission of electrical energy are allowed as conditional uses in Agricultural zones. With approval of a Conditional Use Permit, no conflicts with land use plans or policies would occur. Extension of electrical transmission lines into Utility Corridor N of the Yuha Basin ACEC is allowed with a grant of right-of-way from BLM. Locating electrical infrastructure within designated utility corridors would minimize multiple right-of-ways within the Yuha Basin ACEC. While alteration of views looking east from the Yuha Basin ACEC would occur in association with the project, the area is not highly scenic and is unpopulated. Therefore, less than significant impacts to land use and special designations would occur.</p>
7	<p style="text-align: center;">Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Mayflower Solar Farm Project is outside the 15-mile radius of the project site.</p>	<p>Insufficient information currently available regarding impacts to land use. This project is not within a BLM special designation and no impact would occur in this regard.</p>

**TABLE 5.2-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
8	<p>Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. Arkansas Solar is outside the 15-mile radius of the project site.</p>	<p>Insufficient information currently available regarding impacts to land use. This project is not within a BLM special designation and no impact would occur in this regard.</p>
9	<p>Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. Sonora Solar is outside the 15-mile radius of the project site.</p>	<p>Insufficient information currently available regarding impacts to land use. This project is not within a BLM special designation and no impact would occur in this regard.</p>

**TABLE 5.2-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
10	Alhambra Solar Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. Alhambra Solar is outside of the project viewshed background distance of 15 miles or less.	Insufficient information currently available regarding impacts to land use. This project is not within a BLM special designation and no impact would occur in this regard.
11	Acorn Greenworks Less than one mile west of northwestern boundary of the project site.	Yes. The Acorn Greenworks project is within the 15-mile radius of project site on land in unincorporated Imperial County bordering the eastern boundary of the Yuha Basin ACEC. The proposed electrical transmission line is anticipated to extend through Utility Corridor N.	Although the Acorn Greenworks project would border the Yuha Basin ACEC and add an additional overhead transmission line within Utility Corridor N, the project would be consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. The project site would be visible from the Yuha Basin ACEC and would alter existing views east from agricultural land to a solar facility. While alteration of views looking east from the Yuha Basin ACEC would occur in association with the project, the area is not highly scenic and is unpopulated. The proposed project is allowed on lands zoned for agriculture in Imperial County with a Conditional Use Permit. Therefore, less than significant impacts to land use and special designations would occur.
12	Calexico I-A Immediately adjacent to southern and eastern portions of the project site	Yes. The Calexico I-A Project is within the 15-mile radius of project site on land in unincorporated Imperial County. The proposed electrical transmission line is anticipated to extend through Utility Corridor N.	The Calexico I-A project is allowed on lands zoned for agriculture in Imperial County with a Conditional Use Permit. No conflicts with surrounding lands or land use plans would occur. The project would be consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. Therefore, less than significant impacts to land use and special designations would occur.

**TABLE 5.2-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO LAND USE AND SPECIAL DESIGNATIONS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Land Use and Special Designations
13	Calexico I-B Immediately adjacent to southern portion of project site.	Yes. The Calexico I-B Project is within the 15-mile radius of project site on land in unincorporated Imperial County. The proposed electrical transmission line is anticipated to extend through Utility Corridor N.	The Calexico I-B project is allowed on Imperial County land with a Conditional Use permit. No conflicts with surrounding lands or land use plans would occur. The project would be consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. Therefore, less than significant impacts to land use and special designations would occur.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	Yes. The Calexico II-A Project is within the 15-mile radius of project site on land in unincorporated Imperial County. The proposed electrical transmission line is anticipated to extend through Utility Corridor N.	The Calexico II-A project is allowed on Imperial County land with a Conditional Use permit. No conflicts with surrounding lands or land use plans would occur. The project would be consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. Therefore, less than significant impacts to land use and special designations would occur.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. The Calexico II-B Project is within the 15-mile radius of project site on land in unincorporated Imperial County. The proposed electrical transmission line is anticipated to extend through Utility Corridor N.	The Calexico II-B project is allowed on Imperial County land with a Conditional Use permit. No conflicts with surrounding lands or land use plans would occur. The project would be consistent with the CDCA Plan by placing electrical infrastructure within designated corridors. Therefore, less than significant impacts to land use and special designations would occur.

5.2.4 CUMULATIVE LAND USE AND SPECIAL DESIGNATION IMPACTS

5.2.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

The proposed solar projects near the project site would have the potential to cause cumulative impacts. These projects comprise thousands of acres and could potentially conflict with existing land uses. As previously noted, several of the cumulative solar projects identified above are anticipated to be under construction the same time as the Proposed Action or an alternative. As a result, there may be short-term impacts during construction of cumulative projects related to land use and special designations.

Land Use

Land use compatibility impacts could occur during construction of the Proposed Action or an alternative in combination with other cumulative projects. Such impacts could arise as a result of multiple projects being under construction creating nuisances such as dust, exhaust and noise. The project site is in a rural portion of the county devoted predominantly to agriculture with few sensitive receptors. However, there are a few small residential communities along Drew Road that could be impacted by increased traffic volumes on this roadway (e.g. RIO Bend RV Par, Storms Crossing). Currently, some agricultural operations require nighttime harvesting which increases traffic and lighting along area roadways. Traffic associated with harvesting would combine with construction traffic from cumulative projects on area roadways. Likewise, once operational, occasional PV panel washing may occur at night to avoid high temperatures during the day. Nighttime lighting and traffic associated with these activities would combine with cumulative traffic on area roadways and increase traffic volumes for limited durations (e.g. during harvesting or panel washing) and for short periods of time (e.g. limited to few days or weeks several times per year). Therefore, compatibility impacts may occur for limited periods during construction, operations and maintenance and decommissioning of the Proposed Action. Overall, land use conflicts are not considered to be adverse or inhibit operations on the project site or surrounding areas.

Impacts associated with dust, exhaust and noise would be addressed through mitigation measures discussed in Section 4.4 Air Quality and Section 4.8, Noise. Once completed temporary land use conflicts would cease. Therefore, temporary direct cumulative impacts to land use during construction are not considered adverse in association with the Proposed Action or an alternative. Indirect cumulative impacts of construction are discussed under “Operations and Maintenance.”

Special Designations

Construction of multiple solar energy development projects, including the Proposed Action or an alternative, would alter the viewscape within the Yuha Basin ACEC through the presence of construction equipment to erect tower structures and string transmission lines, storage of materials, dust, exhaust, vehicle noise, and increased traffic along area roadways. Cumulative impacts associated with fugitive dust, noise, and visual disturbance would not require any changes to the designations or status of specially designated areas within close proximity to the project site. Thus, the Proposed Action or an alternative would not adversely contribute to direct or indirect cumulative impacts on special designations during construction. Temporary impacts associated with construction activities would cease following completion of the construction phase. Indirect cumulative impacts of construction (i.e. tower structures and transmission lines) are discussed under “Operations and Maintenance.”

B. Operation and Maintenance

Land Use

In considering cumulative land use compatibility impacts, solar projects in Imperial County occur primarily in undeveloped desert lands or rural agricultural areas (refer to subsection 5.15 for cumulative impacts associated with recreational resources). In many cases, the solar sites are in remote and unpopulated areas. In other cases, there may be small communities or residential areas (e.g. RIO Bend RV Park and Storms Crossing located along Drew Road). As a result, development of solar facilities in these areas would not create physical divisions of established residential communities. Thus no cumulative impacts relative to dividing established communities would occur.

Some, if not all, of the cumulative projects described above are anticipated to be operational during the 30+ year operational life of Proposed Action or an alternative. As part of the thousands of acres of land are proposed for solar development in the Imperial County, the Proposed Action or an alternative, could contribute to these cumulative impacts to land use during operations and maintenance. The conversion of rural agricultural and desert lands to solar facilities would preclude existing land uses including agriculture, rangeland, and open space from continuing on these sites. Existing surrounding land uses such as agricultural fields are considered compatible with solar projects. However, solar projects are subject to dust, and particles from periodic spraying being carried by the wind and depositing on PV panels. These represent nuisance issues rather than insurmountable land use incompatibilities or conflicts. With approval of the Conditional Use Permit for the Proposed Action or an alternative, there would be no conflicts with the Imperial County General Plan or zoning. Therefore, the Proposed Action or an alternative would not result in an adverse direct or indirect cumulative impact to land use during operations and maintenance. Indirect cumulative impacts of operations and maintenance to land use (i.e. removal of PV solar panels, inverters, etc.) are discussed under "Decommissioning."

Special Designations

Numerous energy-related development projects, including the Proposed Action or an alternative would modify the surrounding viewscape by adding permanent tower structures and transmission lines. All of the present and reasonably foreseeable projects identified above ("S" Line Upgrade 230-kV Transmission Line Project; Imperial Valley Solar; Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation; Ocotillo Sol; North Gila to Imperial Valley #2; Dixieland Connection to Imperial Irrigation District Transmission System; and Solar Reserve Imperial Valley) would be developed and have similar operations to the Proposed Action or an alternative, but on varying scales. The addition of these features individually, or in combination, would alter existing views within and adjacent to the Yuha Basin ACEC throughout the operational phase of the project. The proposed Gen-tie Line, as well as transmission lines from other projects would be in the eastern portion of the Yuha Basin ACEC within Utility Corridor N. Likewise, solar fields of several cumulative projects would border the northern and eastern boundaries of the Yuha Basin ACEC: Imperial Valley Solar would border the northern boundary while Campo Verde, Acorn Greenworks and Imperial Solar Energy Center South would all border the eastern boundary. Based on proximity, these projects would result in similar direct impacts to alteration of viewscales in the eastern portion of the Yuha Basin ACEC.

Development of the projects in the cumulative scenario, both individually in combination with the Proposed Action or an alternative, and collectively in combination with the Proposed Action or an alternative, would add large- and small-scale industrial, utility-related uses to the southwestern Imperial Valley. Visual changes would occur in association with operation of the Proposed Action or an

alternative as views within the eastern portion of the Yuha Basin ACEC within Utility Corridor N would be altered due to the presence of bordering solar fields. Likewise views looking north and east from the Yuha Basin ACEC would be changed to a more industrial setting. Thus, the visual changes to a special designation would continue during the operations and maintenance phase of the project.

Potential cumulative impacts on the eastern Yuha Basin ACEC could affect visitor attraction to other specially designated areas to the west of the project area such as the Jacumba Mountain Wilderness Area or the Plaster City Off-Highway Vehicle Area. The proliferation of solar projects in the cumulative scenario, in combination, would add acres of industrial, utility-related uses and miles of transmission lines to the southwestern Imperial Valley. Construction and operation of the Proposed Action or an alternative would increase the amount of infrastructure visible in the landscape and within Utility Corridor N which is within the Yuha Basin ACEC special designation areas. Thus, the effects on special designation areas would continue until project facilities are dismantled and the vegetation and landforms of the site are reclaimed. Potential impacts are discussed in Section 4.4, Air Quality, Section 4.8, Noise, and Section 4.1, Visual Resources and mitigation measures for construction, operations and maintenance activities have been proposed to reduce the impacts of the Proposed Action or an alternative. Therefore, the Proposed Action or an alternative would result in a direct cumulative impact to the Yuha Basin ACEC special designation during operations and maintenance through alteration of visual features. Indirect cumulative impacts of operations and maintenance to special designations (i.e. removal of tower structures and transmission lines) are discussed under “Decommissioning.”

C. Decommissioning

Land Use

The decommissioning of the Proposed Action or an alternative is expected to result in temporary direct impacts similar to construction impacts. Decommissioning of other solar energy projects would have the potential to combine with the Proposed Action or an alternative to result in temporary land use conflicts similar to construction (i.e. increases in traffic, disruptions in accessibility to surrounding lands). However, due to the short-term nature of decommissioning activities, the Proposed Action or an alternative’s contribution to cumulative land use impacts (i.e. temporary conflicts or incompatibilities) would occur for a limited duration.

The Applicant plans to restore and reclaim the project site at the end of the project’s operational life or upon expiration of the project’s Conditional Use Permit. The Applicant will develop and implement a Reclamation Plan to address Gen-tie Line disturbances on BLM land which will attempt to restore and reclaim the landscape as near to original conditions as practicable. The Applicant also intends to return the CSE Facility site to a condition capable of supporting agricultural production. The CSE Facility site would be restored based on an Agricultural Reclamation Plan. The Plan is to be reviewed and approved by the Imperial County Planning and Development Services Department prior to issuance of building permits. Therefore, the Proposed Action or an alternative would result in a temporary direct cumulative impact to land use decommissioning associated with dismantling operations. Likewise, an indirect cumulative impact to land use would occur in the interim following removal of equipment and restoration of the project site.

Special Designations

During decommissioning, the proposed project would be dismantled. Cumulative impacts associated with decommissioning and reclamation activities include generation of dust, noise, and visual

disturbance. These impacts would occur for a limited duration and would not require any changes to the designations or status of specially designated areas.

The Applicant will develop and implement a Reclamation Plan to address Gen-tie Line disturbances on BLM land which will attempt to restore and reclaim the landscape as near to original conditions as practicable. This Reclamation Plan in tandem with restoration of the CSE Facility site based on an Agricultural Reclamation Plan will result in restoration of the entire area affected by the Proposed Action or an alternative.

Temporary direct cumulative impacts to special designations would occur in association with dismantling operations for the Proposed Action or an alternative. Likewise, an indirect cumulative impact to the Yuha Basin ACEC special designation would occur in the interim following removal of equipment as revegetation of the area is established.

5.2.4.2 CEQA Significance Determinations

Note, criterion 1 was scoped out as part of the Initial Study and is not discussed further in this analysis.

Conflicts with Applicable Plans

- 2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or Land Use Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

A. Construction

Federal Land Policy and Management Act, 1976

Construction of the proposed Gen-tie Line component of the proposed project is consistent with the Federal Land Policy Management Act (FLPMA) which encourages use of existing right-of-way when practical (Section 503). No conflict with the FLPMA would occur in association with the proposed project. Moreover, the proposed project would not cumulatively contribute to cumulative impacts regarding conflicts with the FLPMA. No cumulatively considerable impact would occur under CEQA.

California Desert Conservation Area (CDCA) Plan, 1980 as Amended

The proposed Gen-tie Line included as part of the proposed project is allowed within Corridor N as identified in the CDCA Plan. The portion of the Gen-tie Line on BLM land for the proposed project will require approval of a Right-of-Way (ROW) grant by BLM to allow construction and operation of the proposed electric line, any required improvements to existing unpaved access roads, and, if necessary, construction of new unpaved access roads within the federal lands managed by the BLM. With the approval of a ROW grant, construction of the proposed project would not conflict with the CDCA Plan. No conflict with the CDCA Plan would occur in association with the proposed project. Moreover, the proposed project would not cumulatively contribute to cumulative impacts regarding conflicts with the CDCA Plan. No cumulatively considerable impact would occur under CEQA.

Yuha Desert Management Plan

The proposed project is within the Yuha Desert Management Plan (YDMP) and is consistent with its goal to reduce impacts from electrical transmission lines and access roads. This is accomplished through locating the Gen-tie Line within Utility Corridor N. Thus, no conflict between the proposed project and the Yuha Desert Management Plan would occur. Moreover, the proposed project would not cumulatively contribute to cumulative impacts resulting from conflicts with the Yuha Desert Management Plan. No cumulatively considerable impact would occur under CEQA.

Flat-tailed Horned Lizard Rangeland Management Strategy

The proposed project will use existing access roads to the extent practicable, particularly where there are multiple existing electric lines with associated access roads thereby minimizing to the extent possible any additional disturbance to desert lands, including habitat for Flat-tailed Horned Lizard. The proposed project is designed to be consistent with the Flat-tailed Horned Lizard Rangeland Management Strategy (Strategy). As such, no conflict with the Strategy would occur. Moreover, the proposed project would not cumulatively contribute to cumulative impacts resulting from conflicts with the Strategy. No cumulatively considerable impact would occur under CEQA.

Imperial County General Plan

The CSE Facility portion of the proposed project is in Imperial County and is subject to the goals and policies of the Imperial County General Plan. The proposed project is a conditionally permitted use under the A-2, A-2-R and A-3 zones, and is considered consistent with the "Agriculture" land use designation. Based on the project's consistency, a General Plan land use amendment would not be required for construction of the proposed project. Therefore, no conflict with the Imperial County General Plan would occur. Moreover, the proposed project would not cumulatively contribute to cumulative impacts regarding the Imperial County General Plan. No cumulatively considerable impact would occur under CEQA.

County of Imperial Land Use Ordinance, Title 9

As part of the proposed project, a CUP application (CUP10-0017) has been filed which would allow development of a solar facility including proposed access, to occur within the A-2, A-2-R and A-3 zones. Thus, the proposed project would be consistent with the land use ordinance and the underlying zoning of the proposed solar facility site. Therefore, no conflict with the County of Imperial Land Use Ordinance would occur. Moreover, the proposed project would not cumulatively contribute to cumulative impacts regarding County of Imperial Land Use Ordinance. No cumulatively considerable impact would occur under CEQA.

Tower structures proposed on private lands as part of the proposed project could be up to 130 feet in height. Heights for non-residential structures and commercial communication towers within zones A-2, A-2-R and A-3 are limited to 120 feet in height and must meet ALUC Plan requirements (Title 9 Division 5: Zoning Areas Established, Section 90508.07 and 90509.07). The Applicant has requested a variance (V10-0060) from the County to allow the towers on private lands under the jurisdiction of Imperial County to exceed the 120-foot height limit. The variance would eliminate for potential for conflicts with the height limit in A-2, A-2-R and A-3 zoning for the proposed project. Therefore, no conflict with the County of Imperial Land Use Ordinance, Title 9 would occur. Moreover, the proposed project would not cumulatively contribute to cumulative impacts regarding the County of Imperial Land Use Ordinance, Title 9. No cumulatively considerable impacts would occur under CEQA.

Airport Land Use Compatibility Plan (ALUCP)

The parcels that comprise the CSE Facility included as part of the proposed project are not within any Airport Land Use Compatibility Zones. The Airport Land Use Commission determined that the proposed project would be consistent with the Airport Land Use Compatibility Plan (ALUCP). Therefore, the land use for the proposed project is compatible with the ALUCP. Moreover, the proposed project would not cumulatively contribute to cumulative impacts regarding the ALUCP. No cumulatively considerable impacts would occur under CEQA.

B. Operations and Maintenance

The cumulative discussion of compatibility with applicable land use plans and policies provided under “Construction” would also apply to Operations and Maintenance of the proposed project. Once the necessary right-of-way grant is approved by BLM and the County has approved the CUP and Variance for the proposed project to be constructed, no additional conflicts with land use plans or policies are anticipated. Therefore, the proposed project would be consistent with applicable land use plans and policies and no conflicts would occur. Moreover, the proposed project would not cumulatively contribute to cumulative impacts involving applicable plans. No cumulatively considerable impacts to applicable plans would occur under CEQA in association with operations and maintenance.

C. Decommissioning

When the proposed project reaches the end of its operational life, the components will be decommissioned and deconstructed. The proposed project would contribute to temporary cumulative impacts associated with air quality, noise, transportation and circulation. However, the proposed project would not contribute to cumulative impacts to land use plans and policies are anticipated. Therefore, the proposed project would not cumulatively contribute to cumulative impacts involving applicable plans. No cumulatively considerable impacts to applicable plans would occur under CEQA in association with decommissioning.

Conflict with Habitat Conservation Plan

- 3) Conflict with any applicable habitat conservation plan or natural community conservation plan.

A. Construction

Imperial County is not within the jurisdiction of any adopted habitat conservation plan or natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, the portions of the proposed project on private land in Imperial County would not cumulatively contribute to impacts to a habitat conservation plan or natural community conservation plan. No cumulatively considerable impacts would occur under CEQA as no such plans are currently in place.

The Gen-tie Line on BLM land is subject to applicable conservation plans including the CDCA Plan, Yuha Basin Management Plan and Flat-tailed Horned Lizard Rangewide Management Strategy. The proposed Gen-tie Line and any new access roads on BLM lands would be considered an allowed use as they would be within a designated utility corridor (Utility Corridor N) per Map 16 of the CDCA Plan (BLM, 1980). Because the Proposed Action is designed to be consistent with the CDCA Plan, Yuha Desert Management Plan, and Flat-tailed Horned Lizard Rangewide Management Strategy, no impact to habitat conservation plans would occur. Therefore, the Proposed Action would not cumulatively contribute to cumulative impacts involving conservation plans. No cumulatively considerable impacts to applicable conservation plans would occur under CEQA in association with construction of the proposed project.

B. Operations and Maintenance

The discussion of cumulative impacts relative to an applicable habitat conservation plan provided under “Construction” would also apply to Operations and Maintenance of the proposed project. Following construction, the project site would be accessed using only roadways that are necessary to maintain the site and facilities. The project would be operated and maintained within Utility Corridor N. All

maintenance activities would be confined to existing roadways and disturbed areas. Therefore, the proposed project would be consistent with applicable habitat conservation plans including the CDCA Plan, Yuha Desert Management Plan, and Flat-tailed Horned Lizard Rangewide Management Strategy. No cumulatively considerable impacts to habitat conservation plans would occur under CEQA in association with operations and maintenance.

C. Decommissioning

When the proposed project reaches the end of its operational life, the components will be decommissioned and deconstructed. The project site will have been disturbed, developed and maintained as a solar energy facility. Decommissioning activities would be short-term. As no habitat conservation plan is currently in place in Imperial County, and it is speculative whether one would be adopted at the time of decommissioning, no cumulatively considerable impacts to habitat conservation plans would occur under CEQA in association with decommissioning.

5.2.4.3 NEPA IMPACT ANALYSIS

NEPA Special Designation Area

- 4) Conflict with the management goals of any special designation area.

Note: Appendix G of the State CEQA Guidelines does not provide significance criteria for special designations. Therefore, the following discussion is limited to direct and indirect cumulative impacts associated with construction, operations and maintenance and decommissioning. Habitat disturbances in the Yuha Basin MA currently constitute approximately 0.8 percent of the 1 percent of habitat disturbance allowable. This is described more fully in subsection 5.12.4.1, below.

A. Direct and Indirect Impacts

Construction

The Proposed Action, or an alternative, is in the Yuha Basin Area of Critical Environmental Concern (ACEC) as identified on Map 17 of the California Desert Conservation Area (CDCA) Plan (BLM, 1985). The Gen-tie Line proposed as part of the Proposed Action or an alternative is allowed with approval of a grant of Right-of-Way from the BLM and would be within Utility Corridor N. Therefore, no direct cumulative impacts to special designations during construction would occur. Indirect cumulative impacts in a special designation resulting from construction activities (such as heavy equipment exhaust, impacts to biological and cultural resources) are addressed in the appropriate sections of this EIR/EA (e.g. Air Quality, Biological Resources, Cultural Resources) as well as under "Operations and Maintenance".

Operations and Maintenance

The Proposed Action or an alternative would be within the Yuha Basin ACEC as mentioned above under "Construction". Multiple electrical lines are currently in the Yuha Basin ACEC (a special designation) within Utility Corridor N. Thus, the addition of the Proposed Action or an alternative would expand the number of towers and electrical lines in Utility Corridor N. Electrical transmission lines are allowed in Utility N with a grant of Right-of-Way from BLM. Therefore, the Proposed Action or an alternative would contribute to direct cumulative impacts to a land use within a special designation during operations and maintenance. Cumulative direct impacts would occur primarily with respect to altering the viewscape.

Decommissioning

As previously mentioned, the Proposed Action or an alternative would be within the Yuha Basin ACEC. Decommissioning activities would contribute cumulatively to temporary fugitive dust and noise associated with removal of above-ground and buried infrastructure, heavy equipment trips, etc. Views would also be temporarily disturbed by the presence of dismantling activities. However, the viewscape would be improved by the removal of the tower structures and transmission lines associated with the Proposed Action or an alternative. After decommissioning is completed, views of the eastern Yuha Basin ACEC would appear less cluttered as a result of removal of a portion of electrical infrastructure in Utility Corridor N. This would be a cumulative beneficial direct impact of decommissioning the Proposed Action or an alternative.

5.3 TRANSPORTATION AND CIRCULATION

5.3.1 GEOGRAPHIC SCOPE

Cumulative impacts to transportation and circulation could occur if implementation of the proposed Centinela Solar Energy Project would combine with transportation and circulation impacts of other local or regional projects. The geographic scope for cumulative transportation and circulation impacts is based on the County of Imperial Department of Public Works' *Traffic Study and Report Policy* dated March 12, 2007, revised June 29, 2007 and approved by the Board of Supervisors of the County of Imperial on August 7, 2007. According to page 14 of the *Traffic Study and Report Policy*, "The study area for the project will be expected to encompass an adequate surrounding area to ensure that all impacts are identified to a sufficient extent that any mitigation measures, regardless of importance are shown, e.g. stop signs, yield signs, etc." Accordingly, the cumulative project study area is based on the extent of where 50 peak hour project trips would travel on roadways in the vicinity of the project site. A total of 21 intersections, 22 roadway/highway segments and 3 freeway segments were identified for inclusion in the study area. The selected intersections, roadway/highway segments and freeway segments were confirmed by County staff. These are listed in Table 3.3-5, Table 3.3-6 and Table 3.3-7 in Section 3.3.

5.3.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to transportation and circulation would occur primarily during the construction and decommissioning periods in association with the addition of worker trips and construction vehicles going to and from the site. Long-term impacts to transportation and circulation would occur as a result of any changes in traffic patterns or volumes which would occur as a result of the presence of the project over its operational life (approximately 30+ years).

The short-term cumulative traffic scenario is modeled for Year 2012 Plus Project Plus Cumulative Projects and is discussed with regard to construction impacts. The long-term cumulative traffic scenario was analyzed based on Horizon Year 2050 Plus Project Roadway Segment Operations per the Imperial County Scenic Highways and Circulation Element.

5.3.3 EXISTING CUMULATIVE CONDITIONS

5.3.3.1 Past, Present and Reasonably Foreseeable Projects

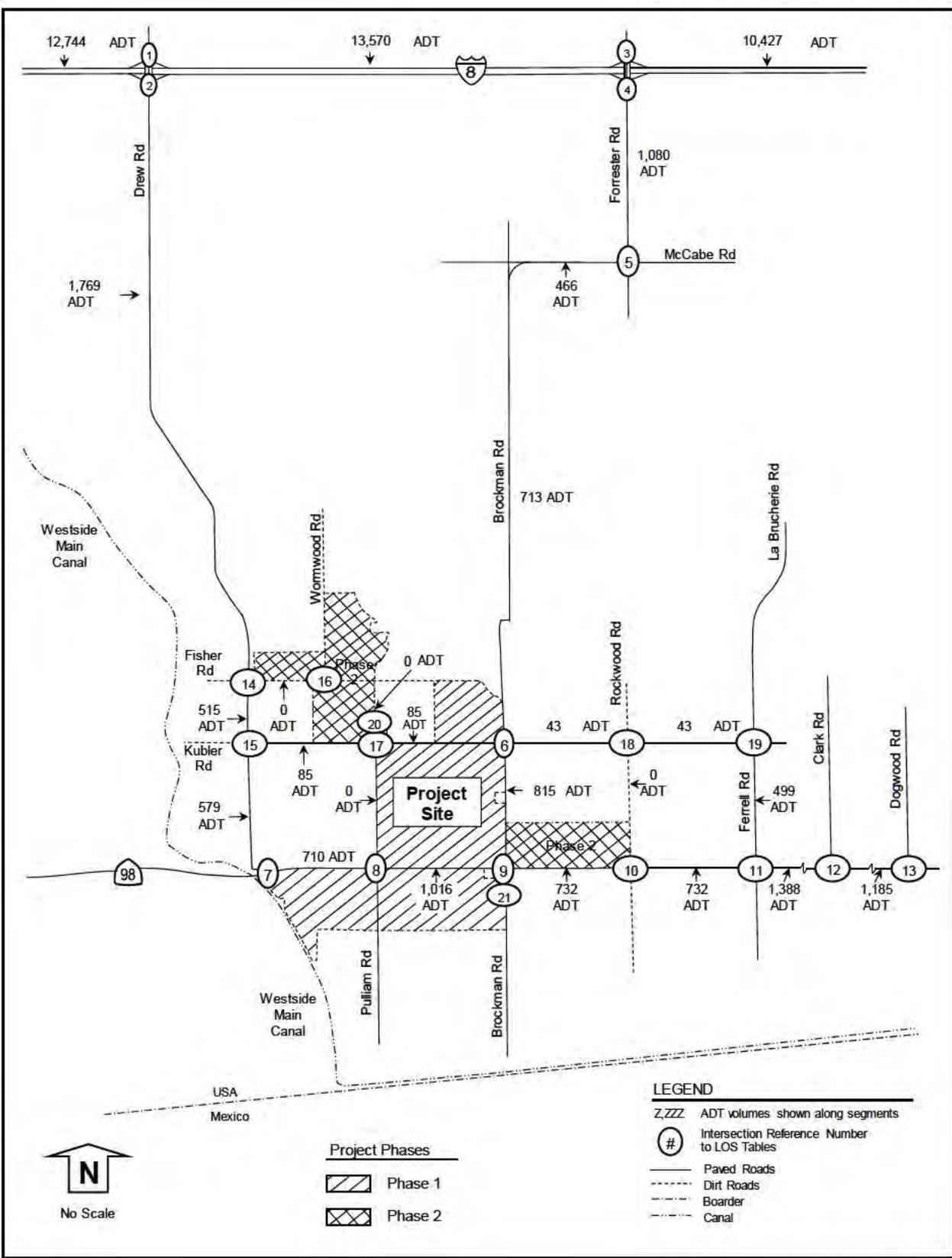
Information on cumulative projects (new development) was assembled by Imperial County staff and the applicant. The cumulative list also includes projects within the jurisdiction of the Bureau of Land Management (BLM). Most of the cumulative projects have completed technical studies including traffic

generation information; however, several do not because they are in their initial stages. For the projects that do not have detailed traffic generation information, an estimate was calculated based on traffic generation information for similar projects. Traffic generation calculations and copies of the individual cumulative project descriptions, locations, traffic generation, and assignments are included in Appendix O of the *Draft Traffic Impact Analysis*. This document is provided on the attached CD of Technical Appendices as **Appendix C** of this EIR/EA. The combined Imperial County and BLM cumulative projects (new development) are included below:

To be conservative, all of the cumulative projects listed in **Table 5.3-1** and **Table 5.3-2** were assumed to be generating construction traffic during the construction phase of the Proposed Action. However, several of the projects have just recently initiated the environmental review process. Thus, construction of recently initiated projects may commence after construction of the Proposed Action or an alternative is completed. Furthermore, most if not all of the cumulative solar projects will have a peak construction period that may or may not coincide with the peak construction period for the Proposed Action or an alternative. However, to be conservative, all of the peak cumulative construction volumes were used in the short-term cumulative analysis (Year 2012 Plus Project Plus Cumulative Conditions) even though it is unlikely that all construction peaks will occur simultaneously.

The short-term cumulative traffic baseline consists of existing traffic, plus ambient growth (existing traffic plus 2.8 percent per year), plus peak construction traffic, plus traffic from the baseline cumulative projects identified in **Table 5.3-1** and **Table 5.3-2**. This baseline (or cumulative project [new development) volumes, are shown in **Figure 5.3-1A** and **Figure 5.3-1B**. Traffic counts attributed to each project are provided in **Table 5.3-1** and **Table 5.3-2**. However, the level of impact at each of the study area intersections, roadway segments and freeway segments attributed to each individual project was not determined.

5.0 CUMULATIVE IMPACTS



Source: LOS, 2011.

FIGURE 5.-31A
CUMULATIVE PROJECT (NEW DEVELOPMENT) VOLUMES

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5.0 CUMULATIVE IMPACTS

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: right;">Drew Rd</td> <td style="width: 15%; text-align: center;">30 (1)</td> <td style="width: 15%; text-align: center;">76 (6)</td> <td style="width: 15%; text-align: center;">I-8 WB Ramp</td> <td style="width: 15%; text-align: center;">0 0 333</td> <td style="width: 15%; text-align: center;">0 0 (35)</td> </tr> <tr> <td></td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td></td> <td style="text-align: center;">↑</td> <td style="text-align: center;">↑</td> </tr> <tr> <td></td> <td style="text-align: center;">(1)</td> <td style="text-align: center;">(106)</td> <td></td> <td style="text-align: center;">(35)</td> <td style="text-align: center;">(35)</td> </tr> <tr> <td></td> <td style="text-align: center;">↑</td> <td style="text-align: center;">↑</td> <td></td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td></td> <td style="text-align: center;">32 (76)</td> <td style="text-align: center;">6 (106)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table>	Drew Rd	30 (1)	76 (6)	I-8 WB Ramp	0 0 333	0 0 (35)		↓	↓		↑	↑		(1)	(106)		(35)	(35)		↑	↑		↓	↓		32 (76)	6 (106)		0	0	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: right;">I-8 EB Ramp</td> <td style="width: 15%; text-align: center;">409 (41)</td> <td style="width: 15%; text-align: center;">0 0</td> <td style="width: 15%; text-align: center;">Drew Rd</td> <td style="width: 15%; text-align: center;">1 0 76</td> <td style="width: 15%; text-align: center;">(30) (34)</td> </tr> <tr> <td></td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td></td> <td style="text-align: center;">↑</td> <td style="text-align: center;">↑</td> </tr> <tr> <td></td> <td style="text-align: center;">(2)</td> <td style="text-align: center;">(333)</td> <td></td> <td style="text-align: center;">(30)</td> <td style="text-align: center;">(34)</td> </tr> <tr> <td></td> <td style="text-align: center;">↑</td> <td style="text-align: center;">↑</td> <td></td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td></td> <td style="text-align: center;">37 (152)</td> <td style="text-align: center;">30 (333)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table>	I-8 EB Ramp	409 (41)	0 0	Drew Rd	1 0 76	(30) (34)		↓	↓		↑	↑		(2)	(333)		(30)	(34)		↑	↑		↓	↓		37 (152)	30 (333)		0	0	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: right;">Forrester Rd</td> <td style="width: 15%; text-align: center;">45 (2)</td> <td style="width: 15%; text-align: center;">118 (32)</td> <td style="width: 15%; text-align: center;">I-8 WB Ramp</td> <td style="width: 15%; text-align: center;">0 0 130</td> <td style="width: 15%; text-align: center;">0 0 (8)</td> </tr> <tr> <td></td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td></td> <td style="text-align: center;">↑</td> <td style="text-align: center;">↑</td> </tr> <tr> <td></td> <td style="text-align: center;">(3)</td> <td style="text-align: center;">(121)</td> <td></td> <td style="text-align: center;">(8)</td> <td style="text-align: center;">(8)</td> </tr> <tr> <td></td> <td style="text-align: center;">↑</td> <td style="text-align: center;">↑</td> <td></td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td></td> <td style="text-align: center;">30 (1)</td> <td style="text-align: center;">20 (121)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table>	Forrester Rd	45 (2)	118 (32)	I-8 WB Ramp	0 0 130	0 0 (8)		↓	↓		↑	↑		(3)	(121)		(8)	(8)		↑	↑		↓	↓		30 (1)	20 (121)		0	0
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LEGEND

XX AM peak hour volumes at intersections
 (YY) PM peak hour volumes at intersections
 # Intersection Reference Number



Source: LOS, 2011.

FIGURE 5.3-1B
 CUMULATIVE PROJECT (NEW DEVELOPMENT) VOLUMES

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**TABLE 5.3-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO TRANSPORTATION AND CIRCULATION**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>Yes. The construction and delivery traffic associated with the “S” Line Upgrade 230-kV Transmission Line Project would move along the project corridor as work progresses. An estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is assumed for the segment or work area under construction.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. The construction phase of the Imperial Valley Solar project is calculated to generate 1,736 ADT with 772 AM peak hour trips and 772 PM peak hour trips.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The construction and delivery traffic associated with the Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation moves along the project corridor as work progresses. An estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is assumed for the segment or work area under construction.</p>
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. The construction phase of the Ocotillo Sol project is calculated to generate approximately 40 ADT with 15 AM peak hour trips and 15 PM peak hour trips.</p>
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>Yes. Limited construction traffic associated with the SDG&E Geotechnical Investigations anticipated to last no longer than one week in September 2011.</p>

**TABLE 5.3-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO TRANSPORTATION AND CIRCULATION**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. The construction and delivery traffic associated with the North Gila to Imperial Valley #2 Transmission Line moves along the project corridor as work progresses; therefore, an estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is for the segment or work area under construction.</p>
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. The construction and delivery traffic associated with the Dixieland Connection to Imperial Irrigation District Transmission System moves along the project corridor as work progresses; therefore, an estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is for the segment or work area under construction.</p>
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>Yes. The construction phase of the Solar Reserve Imperial Valley project is calculated to generate approximately 283 ADT with 110 AM peak hour trips and 112 PM peak hour trips.</p>

**TABLE 5.3-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO TRANSPORTATION AND CIRCULATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?
1	Linda Vista Approximately eight miles northeast of project site.	Yes. The traffic generation for the Linda Vista project is calculated at 7,175 ADT with 252 AM and 676 PM peak hour trips.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The total project is calculated to generate 24,069 ADT with 2,581 AM peak hour trips and 2,242 PM peak hour trips.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. The construction phase of the Imperial Solar Energy Center West project is calculated to generate 750 ADT with 306 AM peak hour trips and 315 PM peak hour trips.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. The construction phase of the Imperial Solar Energy Center South project is calculated to generate 680 ADT with 271 AM peak hour trips and 280 PM peak hour trips.
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.	Yes. The construction phase of the Mount Signal Solar Farm I project is calculated to generate 522 ADT with 162 AM peak hour trips and 162 PM peak hour trips.
6	Campo Verde Approximately two miles northwest of the northern-most portion of the project site.	Yes. The construction phase of the Campo Verde project is calculated to generate 708 daily trips with 276 AM peak hour trips and 281 PM peak hour trips.

**TABLE 5.3-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO TRANSPORTATION AND CIRCULATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?
7	<p>Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	Yes. The construction phase of the Mayflower Solar Farm Project is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
8	<p>Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	Yes. The construction phase of the Arkansas Solar project is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
9	<p>Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	Yes. The construction phase of the Sonora Solar project is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
10	<p>Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	Yes. The construction phase of the Alhambra Solar is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
11	<p>Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	Yes. The construction phase of the Acorn Greenworks project is calculated to generate 425 daily trips with 166 AM peak hour trips and 169 PM peak hour trips.
12	<p>Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	Yes. The construction phase of the Calexico I-A project is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.

**TABLE 5.3-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO TRANSPORTATION AND CIRCULATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?
13	Calexico I-B Immediately adjacent to southern portion of project site.	Yes. The construction phase of the Calexico I-B project is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	Yes. The construction phase of the Calexico II-A project is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. The construction phase of the Calexico II-B project is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.

5.3.4 CUMULATIVE TRANSPORTATION AND CIRCULATION IMPACTS

5.3.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Year 2012 Plus Project Plus Cumulative Conditions

Construction activities are expected to require approximately 22 to 28 months for Phase I and 15 to 18 months for Phase II. Peak construction activity is anticipated to occur during month six of Phase I. To analyzed cumulative construction impacts, anticipated project construction traffic was added onto year 2012 traffic volumes. Year 2012 Plus Project Plus Cumulative Volumes are shown in Figure 5.3-2A and Figure 5.3-2B. Intersection, segment, and freeway LOS are shown in Tables 5.3-3, 5.3-4 and 5.3-5. Intersection LOS calculations are included in Appendix P of the *Draft Traffic Impact Analysis*. This document is provided on the attached CD of Technical Appendices as Appendix C of this EIR/EA.

**TABLE 5.3-3
YEAR 2012 PLUS PROJECT PLUS CUMULATIVE INTERSECTION LOS**

Intersection & (Control) ¹	Movement	Peak Hour	Year 2012		Year 2012 Plus Project			Year 2012 Plus Project Plus Cumulative		
			Delay ²	LOS ³	Delay ²	LOS ³	Delta ⁴	Delay ²	LOS ³	Delta ⁴
1) Drew Road at I-8 WB Ramp (U)	Minor Leg	AM	9.2	A	9.3	A	0.1	23.3	C	None
		PM	9.0	A	9.3	A	0.3	12.2	B	None
2) Drew Road at I-8 EB Ramp (U)	Minor Leg	AM	9.7	A	9.7	A	0.1	14.1	B	None
		PM	10.9	B	11.2	B	0.3	14.9	B	None
3) Forrester Road at I-8 WB Ramp (U)	Minor Leg	AM	9.8	A	10.2	B	0.4	15.3	C	None
		PM	9.8	A	10.2	B	0.4	11.7	B	None
4) Forrester Road at I-8 EB Ramp (U)	Minor Leg	AM	10.8	B	12.1	B	1.3	17.3	C	None
		PM	17.4	C	19.9	C	3.0	41.7	E	Cumulative
5) Forrester Road at McCabe Road (U)	Minor Leg	AM	9.1	A	9.9	A	0.8	12.8	B	None
		PM	9.0	A	11.0	B	2.0	23.0	C	None
6) Brockman Road at Kubler Road (U)	Minor Leg	AM	9.1	A	10.3	B	1.2	12.9	B	None
		PM	8.9	A	10.0	B	1.1	13.9	B	None
7) SR 98 at Drew Road (U)	Minor Leg	AM	8.6	A	9.1	A	0.5	10.8	B	None
		PM	9.2	A	9.5	A	0.3	11.3	B	None
8) SR 98 at Pulliam Road (U)	Minor Leg	AM	9.3	A	9.4	A	0.1	15.1	C	None
		PM	9.1	A	9.4	A	0.4	13.8	B	None
9) SR 98 at Brockman Road (U)	Minor Leg	AM	9.4	A	13.7	B	4.3	44.6	E	Cumulative
		PM	9.7	A	11.2	B	1.5	101.0	F	None
10) SR 98 at Rockwood Road (U)	Minor Leg	AM	9.7	A	9.9	A	0.2	11.5	B	None
		PM	9.4	A	9.8	A	0.1	11.4	B	None
11) SR 98 at Ferrell Road (U)	Minor Leg	AM	9.9	A	10.9	B	1.1	178.5	F	None
		PM	10.1	B	11.5	B	1.4	54.2	F	None

5.0 CUMULATIVE IMPACTS

**TABLE 5.3-3
YEAR 2012 PLUS PROJECT PLUS CUMULATIVE INTERSECTION LOS**

Intersection & (Control) ¹	Movement	Peak Hour	Year 2012		Year 2012 Plus Project			Year 2012 Plus Project Plus Cumulative		
			Delay ²	LOS ³	Delay ²	LOS ³	Delta ⁴	Delay ²	LOS ³	Delta ⁴
12) SR 98 at Clark Road (U)	Minor Leg	AM	9.9	A	10.5	B	0.6	46.1	E	None Cumulative
		PM	10.8	B	13.0	B	2.3	431.8	F	
13) SR 98 at Dogwood Road (S)	Minor Leg	AM	10.7	B	11.6	B	0.9	39.6	D	None None
		PM	11.0	B	12.1	B	1.2	21.5	C	
14) Drew Road at Fisher Road (U)	Minor Leg	AM	9.1	A	9.6	A	0.5	11.1	B	None None
		PM	0.0	A	8.6	A	8.6	11.4	B	
15) Drew Road at Kubler Road (U)	Minor Leg	AM	8.9	A	9.3	A	0.4	11.4	B	None None
		PM	9.1	A	9.2	A	0.1	10.8	B	
16) Wormwood Road Minor at Fisher Road (U)	Minor Leg	AM	8.5	A	8.6	A	0.1	8.6	A	None None
		PM	0.0	A	8.5	A	8.5	8.5	A	
17) Pulliam Road at Kubler Road (U)	Minor Leg	AM	8.8	A	10.4	B	1.6	10.4	B	None None
		PM	9.0	A	9.9	A	0.9	9.9	A	
18) Rockwood Road Minor at Kubler Road (U)	Minor Leg	AM	9.1	A	9.1	A	0.0	9.1	A	None None
		PM	9.1	A	9.2	A	0.1	9.2	A	
19) Ferrell Road at Minor at Kubler Road (U)	Minor Leg	AM	9.5	A	9.8	A	0.3	10.6	B	None None
		PM	9.2	A	9.5	A	0.3	10.4	B	
20) Brockman Road at Project Access (U)	Minor Leg	AM	DNE	DNE	9.5	A	N/A	9.5	A	None None
		PM	DNE	DNE	9.9	A	N/A	9.9	A	
21) Pulliam Road At Project Access (U)	Minor Leg	AM	DNE	DNE	9.3	A	N/A	10.7	B	None None
		PM	DNE	DNE	9.7	A	N/A	11.7	B	

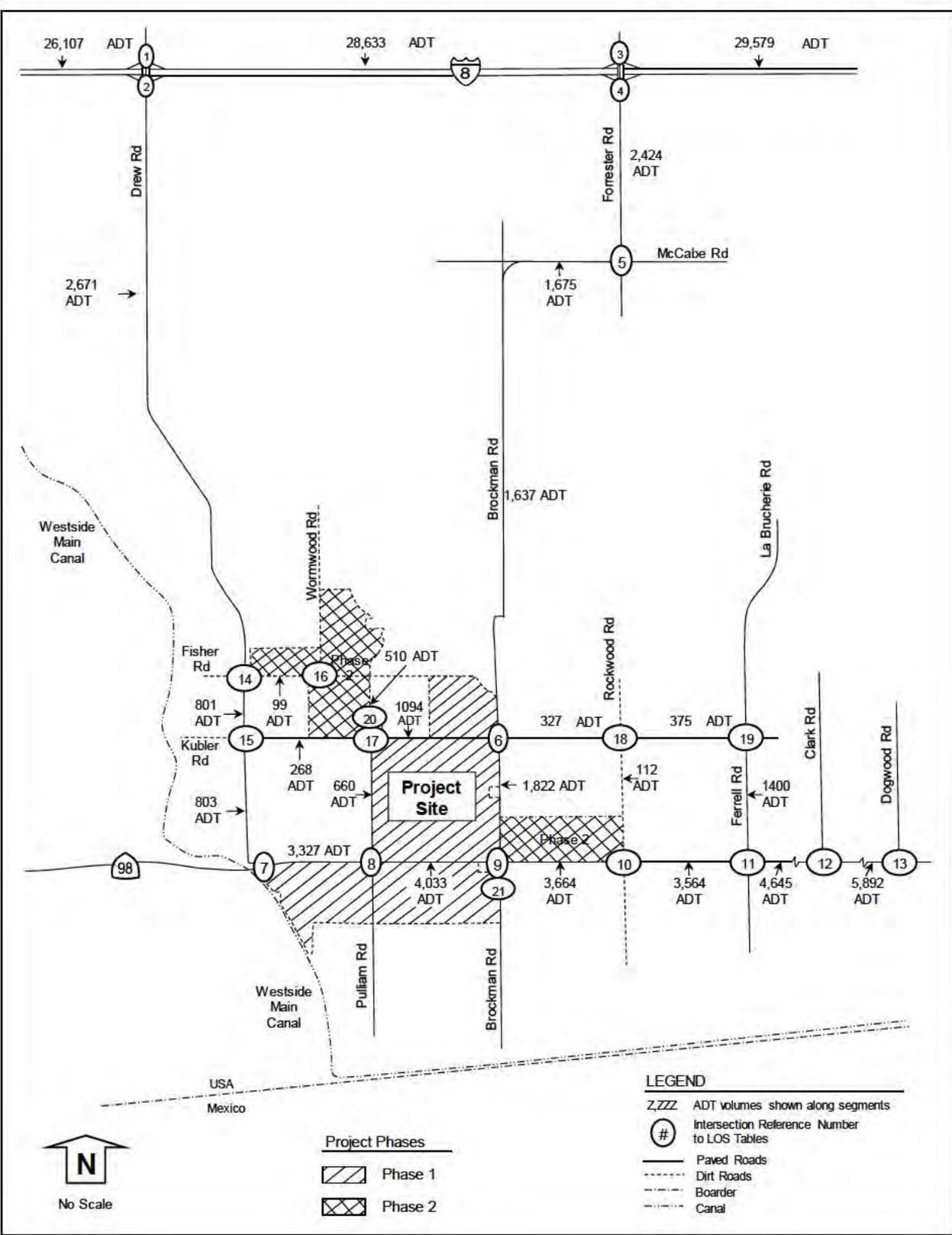
Source: LOS, 2011.

Notes: ¹ Intersection Control - (S) Signalized, (U) Unsignalized. ³ LOS: Level of Service.

² Delay - HCM Average Control Delay in seconds.

DNE: Does Not Exist

5.0 CUMULATIVE IMPACTS

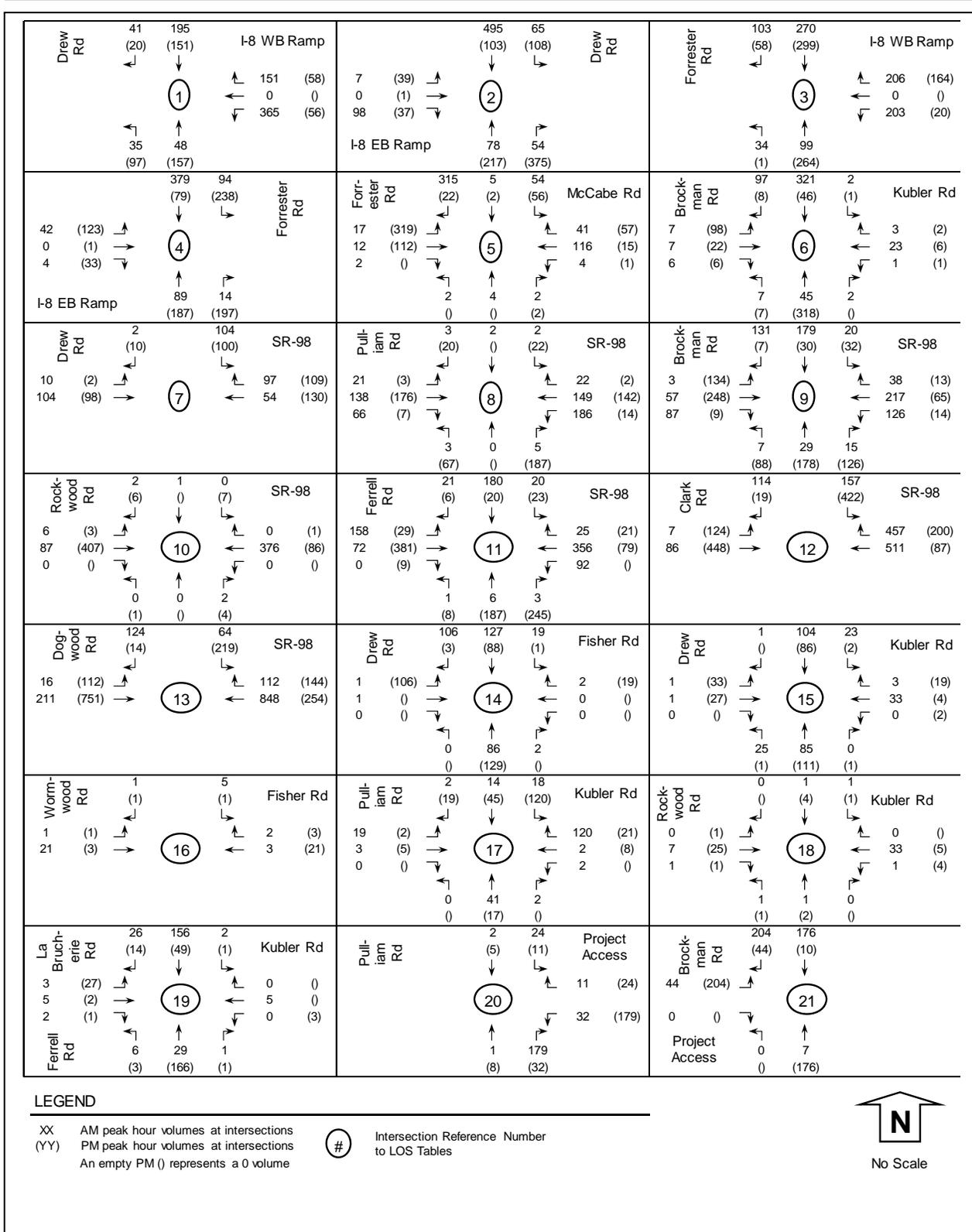


Source: LOS, 2011.

FIGURE 5.3-2A
YEAR 2012 PLUS PROJECT PLUS CUMULATIVE VOLUMES

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5.0 CUMULATIVE IMPACTS



LEGEND

XX AM peak hour volumes at intersections
 (YY) PM peak hour volumes at intersections
 An empty PM () represents a 0 volume

Intersection Reference Number to LOS Tables



No Scale

Source: LOS, 2011.

FIGURE 5.3-2B
 YEAR 2012 PLUS PROJECT PLUS CUMULATIVE

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**TABLE 5.3-4
YEAR 2012 PLUS PROJECT PLUS CUMULATIVE SEGMENT LOS**

Segment	Classification (as built)	LOS C Capacity	Year 2012			Year 2012 + Project				Cum Daily Vol	2012+Proj+Cum			
			Daily Vol	V/C	LOS	Daily Vol	V/C	LOS	Change in V/C		Daily Vol	V/C	LOS	Impact?
Brockman Road														
McCabe Road to Kubler Road	Major Collector (2U)	7,100	420	0.06	A	924	0.13	A	0.071	713	1,637	0.23	A	None
Kubler Road to SR 98	Major Collector (2U)	7,100	318	0.04	A	1,007	0.14	A	0.097	815	1,822	0.23	A	None
Drew Road														
I-8 to Fisher Road	Prime Arterial (2U)	7,100	713	0.10	A	902	0.13	A	0.027	1,769	2,671	0.38	B	None
Fisher Road to Kubler Road	Prime Arterial (2U)	7,100	160	0.02	A	286	0.04	A	0.018	515	801	0.11	A	None
Kubler Road to SR 98	Prime Arterial (2U)	7,100	161	0.02	A	224	0.03	A	0.009	579	803	0.11	A	None
Ferrel Road														
Kubler Road to SR 98	Major Collector (2U)	7,100	838	0.12	A	901	0.13	A	0.009	499	1,400	0.20	A	None
Fisher Road														
Drew Road to Wormwood Road	Minor Collector (Dirt 2U)	1,500	26	0.02	C	99	0.07	C	0.049	0	99	0.07	C	None
Forrester Road														
I-8 to McCabe Road	Prime Arterial (2U)	7,100	1,029	0.14	A	1,344	0.19	A	0.044	1,080	2,424	0.34	B	None
Kubler Road														
Drew Road to Pulliam Road	Minor Collector (2U)	7,100	70	0.01	A	183	0.03	A	0.016	85	268	0.04	A	None
Pulliam Road to Brockman Road	Minor Collector (2U)	7,100	131	0.02	A	1,009	0.14	A	0.124	85	1,094	0.15	A	None
Brockman Road to Rockwood Road	Minor Collector (2U)	7,100	216	0.03	A	284	0.04	A	0.010	43	327	0.05	A	None
Rockwood Road to Ferrell Road	Minor Collector (2U)	7,100	269	0.04	A	332	0.05	A	0.009	43	375	0.05	A	None
McCabe Road														
Brockman Road to Forrester Road	Major Collector (2U)	7,100	705	0.10	A	1,209	0.17	A	0.071	466	1,675	0.24	A	None
Pulliam Road														
Fisher Road to Kubler Road	Minor Collector (Dirt 2U)	1,500	47	0.03	C	510	0.34	C	0.309	0	510	0.34	C	None
Kubler Road to SR 98	Minor Collector (2U)	7,100	34	0.00	A	660	0.09	A	0.088	0	660	0.09	A	None
Rockwood Road														
Kubler Road to SR 98	Minor Collector (Dirt 2U)	1,500	107	0.07	C	112	0.07	C	0.003	0	112	0.07	C	None
SR 98														
Drew Road to Pulliam Road	State Highway (2U)	7,100	2,391	0.34	B	2,617	0.37	B	0.032	710	3,327	0.47	B	None
Pulliam Road to Brockman Road	State Highway (2U)	7,100	2,391	0.34	B	3,017	0.42	B	0.088	1,016	4,033	0.57	B	None
Brockman Road to Rockwood Road	State Highway (2U)	7,100	2,391	0.34	B	2,932	0.41	B	0.076	732	3,664	0.52	B	None
Rockwood Road to Ferrell Road	State Highway (2U)	7,100	2,391	0.34	B	2,832	0.40	B	0.062	732	3,564	0.50	B	None
Ferrell Road to Clark Road	State Highway (2U)	7,100	2,879	0.41	B	3,257	0.46	B	0.053	1,388	4,645	0.65	C	None
Clark Road to Dogwood Road	State Highway (2U)	7,100	4,455	0.63	C	4,707	0.66	C	0.035	1,185	5,892	0.83	C	None

Source: LOS, 2011. Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. LOS = Level of Service 2U = 2 lane undivided roadway V/C: Volume to Capacity ratio. Daily volume is a 24 hour volume. LOS based on actual number of lanes currently constructed. Impact? = type of impact (none, cumulative, or direct).

**TABLE 5.3-5
YEAR 2012 PLUS PROJECT PLUS CUMULATIVE FREEWAY LOS**

Freeway Segment	I-8 Dunaway Road to Drew Road				I-8 Drew Road to Forrester Road				I-8 Forrester Road to Imperial Ave			
Year 2012 (Forecasted from 2009)												
ADT	13,000				15,000				18,900			
Peak Hour	AM		PM		AM		PM		AM		PM	
Directions	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Number of Lanes	2	2	2	2	2	2	2	2	2	2	2	2
Capacity ¹	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700
K Factor ²	.1076	.0963	.0917	.1517	.1076	.0963	.0917	.1517	.1076	.0963	.0917	.1517
D Factor ³	.2616	.7384	.4419	.5581	.2616	.7384	.4419	.5581	.2616	.7384	.4419	.5581
Truck Factor ⁴	.8376	.8376	.8376	.8376	.8376	.8376	.8376	.8376	.8376	.8376	.8376	.8376
Peak Hour Volume	447	1,129	643	1,344	504	1,273	726	1,516	635	1,605	914	1,910
V/C	.095	.240	.137	.286	.107	.271	.154	.323	.135	.341	.195	.406
LOS	A	A	A	A	A	A	A	B	A	B	A	B
Project Peak Hour Vol	19	1	1	19	19	1	1	19	5	77	77	5
Existing (2012) + Project												
Peak Hour Vol	466	1,130	644	1,363	523	1,274	727	1,535	640	1,682	991	1,915
Volume to Capacity	0.099	0.240	0.137	0.290	0.111	0.271	0.155	0.327	0.136	0.358	0.211	0.408
LOS	A	A	A	A	A	A	A	B	A	B	A	B
Increase in V/C	0.004	0.000	0.000	0.004	0.004	0.000	0.000	0.004	0.001	0.016	0.016	0.001
Impact?	None	None	None	None	None	None	None	None	None	None	None	None
Cumulative Pk Hr Vol	239	803	828	246	192	1,074	1,097	204	195	1,129	1,162	209
Existing (2012) + Project + Cum												
Peak Hour Volume	686	1,932	1,471	1,590	696	2,347	1,823	1,720	830	2,734	2,076	2,119
Volume to Capacity	0.146	0.411	0.313	0.338	0.148	0.499	0.388	0.366	0.177	0.582	0.442	0.451
LOS	A	B	B	B	A	C	B	B	A	C	B	B
Impact	None	None	None	None	None	None	None	None	None	None	None	None

Source: LOS, 2011.

Notes:

¹ Capacity of 2,350 passenger cars per hour per lane (pcphpl) from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002.

² Latest K factor (percentage of the AADT in both directions during the peak hour) from Caltrans (based on 2007 report).

³ Latest D factor (percentage of traffic in the peak direction during the peak hour) from Caltrans (based on 2007 report), which when multiplied by K and ADT will provide peak hour volume.

⁴ Latest truck factor from Caltrans (based on 2007 report).

LOS: Level of Service. LOS based on actual number of lanes currently constructed. V/C: Volume to Capacity ratio. Impact? = Direct, Cumulative, or None.

5.0 CUMULATIVE IMPACTS

Under Year 2012 Plus Project Plus Cumulative Conditions (Table 5.3-3), all the study roadways were calculated to operate at LOS C or better, with the exception of the following intersections:

- 1) Intersection of Forrester Road at I-8 EB Ramp (LOS E PM),
- 2) Intersection of SR98 at Brockman Road (LOS E AM and LOS F PM),
- 3) Intersection of SR 98 at Ferrell Road (LOS F AM and PM),
- 4) Intersection of SR98 at Clark Road (LOS E AM and LOS F PM), and
- 5) Intersection of SR98 at Dogwood Road (LOS D AM).

However, as shown in Table 5.3-3, these intersections were not determined to result in a direct or cumulative impact to cumulative LOS during construction.

B. Operation and Maintenance

Horizon Year 2050 Plus Project Conditions

Year 2050 (Horizon Year) street segment volumes were obtained from the *Imperial County Scenic Highways and Circulation Element Update*, January 2008. An excerpt from the Element is included in Appendix G of the *Draft Traffic Impact Analysis*. This document is provided on the attached CD of Technical Appendices as Appendix D of this EIR/EA. The horizon year 2050 plus project segment operations are shown in Table 5.3-6. Operation and maintenance traffic volumes generated by the proposed project/Proposed Action and alternatives would be assumed under Horizon Year 2050 although it is possible that the project would be decommissioned at this time. The County's traffic model assumes agricultural land use for the project site which would generate approximately 2 trips per acre. Thus, the proposed project, if still operational in Horizon Year 2050, would generate substantially fewer trips.

**TABLE 5.3-6
HORIZON YEAR 2050 SEGMENT OPERATIONS**

Segment	Year 2050 Recommended Classification (# of Lanes)	Year 2050 ADT Volume	2050 LOS
Brockman Road McCabe Road to Kubler Road Kubler Road to SR 98	Major Collector (4) Major Collector (4)	Not Reported Not Reported	Not Reported Not Reported
Drew Road I-8 to Fisher Road Fisher Road to Kubler Road Kubler Road to SR 98	Prime Arterial (6-divided) Prime Arterial (6-divided) Prime Arterial (6-divided)	Not Reported Not Reported Not Reported	Not Reported Not Reported Not Reported
Ferrel Road Kubler Road to SR 98	Major Collector (4)	Not Reported	Not Reported
Fisher Road Drew Road to Wormwood Road	Minor Collector (2)	Not Reported	Not Reported
Forrester Road I-8 to McCabe Road	Prime Arterial (6-divided)	Not Reported	Not Reported
Kubler Road Drew Road to Pulliam Road Pulliam Road to Brockman Road Brockman Road to Rockwood Road Rockwood Road to Ferrell Road	Minor Collector (2) Minor Collector (2) Minor Collector (2) Minor Collector (2)	Not Reported Not Reported Not Reported Not Reported	Not Reported Not Reported Not Reported Not Reported

**TABLE 5.3-6
HORIZON YEAR 2050 SEGMENT OPERATIONS**

Segment	Year 2050 Recommended Classification (# of Lanes)	Year 2050 ADT Volume	2050 LOS
McCabe Road Brockman Road to Forrester Road	Prime Arterial (6-divided)	Not Reported	Not Reported
Pulliam Road Fisher Road to Kubler Road Kubler Road to SR 98	Minor Collector (2) Minor Collector (2)	Not Reported Not Reported	Not Reported Not Reported
Rockwood Road Kubler Road to SR 98	Prime Arterial (6-divided)	Not Reported	Not Reported
SR 98 Drew Road to Pulliam Road Pulliam Road to Brockman Road Brockman Road to Rockwood Road Rockwood Road to Ferrell Road Ferrell Road to Clark Road Clark Road to Dogwood Road	Collector (4) Collector (4) Collector (4) Collector (4) Collector (4) Collector (4)	Not Reported Not Reported Not Reported Not Reported Not Reported Not Reported	Not Reported Not Reported Not Reported Not Reported Not Reported Not Reported

Source: LOS, 2011.

Notes: Classification based on Year 2050 Circulation and Scenic Highways Element 2 = 2 lane roadway. ADT: Average Daily Traffic volume.
LOS: Level of Service.

Under Horizon Year 2050 Plus Project conditions, the study segments with reported volumes and LOS were calculated to operate at LOS B or better when built to year 2050 roadway classifications. Thus, no cumulative impacts would occur to roadway segments in the vicinity of the Proposed Action or an alternative.

C. Decommissioning

The proposed project/Proposed Action or an alternative is anticipated to be decommissioned approximately 30+ years in the future. Projecting traffic volumes with certainty 30 years into the future is speculative because of the number of variables involved including how much development will occur in the area and what improvements will be made to area roadways, intersections and freeways (e.g. would a full interchange be constructed at Drew Road). Worst-case decommissioning traffic direct impacts could be assumed to be the same as would occur during construction. However, decommissioning traffic is assumed to be far less because decommissioning activities could be spread out over a longer timeframe. Further analysis would be required at the time of decommissioning to verify roadway LOS and potential direct or cumulative impacts to area roadways, intersections and freeways.

5.3.4.2 CEQA SIGNIFICANCE DETERMINATIONS

For the purposes of the cumulative traffic analysis, only one CEQA Significance criterion was considered appropriate for the analysis.

Conflict with an Applicable Congestion Management Program

- 2) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

A. Construction

As shown in Table 5.3-3, the proposed project would result in a cumulatively significant contribution to Year 2012 Plus Project Plus Cumulative Conditions based on the County significance criteria (refer to Table 4.3-3 in Section 4.3) at three intersections (refer to **Table 5.3-3**):

- 1) Intersection of Forrester Road at I-8 EB Ramp
- 2) Intersection of SR 98 at Brockman Road
- 3) Intersection of SR 98 at Clark Road

This is considered a cumulatively considerable impact under CEQA. Mitigation Measure CUM-1 addresses cumulative construction impacts to roadway intersections through the payment of fair share contributions based on the project's temporary construction traffic. Payment of fair share fees, if the intersections are already at failing conditions during construction, would reduce impacts to less than significant under CEQA.

B. Operation and Maintenance

Horizon Year 2050 Plus Project Conditions

As shown in **Table 5.3-6**, under Horizon Year 2050 Plus Project conditions, the study segments with reported volumes and LOS were calculated to operate at LOS B or better when built to year 2050 roadway classifications. Thus, the proposed project would have a less than cumulatively considerable contribution to cumulative traffic volumes under CEQA.

C. Decommissioning

The proposed project/Proposed Action or an alternative is anticipated to be decommissioned approximately 30+ years in the future. Worst-case decommissioning traffic direct impacts could be assumed to be the same as would occur during construction. However, in reality, decommissioning traffic is assumed to be far less because decommissioning activities could be spread out over a longer timeframe. Further analysis would be required at the time of decommissioning to verify roadway LOS and potential LOS impacts under CEQA.

5.3.4.3 NEPA IMPACT ANALYSIS

The Proposed Action or an alternative would contribute to direct and indirect traffic both on a short-term (construction and decommissioning) and long-term basis (operations and maintenance) basis. Average daily trips associated with each project were provided in Table 5.3-1 and Table 5.3-2. Neither the Proposed Action nor an alternative (individually, or in combination with other cumulative projects) would result in adverse impacts during construction, operations and maintenance, or decommissioning under Existing (Year 2011) Conditions, Existing (Year 2011) Plus Project Conditions and Year 2012 Conditions (Without Project). However, under Year 2012 Plus Project Conditions, the project would have

a direct adverse cumulative impact at three intersections (Forrester Road at I-8 EB Ramp, SR 98 at Brockman Road, and SR 98 at Clark Road) based on the County significance criteria (refer to Table 4.3-3 in Section 4.3). Mitigation Measure CUM-1 addresses cumulative construction impacts to roadway intersections through the payment of fair share contributions based on the project's temporary construction traffic. Payment of fair share fees, if the intersections are already at failing conditions during construction, would reduce adverse cumulative impacts at these three intersections.

5.3.5 MITIGATION MEASURES

CUM-1 The calculated cumulative impacts on study area intersections result from traffic generated by new development (refer to Table 5.3-1 and 5.3-2). If a majority of the proposed new developments do not materialize, then the cumulatively impacted intersections may continue to operate at acceptable levels of service and would not require mitigation. Normally, the recommended mitigation for cumulative impacts is a "fair share" contribution based on the Caltrans' fair share formula for future intersection improvements. In the case of the proposed project, it should be noted that the fair share participation is based on the project's temporary construction traffic that is significantly higher than the project's traffic after completion of construction (for example 360 temporary construction employees compared to 5 to 7 permanent operation employees). The fair share contributions are as follows:

- At the intersection of Forrester Road/I-8 EB Ramps, the construction traffic fair share responsibility is 23.7 percent and the permanent operation fair share is 0.6 percent based on the number of operational employees.
- At the intersection of SR 98/Brockman Road, the construction traffic fair share responsibility is 33.8percent and permanent operation fair share is 0.2 percent based on the number of operational employees.
- At the intersection of SR 98/Clark Road, the construction traffic fair share responsibility is 12.8 percent and 0.1 percent based on the number of operational employees.

The project fair share responsibility should be validated at month six and yearly during the entire construction period. If the three intersections noted above are calculated to operate at unacceptable LOS during the validation period, then the Applicant shall pay the fair share amount based on project construction traffic. If the three intersections noted above are calculated to operate at acceptable LOS, then the Applicant shall not be required to pay the fair share amount because the intersection would be documented to operate at acceptable LOS.

It is recommended that the Applicant enter into an agreement with the County to fulfill the California Environmental Quality Act (CEQA) cumulative mitigation requirement, but not be obligated to pay a fair share should the three cumulatively impacted intersections never reach failing conditions during the project's temporary construction period.

The cumulatively impacted intersections with recommended mitigation measures of signalization are calculated to reduce the impact to below a level of significance as summarized below in **Table 5.3-7**. LOS and fair share calculations are included in Appendix

Q of the *Draft Traffic Impact Analysis*. This document is provided on the attached CD of Technical Appendices as **Appendix C** of this EIR/EA.

**TABLE 5.3-7
IMPACT SUMMARY**

Cumulative Impact Location	Peak Hour	Without Mitigation 2012 + Project + Cumulative			Recommended Mitigation	Without Mitigation 2012 + Project + Cumulative			Fair Share % Construction Traffic	Fair Share % Operations Traffic
		Delay ¹	LOS ²	Impact ³		Delay ¹	LOS ²	Impact ³		
4) Forrester Road at I-8 EB Ramp	AM	17.3	C	None	Install Traffic Signal	3.4	A	None	23.7%	0.6%
	PM	41.7	E	Cumulative		6.4	A	None		
9)SR 98 at Brockman Road	AM	44.6	E	Cumulative	Install Traffic Signal	19.2	B	None	33.8%	0.2%
	PM	101.0	F	None		19.4	B	None		
12)SR 98 at Clark Road	AM	46.1	E	None	Install Traffic Signal	30.5	C	None	12.8%	0.1%
	PM	431.8	F	Cumulative		25.6	C	None		

Source: LOS, 2011.

Notes: ¹Delay – HCM Average Control Delay in seconds. ²LOS: Level of Service. ³Impact type (None, cumulative or direct).

5.3.6 RESIDUAL IMPACTS AFTER MITIGATION

Implementation of Mitigation Measure CUM-1 would mitigate the Proposed Action or alternative’s cumulative contribution to construction through payment of fair share fees (if required). Following construction, any residual impacts would be addressed through payment of fair share fees based on permanent operation employees’ traffic contributions. Therefore, there are no residual impacts after mitigation.

5.4 AIR QUALITY

5.4.1 GEOGRAPHIC SCOPE

Cumulative impacts to air quality could occur if implementation of the proposed Centinela Solar Energy Project would combine with air quality impacts of other local or regional projects. A list of the existing and reasonably foreseeable cumulative projects is provided in Table 5.4-1 and Table 5.4-2. Cumulative projects are mapped in Figure 5.0-1 and Figure 5.0-2. The general emission plume created from the Proposed Action or an alternative is expected to be greatest at 2,000 meters (approximately 6,562 feet) from the center of construction activity. Assuming other projects in the vicinity were operating equipment approximately 2,000 meters from the center of construction activity on the project site, a geographic scope of 4,000 meters (approximately 13,123 feet) was assumed.

5.4.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to air quality would occur during the construction and decommissioning periods in association with the addition of construction equipment to the landscape. Based on the nature of the project as a solar energy facility, no long-term impacts to air quality are anticipated in association with operation of the proposed project. Very small increases in traffic volumes associated with operations would occur and are not anticipated to adversely impact air quality during the operational life of the project (approximately 30+ years).

5.4.3 EXISTING CUMULATIVE CONDITIONS

5.4.3.1 Past, Present and Reasonably Foreseeable Projects

Past, Present and Reasonably Foreseeable projects are projects that have notices of preparations filed within the local jurisdiction. A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.4-1** and **Table 5.4-2**.

5.4.4 CUMULATIVE AIR QUALITY IMPACTS

5.4.4.1 Direct and Indirect Impacts

A. Construction

As discussed in Section 4.4, the Proposed Action or an alternative would not have any unmitigable construction air quality impacts with respect to ozone precursors NO_x or PM_{10} based on County standards. In addition, the cumulative projects identified in **Table 5.4-1** and **Table 5.4-2** are either: 1) not expected to be under peak construction concurrent with the Proposed Action; or the cumulative projects' estimated worst-case construction emissions would not overlap (i.e. combine) with the Proposed Action or an alternative's worst-case estimated construction emissions. Stated another way, no significant cumulative project peak construction would coincide simultaneously with construction of the Proposed Action; or 2) such construction would be almost 2.5 miles away from the project site. Thus, if other cumulative projects are under construction simultaneous with the Proposed Action or an alternative, no cumulative construction air quality impacts are anticipated based on timing of projects in the planning and environmental process and distance between construction activities of individual cumulative projects.

B. Operations and Maintenance

No cumulative air quality impacts are anticipated to occur during operations and maintenance. The project by nature as a solar energy facility would not emit large quantities of air emissions. A small amount of emissions would occur in association with operation and maintenance vehicle trips to and from the site. However, the number of trips is low (50 ADT during a worst-case project traffic generation day) and the associated air quality emissions would be low as well. As discussed in Section 4.4, emissions resulting from operations and maintenance of the Proposed Action or an alternative for all criteria pollutants would be near zero, and therefore, well under the ICAPCD thresholds of significance (shown in Table 4.4-2 in Section 4.4) with only 0.02 pounds per day of ROG. As is discussed above for construction, the distance between this project and other cumulative projects would ensure that emissions do not combine to create a cumulative effect. Therefore, no direct cumulative impact with regard to an air quality is anticipated during operations and maintenance of the Proposed Action or an alternative.

**TABLE 5.4-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis	Level of Impact to Air Quality
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>No. The “S” Line Upgrade 230-kV Transmission Line Project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The “S” Line Upgrade 230-kV Transmission Line Project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>No. The Imperial Valley Solar project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Imperial Valley Solar project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>No. The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>

**TABLE 5.4-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis	Level of Impact to Air Quality
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. The Ocotillo Solis within the 4,000-meter radius but is not expected to be under construction simultaneously with the proposed project.</p>	<p>The Ocotillo Sol project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>No. The SDG&E Geotechnical Investigation is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The SDG&E Photovoltaic Geotechnical Investigation is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>

**TABLE 5.4-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis	Level of Impact to Air Quality
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>No. The North Gila to Imperial Valley #2 Transmission Line may be constructed within the 4,000-meter radius, but is not expected to be under construction simultaneously with the proposed project.</p>	<p>The North Gila to Imperial Valley #2 Transmission Line is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>No. The Dixieland Connection to Imperial Irrigation District Transmission System may be constructed within the 4,000-meter radius, but is not expected to be under construction simultaneously with the proposed project.</p>	<p>The Dixieland Connection to Imperial Irrigation District Transmission System is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>

**TABLE 5.4-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis	Level of Impact to Air Quality
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>No. The Solar Reserve Imperial Valley project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Solar Reserve Imperial Valley project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>

**TABLE 5.4-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Air Quality
1	Linda Vista Approximately eight miles northeast of project site.	No. The Linda Vista project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.	The Linda Vista project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	No. The County Center II Expansion/County and Imperial County Office of Education project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.	The County Center II Expansion/County and Imperial County Office of Education project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	No. The Imperial Solar Energy Center West project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.	The Imperial Solar Energy Center West project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. The Imperial Solar Energy Center South project is within the 4,000-meter radius. However, it is not expected to be under construction simultaneously with the proposed project.	The Imperial Solar Energy Center South project could cumulatively contribute to construction air quality impacts if it were to be under construction at the same time as the proposed project. However, construction timing is not certain and most likely would not overlap with peak construction of the proposed project. The <i>Draft Traffic Impact Analysis</i> (LOS, 2011) used an ultra-conservative approach in assuming overlapping peak construction periods. The

**TABLE 5.4-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Air Quality
			proposed project is more than 6 months ahead of other cumulative projects in the environmental review process. Thus, it is anticipated that the peak construction periods of other cumulative projects would not overlap with the proposed project and/or the construction operations will be separated by a sufficient distance. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.	Yes. The Mount Signal Solar Farm I project is within the 4,000-meter radius, but is it expected to be under construction simultaneously with the proposed project.	The Mount Signal Solar Farm I project is not anticipated to cumulatively contribute to construction air quality impacts based on the assumption that it would not be under construction at the same time as the proposed project. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
6	Campo Verde Approximately two miles northwest of the northern-most portion of the project site.	Yes. The Campo Verde project is within the 4,000-meter radius, but is it expected to be under construction simultaneously with the proposed project.	The Campo Verde project is not anticipated to cumulatively contribute to construction air quality impacts based on the assumption that it would not be under construction at the same time as the proposed project. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.

**TABLE 5.4-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Air Quality
7	<p>Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Mayflower Solar Farm Project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Mayflower Solar Farm Project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
8	<p>Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Arkansas Solar project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Arkansas Solar Project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
9	<p>Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Sonora Solar Project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Sonora Solar Project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>

**TABLE 5.4-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Air Quality
10	<p align="center">Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Alhambra Solar project is neither within the 4,000-meter radius nor is it expected to be under construction simultaneously with the proposed project.</p>	<p>The Alhambra Solar project is not anticipated to cumulatively contribute to construction air quality impacts based on its timing and distance from the project site. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
11	<p align="center">Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	<p>Yes. The Acorn Greenworks project is within the 4,000-meter radius. However, it is not expected to be under construction simultaneously with the proposed project.</p>	<p>The Acorn Greenworks project could cumulatively contribute to construction air quality impacts if it were to be under construction at the same time as the proposed project. However, construction is not anticipated to occur simultaneously as this project is behind the proposed project in terms of its environmental review process. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>
12	<p align="center">Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	<p>Yes. The Calexico I-A project is within the 4,000-meter radius. However, it is not expected to be under construction simultaneously with the proposed project.</p>	<p>The Calexico I-A project could cumulatively contribute to construction air quality impacts if it were to be under construction at the same time as the proposed project. However, construction is not anticipated to occur simultaneously as this project is behind the proposed project in terms of its environmental review process. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.</p>

**TABLE 5.4-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF
CUMULATIVE IMPACTS TO AIR QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Air Quality
13	Calexico I-B Immediately adjacent to southern portion of project site.	Yes. The Calexico I-B project is within the 4,000-meter radius. However, it is not expected to be under construction simultaneously with the proposed project.	The Calexico I-B project could cumulatively contribute to construction air quality impacts if it were to be under construction at the same time as the proposed project. However, construction is not anticipated to occur simultaneously as this project is behind the proposed project in terms of its environmental review process. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	Yes. The Calexico II-A project is within the 4,000-meter radius, but it is not expected to be under construction simultaneously with the proposed project.	The Calexico II-A project is not anticipated to cumulatively contribute to construction air quality impacts based on the assumption that it would not be under construction at the same time as the proposed project. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. The Calexico II-B project is within the 4,000-meter radius, but it is not expected to be under construction simultaneously with the proposed project.	The Calexico II-B project is not anticipated to cumulatively contribute to construction air quality impacts based on the assumption that it would not be under construction at the same time as the proposed project. In addition, all projects are anticipated to implement construction air quality mitigation measures to reduce adverse impacts.

C. Decommissioning

At the end of the Proposed Action or an alternative's operational life approximately 30 or more years in the future, all equipment and components would be decommissioned and deconstructed. Because decommissioning would occur after serving at least 30 years, it is likely that equipment engine technology would be more advanced and fuel would be cleaner than what is currently used today. Criteria pollutant emissions and Diesel Particulate Matter (DPM) generated during decommissioning are anticipated to be substantially less than the emissions estimated for project construction, but could still contribute to cumulative air quality impacts. Because air quality conditions, regulations and standards cannot be modeled with certainty 30 years into the future, additional air studies would be required prior to decommissioning to determine potential air quality impacts.

5.4.4.2 CEQA SIGNIFICANCE DETERMINATIONS

For the purposes of the cumulative traffic analysis, only two CEQA Significance criteria were considered appropriate for the analysis.

Violate Air Quality Standard/Cause Air Quality Violation

- 2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

A. Construction

As discussed in Section 4.5, the Proposed Action or an alternative would generate ozone precursors and PM₁₀ during construction which could be mitigated to meet County standards (i.e. comply with daily thresholds for criteria pollutants). Thus, no violation of an air quality standard or an air quality violation would occur during project construction. Therefore, the Proposed Action would result in a less than cumulatively considerable contribution to violation of an air quality standard or air quality violation under CEQA. In addition, the cumulative projects identified in Table 5.4-1 and Table 5.4-2 are still in the early stages of environmental review and thus not expected to be under peak construction at the same time as the Proposed Action or an alternative. Furthermore, if other cumulative projects are under construction simultaneous with the Proposed Action or an alternative, no cumulative construction air quality impacts are anticipated based on distance between construction activities. Other cumulative projects would also be assumed to implement mitigation measures to reduce their individual construction air quality impacts.

B. Operations and Maintenance

Emissions resulting from operations and maintenance of the project for all criteria pollutants be near zero, and therefore, well under the ICAPCD thresholds of significance with only 0.02 pounds per day of ROG. Such levels of emissions should not cause localized exceedances, or contribute cumulatively to existing exceedances of ozone and PM₁₀, of the State or federal air quality standards. Therefore, the Proposed Action or alternative would not result in cumulatively considerable contributions to impacts to air quality standards during operations and maintenance under CEQA.

C. Decommissioning

As previously described, emissions associated with decommissioning are expected to be far less than those estimated for project construction. Improvements in engine technology and less equipment

operating simultaneously would all factor in to lower emissions. Although the ambient air quality attainment status for the project area at the time of decommissioning is unknown, emissions resulting from decommissioning the Proposed Action are not expected to cause or contribute to air quality violations at a level that is cumulatively considerable. Therefore, the Proposed Action or an alternative would not result in cumulatively considerable impacts to air quality standards during decommissioning under CEQA.

Diesel-Related Toxic Emissions

- 4) Expose sensitive receptors to substantial pollutant concentrations

A. Construction

Cumulative DPM emissions were assessed based on a worst-case (month six of Phase I construction) scenario. The health risk analysis indicated a worst-case DPM emission plume at 2,000 meters (approximately 6,562 feet) from the center of construction activities. To be conservative, worst-case, peak-level construction activities were assumed for the entire construction period of the project (Phase I at 28 months and Phase II at 18 months). Even under these parameters, the cancer risk was found to be less (9.7) than ten in one million. The result of the health risk assessment indicates that the proposed project will not result in a significant impact to either existing or future sensitive receptors, but because the project increases cancer risk between 1 and 10 per million, construction equipment will need to be fitted with DPM reducing equipment such as diesel particulate filters, catalytic converters and or a combination DPM reducing equipment and selective emission reduction fuels.

Cumulatively, the project would not be expected to incrementally add emissions to any cumulative projects because: 1) cumulative projects would not be at peak construction simultaneous with the Proposed Action or an alternative; or 2) the estimated worst-case construction emissions of cumulative projects would not overlap with the Proposed Action or an alternative's worst-case estimated construction emissions. In other words, no significant peak construction from cumulative projects would occur at the same time as the Proposed Action or be within a 4,000-meter radius of the Proposed Action (approximately 13,123 feet between both assuming a 2,000 meter plume for the Proposed Action and any other cumulative project). Therefore, no cumulative health risk impacts associated with DPM are expected and no mitigation for cancer risk would be necessary.

B. Operations and Maintenance

Once operational, the Proposed Action would not generate DPM or expose sensitive receptors to substantial pollutants. Therefore, no cumulative CEQA significance determinations can be made with regard to Criterion 4 for the Proposed Action during operations and maintenance.

C. Decommissioning

Decommissioning activities would involve equipment similar to that used during construction. As such, DPM would be generated during decommissioning. However, decommissioning activities are assumed to be less intensive in nature than construction. Thus, emissions would be substantially less than the amount generated during Phase I construction (worst-case scenario). Construction-generated DPM was determined to be less than one in one million as defined by the ARB. Therefore, the Proposed Action or an alternative would result in a less than cumulatively considerable contribution to health risk impacts during decommissioning. Likewise, the Proposed Action is anticipated to result in a less than

cumulatively considerable contribution to exposure of sensitive receptors to substantial pollutant concentrations during decommissioning under CEQA.

5.4.4.3 NEPA IMPACT ANALYSIS

The Proposed Action or an alternative would not have any unmitigable construction air quality impacts with respect to ozone precursors NO_x or PM₁₀ based on County standards. Likewise, if other cumulative projects are under construction simultaneous with the Proposed Action or an alternative, no cumulative construction air quality impacts are anticipated based on timing of projects in the planning and environmental process and distance between construction activities of individual cumulative projects. Emissions resulting from operations and maintenance of the Proposed Action or an alternative for all criteria pollutants would be near zero based on the nature of the project as a solar facility. In addition, the distance between the proposed project and other cumulative projects would ensure that emissions do not combine to create adverse cumulative impacts from operational emissions. Therefore, no direct cumulative impact with regard to an air quality is anticipated during operations and maintenance of the Proposed Action or an alternative.

5.5 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Due to the global nature of climate change and greenhouse gas emissions (GHG) and their potential effects, GHG emissions generated by an individual project were evaluated on a cumulative basis as part of Chapter 4, Environmental Consequences of this EIR/EA. Please refer to subsection 4.5.4 in Section 4.5, Greenhouse Gas Emissions and Climate Change for a discussion of cumulative impacts.

5.6 GEOLOGY AND SOILS

5.6.1 GEOGRAPHIC SCOPE

The geographic scope for analysis of cumulative impacts related to geology and soil resources is limited to the project site. Any potential impacts associated with geology and soil resources related to construction, operation and maintenance, and decommissioning of the Proposed Action or an alternative would be site-specific and would only occur within the boundaries of the project site. Thus, the geographic scope for geology and soils is highly localized.

5.6.2 TIMEFRAME

The timeframe refers the duration over which an impact to geology and soils would occur: short-term or long-term. Short-term impacts to geology and soils would occur during the construction and decommissioning periods in association with earthmoving activities such as grading and excavation to install or remove foundations. Examples of long-term impacts associated with geology and soils include corrosion potential of site soils on subsurface infrastructure and exposure of solar facilities to geologic or seismic hazards over the operational life (approximately 30+ years) of the project.

5.6.3 EXISTING CUMULATIVE CONDITIONS

5.6.3.1 PAST, PRESENT AND REASONABLY FORESEEABLE PROJECTS

The project area consists of undeveloped land, agricultural land, open space land, and desert. Very few structures currently exist in the area as it is primarily devoted to agricultural fields and unpopulated. Most structures in the area are agricultural or industrial in nature and are uninhabited. No past, present or reasonably foreseeable projects identified in **Table 5.6-1** and **Table 5.6-2** and in **Figure 5.0-1** align through, or are within, the proposed project/Proposed Action site boundary. Only the Proposed Action or an alternative would occupy the CSE facility site. As a result, the Proposed Action or an alternative would not combine with another project or contribute to existing cumulative conditions with regard to geology and soils. Therefore, existing cumulative conditions relevant to geology and soils are characterized for the Proposed Action or an alternative.

**TABLE 5.6-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
A	<p>“S” Line Upgrade 230-kV Transmission Line Project (Imperial Irrigation District)</p> <p>Approximately four miles north of the project site.</p>	<p>No. A segment of the “S” Line Upgrade 230-kV Transmission Line Project would be within the same utility corridor (Utility Corridor N) as the proposed Gen-tie Line. However, the “S” Line Upgrade 230-kV Transmission Line Project and the proposed Gen-tie Line would not share the same alignment.</p>	<p>The “S” Line Upgrade 230-kV Transmission Line Project would align through Utility Corridor N in close proximity to the proposed Gen-tie Line alignment. However, the two projects would not share the same tower structures or footings. The alignment of the Gen-tie would be separated from the “S” Line Upgrade 230-kV Transmission Line Project by several hundred feet.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>No. The Imperial Valley Solar project does not share the same site as the CSE Facility.</p>	<p>The Imperial Valley Solar project is approximately 10 miles northwest of the project and would not affect any geology or soils on the project site or within the Gen-tie Line alignment.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site.</p>	<p>No. The Sunrise 500-kV Line would extend northwest from the Imperial Valley Substation which is also the point of interconnection for the proposed Gen-tie Line. A segment of the Sunrise 500-kV Line would be within Utility Corridor N as would the proposed Gen-tie Line. However, the Sunrise 500-kV Line and the proposed Gen-tie Line would not share the same alignment.</p>	<p>The proposed Gen-tie Line and the Sunrise 500-kV Line would be confined to Utility Corridor N. However, they would not share common tower structures or footings.</p>

**TABLE 5.6-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
D	Ocotillo Sol Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.	No. Ocotillo Sol does not share any portion of the proposed project site.	The SDG&E Photovoltaic Field is approximately 2.5 miles northwest of the northwest corner of the project site and is approximately 500 feet west of the proposed Gen-tie Line.
E	SDG&E Geotechnical Investigation Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.	No. The proposed SDG&E Geotechnical Investigation would occur over a period of one week with no long term change to land use patterns.	The SDG&E Geotechnical Investigation (i.e. bore holes for soil testing) would not occur within the proposed Gen-tie Line alignment within Utility Corridor N in the Yuha Basin ACEC.
F	North Gila to Imperial Valley #2 Transmission Line Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.	No. A segment of the North Gila to Imperial Valley #2 Transmission Line is within Utility Corridor N which would be shared by the proposed Gen-tie Line. However, the North Gila to Imperial Valley #2 Transmission Line and the proposed Gen-tie Line would not share the	The North Gila to Imperial Valley #2 Transmission Line would parallel the existing SDG&E 500-kV transmission line to the east of the Imperial Valley Substation, but would not share the same alignment, tower structures or footings as the proposed Gen-tie Line.

**TABLE 5.6-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
		same alignment.	
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>No. Both the proposed Gen-tie Line and the Dixieland Connection would connect to Imperial Valley Substation and are within Utility Corridor N. However, the Dixieland Connection and the proposed Gen-tie Line would not share the same alignment.</p>	<p>A segment of the Dixieland Connection approximately five miles is within Utility Corridor N which is a designated corridor for transmission lines. The proposed Gen-tie Line would not share the same alignment and structures as the Dixieland Connection.</p>
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>No. Both the Gen-tie Line and 230-kV line proposed as part of the Solar Reserve Imperial Valley project would connect to Imperial Valley Substation and are in Utility Corridor N. However, the Solar Reserve Imperial Valley and the proposed Gen-tie Line would not share the same alignment.</p>	<p>A segment of the 230-kV line proposed as part of the Solar Reserve Imperial Valley project is in Utility Corridor N which is a designated corridor for transmission lines. The proposed Gen-tie Line would not share the same alignment and structures as the Solar Reserve Imperial Valley.</p>

**TABLE 5.6-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
1	Linda Vista Approximately eight miles northeast of project site.	No. The Linda Vista does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the Linda Vista project.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	No. The County Center II Expansion/County and Imperial County Office do not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the County Center II Expansion/County and Imperial County Office of Education project.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	No. The Imperial Solar Energy Center West does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the Imperial Solar Energy Center West project.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	No. The Imperial Solar Energy Center South does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the Imperial Solar Energy Center South project.
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and	No. The Mount Signal Solar Farm I project does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the Mount Signal Solar Farm I project.

**TABLE 5.6-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
	adjacent to the southern and southeastern boundary of the project site.		
6	<p align="center">Campo Verde</p> Approximately two miles northwest of the northern-most portion of the project site.	No. Campo Verde does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the Campo Verde project.
7	<p align="center">Mayflower Solar Farm Project</p> Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. The Mayflower Solar Farm Project is not within one mile of the 40-foot contour of ancient Lake Cahuilla in the vicinity of the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares common areas with the Mayflower Solar Farm Project.
8	<p align="center">Arkansas Solar</p> Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. Arkansas Solar does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Arkansas Solar.
9	<p align="center">Sonora Solar</p> Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. Sonora Solar does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Sonora Solar.

**TABLE 5.6-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
10	Alhambra Solar Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. Alhambra Solar does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Alhambra Solar.
11	Acorn Greenworks Less than one mile west of northwestern boundary of the project site.	No. The Acorn Greenworks does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Acorn Greenworks.
12	Calexico I-A Immediately adjacent to southern and eastern portions of the project	No. The Calexico I-A Project does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Calexico I-A.
13	Calexico I-B Immediately adjacent to southern portion of project site.	No. The Calexico I-B Project does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Calexico I-B.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	No. The Calexico II-A Project does not share the same area as the project site.	Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Calexico II-A.

**TABLE 5.6-2
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO GEOLOGY AND SOILS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Geology and Soils
15	<p align="center">Calexico II-B</p> <p>Approximately one mile east of eastern portion of project site.</p>	<p>No. The Calexico II-B Project does not share the same area as the project site.</p>	<p>Geology and soils impacts are limited to the proposed project site which consists of the CSE Facility site and Gen-tie Line corridor. No aspect of the proposed project shares areas in common with Calexico II-B.</p>

5.6.4 CUMULATIVE GEOLOGY AND SOILS IMPACTS

5.6.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

The geographic extent of cumulative analysis for soils is limited to the CSE Facility site, easement through private lands and the Gen-tie Line alignment through Utility Corridor N. No other projects would be on the CSE Facility site or through the private land easement to combine with the Proposed Action or an Alternative to create cumulative erosion impacts. Multiple projects would have transmission lines within Utility Corridor N with their alignments spaced over 100-feet apart. Therefore, construction of transmission structures of other projects and the proposed Gen-tie Line would occur in the same immediate vicinity, but not share the exact alignment or any footings that would be installed to support the tower structures. Construction of some of the cumulative projects would most likely involve the same access roads to Utility Corridor N. However, BMPs and mitigation measures to minimize or avoid potential erosion impacts (including the Construction General Permit and the Stormwater Pollution Prevention Plan [SWPPP]) are identified for the Proposed Action or an alternative. Implementation of the BMPs and compliance with the provisions of the Construction General Permit and SWPPP would reduce the project's potential temporary direct contribution to cumulative erosion impacts on access roads and within Utility Corridor N. Therefore, direct erosion impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects following site specific mitigation.

The project site is in a seismically active region on soils considered unstable. The Applicant would be required to construct project facilities in conformance with the California Building Code and the findings and recommendations of the Preliminary Geotechnical Investigation Report (Landmark, 2011) and any subsequent geotechnical reports. Potential direct impacts would be site-specific and would be reduced by implementing Mitigation Measures GS-1 through GS-4 (see Section 4.6 Geology and Soils). Therefore, direct seismic and unstable soil impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects following site specific mitigation.

The project site has the potential to be subject to expansive soils that swell and lose strength when saturated. This is considered a direct impact with regard to siting building foundations and asphalt concrete. Compliance with the California Building Code and Mitigation Measure GS-4 (see Section 4.6 Geology and Soils) would reduce direct impacts through replacing and conditioning expansive silts and clays on a site-specific basis during project construction. Corrosive soils could result in direct impacts to foundations. These impacts would be addressed and minimized through implementation of Mitigation Measure GS-5 and GS-6 which protect steel, copper and concrete from exposure to destructive chemical compounds. Therefore, direct impacts associated with corrosive and expansive soils would be addressed on a site-specific basis and are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects.

B. Operation and Maintenance

Operation and maintenance of the Proposed Action or an alternative would result in potential exposure of the proposed solar facility to potential seismic hazards and unstable soils. As discussed under Construction (above), potential direct impacts would be site-specific and would be reduced by the implementation of site-specific Mitigation Measures GS-1 through GS-4 (see Section 4.6 Geology and Soils). Therefore, potential direct seismic and unstable soil impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects.

During operation, soil erosion would be controlled in accordance with the General Industrial Permit and BMPs included as part of the SWPPP prepared for the project site. Therefore, potential direct erosion impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects.

As discussed under Construction, the project site has potential for expansive and corrosive soils. These factors could contribute to direct impacts to foundation components of the proposed solar structures (PV panels, towers, etc). Compliance with the California Building Code and Mitigation Measure GS-4 (see Section 4.6 Geology and Soils) would reduce potential direct impacts through replacing and conditioning expansive silts and clays on a site-specific basis at the time of construction. Likewise, corrosive soils with potential to damage foundations would be addressed through Mitigation Measure GS-5 and GS-6 which protect steel, copper and concrete from exposure to destructive chemical compounds over the operational life of the project. Therefore, direct corrosive and expansive soil impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects during operations and maintenance.

C. Decommissioning

Decommissioning of the Proposed Action or an action alternative would involve soil-disturbing activities to dismantle and remove PV panels, tower structures, and building foundations (to a depth of at least 4-feet below ground level). The geographic extent of cumulative analysis for soils is limited to the project site. If decommissioning of other solar projects and the Proposed Action or an action alternative occurs at the same time, and within the same specific vicinity of the project site, potential direct cumulative impacts to soil erosion could occur. Several of the solar projects identified in **Table 5.6-1** and **Table 5.6-2** include transmission lines within Utility Corridor N. While other projects may be decommissioned simultaneous with the Proposed Action or an alternative, each would be within a separate alignment within the utility corridor (unless another project co-locates a transmission line with the Proposed Action). Earth-moving activities associated with the decommissioning phase could result in direct impacts with regard to soil erosion and/or loss of topsoil. Potential for erosion would be minimized or avoided through implementation of BMPs and the decommissioning plan which are specific to the project site. Therefore, direct soil erosion impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects during decommissioning. No indirect (occurring following decommissioning) impacts to soil erosion are anticipated as the Proposed Action or an alternative would implement a restoration plan for the BLM portion of the project and an Agricultural Reclamation Plan for the CSE Facility site. No direct or indirect impacts would occur in association with ground shaking, expansive soils or corrosive soils following decommissioning as the project would be removed from the site.

5.6.4.2 CEQA SIGNIFICANCE DETERMINATIONS

A. Construction

Exposure to Seismic Risk/Unstable Soils

- 1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - ii. Strong seismic ground shaking;
 - iii. Seismic-related ground failure, including liquefaction; or,

- 3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse.

Ground Shaking

The project site is in the seismically active Imperial Valley of Southern California. Exposure of the site to strong seismic ground shaking is a potentially significant site-specific impact. Mitigation Measure GS-1 requires structures to be designed in compliance with CBC standards, recommendations provided in the Preliminary Geotechnical Investigation Report (Landmark, 2011), and any subsequent geotechnical investigations on the final project design. Implementation of Mitigation Measure GS-1 would reduce impacts associated with ground shaking to less than significant under CEQA. Therefore, ground shaking impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. The proposed project would have a less than cumulatively considerable contribution to ground shaking impacts. Thus, cumulative impacts associated with ground shaking would be less than cumulatively considerable under CEQA.

Liquefaction/Unstable Soils

Soils within the CSE Facility site and Gen-tie Line route include saturated silts and silty sands that could liquefy. This is considered a potentially significant site-specific impact under CEQA. Mitigation measures GS-2 (geotechnical report for gen-tie line, ground improvements such as deep soil mixing [cement] and vibro-compaction) and GS-3 (foundation design to withstand liquefaction during a seismic event) are identified to address potential for liquefaction on a site-specific level. Therefore, liquefaction and unstable soil impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. The proposed project would have a less than cumulatively considerable contribution to liquefaction/unstable soils impacts. Thus, cumulative impacts associated with liquefaction/unstable soils would be less than cumulatively considerable under CEQA.

Subsidence or collapse was not identified as a potential geologic issue in the Preliminary Geotechnical Report prepared for the project site (Landmark, 2011). As such, no cumulative impacts are identified with regard to subsidence or collapse.

Soil Erosion

- 2) Result in substantial soil erosion or loss of topsoil.

Construction soil erosion impacts are considered potentially significant short-term, site-specific impacts under CEQA. Erosion would be controlled on-site with site-specific measures, a grading plan approved by the County Engineer, implementation of a dust control plan (Rule 801), and compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. Therefore, soil erosion impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. The proposed project would have a less than cumulatively considerable contribution to soil erosion impacts. Thus, cumulative impacts associated with soil erosion would be less than cumulatively considerable under CEQA.

Expansive and Corrosive Soils

- 4) Be located on expansive soil, as defined in the latest California Building Code, creating substantial risk to life or property.

Expansive Soils

The solar field and Gen-tie Line structures (building and other structural foundations) could be subject to potential swelling forces and reduction in soil strength resulting from saturation of the soil. Mitigation measure GS-4 (replace expansive soils or condition soils to minimize expansion) would reduce impacts associated with expansive soils on a site-specific level. Therefore, expansive soil impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. The proposed project would have a less than cumulatively considerable contribution to expansive soils impacts. Thus, cumulative impacts associated with expansive soils would be less than cumulatively considerable under CEQA.

Corrosive Soils

The native soils of the CSE Facility site have severe levels of sulfate ion concentration. Potential damage to foundations as a result of soil chemistry is considered a potentially significant impact under CEQA. Mitigation Measures GS-5 and GS-6 would reduce the potential damage to foundations on a site-specific basis through compliance with the CBC and use of protective coatings (epoxy) for buried steel components. Therefore, corrosive soils impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. The proposed project would have a less than cumulatively considerable contribution to corrosive soils impacts. Thus, cumulative impacts associated with corrosive soils would be less than cumulatively considerable under CEQA.

Soil Capability to Support Septic Tanks/Alternative Wastewater Disposal System

- 5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The septic system would be engineered based on site-specific soil characteristics and designed and installed in compliance with County Environmental Health Department standards. Therefore, corrosive soil capability to support septic tanks is not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. The proposed project would have a less than cumulatively considerable contribution to soil capability impacts. Thus, cumulative impacts associated with soil capability to support septic tanks would be less than cumulatively considerable under CEQA.

Operations and Maintenance

The discussions of site-specific impacts with regard to exposure to seismic risk/unstable soils; soil erosion; expansive and corrosive soils; and soil capability to support septic tanks/alternative wastewater disposal systems provided under “Construction” would also apply to “Operations and Maintenance”. All impacts are site-specific and would be addressed through site-specific mitigation which would result in less than cumulatively considerable impacts under CEQA.

Decommissioning

The discussions of site-specific impacts with regard to exposure to seismic risk/unstable soils; soil erosion; expansive and corrosive soils; and soil capability to support septic tanks/alternative wastewater disposal systems provided under “Construction” would also apply to “Decommissioning”. All impacts are site-specific and would be addressed through site-specific mitigation which would result in less than cumulatively considerable impacts under CEQA.

5.6.4.3 NEPA IMPACT ANALYSIS

Geology and soils impacts for the Proposed Action or an alternative are for the most part site specific and applicably to the project site individually. In the case of erosion, off-site transport could impact off-site streams or receiving waters in combination with other cumulative projects. Erosion impacts are addressed through compliance with the provisions of the Construction General Permit and SWPPP and would be applicable to all cumulative projects.

Potential direct impacts resulting from seismic groundshaking, expansive soils, and corrosive soils would be site-specific and would be reduced by implementing Mitigation Measures GS-1 through GS-6 (see Section 4.6 Geology and Soils). Therefore, direct seismic, expansive soils, and corrosive soils impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects following site specific mitigation during construction and operations and maintenance. No direct or indirect impacts would occur in association with ground shaking, expansive soils or corrosive soils following decommissioning as the project would be removed from the site.

5.7 CULTURAL RESOURCES

Cumulative impacts on cultural resources take into account the impacts of the Proposed Action or an alternative as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on cultural resources, an assessment is made of the impacts on individual resources as well as the inventory of cultural resources within the cumulative impact analysis area.

5.7.1 GEOGRAPHIC SCOPE

The cumulative impacts of the Proposed Action on cultural resources is defined as the incremental physical impact of the Proposed Action or an alternative when added to other closely related past, present, and reasonably foreseeable probable future projects.

The regulations implementing Section 106 of the National Historic Preservation Act (NHPA) contemplate close coordination between the NEPA and NHPA processes (36 CFR §800.8), and expressly integrate consideration of cumulative concerns within the analysis of a proposed action's potential direct and indirect effects by defining "adverse effect" to include "reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative" (36 CFR §800.5(a)(1)).

The Council on Environmental Quality (CEQ) provides that when establishing the proper geographic scope, the boundaries should not be too broad as to make the analysis unwieldy, nor to narrow as to miss significant issues. Additionally, the EPA provides that for non-ecological resources, other geographic areas should be considered, such as historic districts (for cultural resources).

With this guidance in mind, the geographic scope for the analysis of cumulative impacts related to cultural resources is the southwestern section of the high water mark of ancient Lake Cahuilla within the Yuha Basin. More specifically, the geographic scope is defined as the area within one mile of the 40-foot contour of ancient Lake Cahuilla between the Yuha Wash and the international border with Mexico.

In considering historic districts per the CEQ guidance, two proposed districts are encompassed within the geographic scope of the cumulative analysis for cultural resources.

The Lake Cahuilla High Water Mark Archaeological District is within one-half mile of and above the 40-foot mean sea level contour. This district is characterized by prehistoric archaeological sites reflecting subsistence activities focused on lacustrine resources. Contributing elements to the district include prehistoric sites that 1) are located along and above the 40-foot contour shoreline of the former Lake Cahuilla; 2) have the potential to contain well preserved cultural deposits and/or features; and 3) have an assemblage with a range of artifacts. The district would be significant under criterion D/4 of the NRHP and the CRHR due to its potential to provide information about lithic technology, chronology, subsistence practices, and settlement patterns. The period of significance would be the Late Prehistoric Period and it can be assumed more specifically that the sites were occupied between 1250 before present (B.P.) and 230 B.P. based on past research regarding the timing of the high water mark. The sites within the district may represent a single cultural affiliation and would be culturally distinct from sites located further northwest along the Lake Cahuilla shoreline or those sites on the eastern Lake Cahuilla shoreline. For example, the sites within the Southwest Lake Cahuilla Recessional Shoreline District (approximately 30 miles north of the proposed project) are characterized by fish traps and sandstone enclosures, none of which were identified within the proposed Lake Cahuilla High Water Mark Archaeological District.

The second proposed archaeological district is located below the 40-foot contour and extends to at least 0.7 miles below the 40-foot contour. Sites that characterize the district include sparse lithic scatters, higher density lithic scatters, ceramic and lithic scatters, and temporary camps. Sites below the high water mark are considered important in the study of cultural change because they represent activities that are undertaken after one of the immediate recessions of the lake, or more likely, the final recession. The sites imply the continued use and occupation as the shoreline was receding. The sites represent a roughly contemporary use of a relatively limited duration during the Late Prehistoric Period. This district would be significant under criterion D/4 of the NRHP and the CRHR due to its potential to answer questions about lithic technology, subsistence practices, and settlement patterns as the lake was receding. The sites within the district below the 40-foot contour would also be significantly different than other sites within the Yuha Basin.

Both districts are good representations of past Lake Cahuilla shoreline activities. All of the area of potential effect is contained within the geographic scope of this cumulative impacts analysis. Instead of limiting the analysis to these proposed districts, the geographic scope was expanded to one mile around the 40-foot contour to be more conservative and err on the side of caution in assessing the cumulative impacts of past, present and future projects on cultural resources in the vicinity of the Proposed Action. It is noted that the BLM NEPA Handbook advises that "The geographic scope of cumulative effects will often extend beyond the scope of the direct effects, but not beyond the scope of the direct and indirect effects of the proposed action and alternatives." The Proposed Action's direct and indirect impacts are within the area of potential effect. Nevertheless, the geographic scope has been expanded beyond the area of potential effect to be more conservative and err on the side of caution in assessing the cumulative impacts of past, present and future projects on cultural resources in the vicinity of the Proposed Action.

5.7.2 TIMEFRAME

The timeframe refers to the duration over which an impact would occur: short-term or long-term. Short-term impacts to cultural resources would occur during the construction and decommissioning periods in association with earth-moving and ground disturbing activities. Long-term impacts to cultural resources

would occur as a result of any changes which would occur as a result of the project over its operational life (approximately 30+ years).

Determining the temporal scope requires estimating the length of time the effects of the proposed action will last, either individually or in combination with other anticipated effects. The temporal scope of impacts to cultural resources during the development of cumulative projects would be the through the end of project decommissioning, because any direct or indirect effects of the project would only occur during the life of the project.

5.7.3 EXISTING CUMULATIVE CONDITIONS

There are 43 cultural sites within the Proposed Action APE. Previous studies in the geographic scope by BRG Consulting (2011) indicates that there are an additional 893 cultural resources sites within the southern two-thirds of the geographic scope including temporary camps, lithic scatters, ceramic and lithic scatters, ceramic scatters, rock features, trails or trail markers, historic period sites, and prehistoric isolates. It can reasonably be estimated that the northern third would also have cultural resources proportionate to the southern area, which would provide a total of 1,353 cultural resources in the entire geographic scope.

5.7.3.1 Past, Present and Reasonably Foreseeable Projects

Cumulative conditions to cultural resources involve the disturbance of culturally significant resources, and alteration of the historic and cultural landscape of the area over time. In the past, cultural resources have sometimes been damaged or destroyed by development projects resulting in the loss of potential knowledge. This has become less common in recent years, especially for projects undergoing environmental review under NEPA or CEQA, as laws now provide various protections for cultural resources.

Development projects in the region have resulted in the damage or destruction of cultural resources. Likewise, various human activities have taken place in the project area in the past and certain activities, such as recreation and agricultural endeavors, continue today. In recent times, the severity of impacts to previously unknown cultural resources has been reduced by implementing mitigation measures requiring construction monitoring, evaluation of resources discovered during monitoring, and avoidance or data recovery for significant resources.

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.7-1** and **Table 5.7-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.7-1** and **Table 5.7-2**, their potential effects were considered in the cumulative impacts analyses in this EA/EIR for the geographic area described above. These projects are in the various stages of permitting or construction.

**TABLE 5.7-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>No. This project does not affect cultural resources.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. There are no cultural resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. Imperial Valley Solar is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of land managed by the BLM and approximately 360 acres of privately owned land. There are 149 cultural resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on BLM land. There are 33 cultural resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.</p>

**TABLE 5.7-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. Ocotillo Sol is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>No. This project does not affect cultural resources.</p>	<p>This project is a geotechnical investigation on one acre of BLM land. There are no cultural resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.</p>

**TABLE 5.7-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>No. North Gila to Imperial Valley #2 Transmission Line is not within one mile of the 40-foot contour of ancient Lake Cahuilla</p>	<p>This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is large and is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie</p>	<p>Yes. The Dixieland Connection to Imperial Irrigation District Transmission System is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on land managed by the BLM and approximately 19.19 acres are on privately owned land. There are 10 cultural resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.</p>

**TABLE 5.7-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
	Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.		
H	Solar Reserve Imperial Valley Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.	Yes. A portion of the North Gila to Imperial Valley #2 Transmission Line may be within one mile of the 40-foot contour of ancient Lake Cahuilla.	This project is a 2,000-acre solar power project on lands managed by the BLM. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
1	Linda Vista Approximately eight miles northeast of project site.	No. Linda Vista is not within one mile of the 40-foot contour of ancient Lake Cahuilla.	This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The County Center II Expansion/County and Imperial County Office of Education project appears to be within one mile of the 40-foot contour of ancient Lake Cahuilla.	There are three cultural resources that would be potentially affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. Imperial Solar Energy Center West is within one mile of the 40-foot contour of ancient Lake Cahuilla.	There are three cultural resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
4	<p>Imperial Solar Energy Center South</p> <p>Adjacent to southern boundary of project site.</p>	<p>Yes. Imperial Solar Energy Center South is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>There is one cultural resource that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on cultural resources.</p>
5	<p>Mount Signal Solar Farm I</p> <p>Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.</p>	<p>No. The Mount Signal Solar Farm I project is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
6	<p>Campo Verde</p> <p>Approximately two miles northwest of the northern-most portion of the project site.</p>	<p>No. Campo Verde does not appear to be within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably</p>

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
			<p>anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
7	<p>Mayflower Solar Farm Project Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Mayflower Solar Farm Project is not within one mile of the 40-foot contour of ancient Lake Cahuilla in the vicinity of the project site.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
8	<p>Arkansas Solar Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. Arkansas Solar is not within one mile of the 40-foot contour of ancient Lake Cahuilla in the vicinity of the project site.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that</p>

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
			has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.
9	<p style="text-align: center;">Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	No. Sonora Solar is not within one mile of the 40-foot contour of ancient Lake Cahuilla in the vicinity of the project site.	This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.
10	<p style="text-align: center;">Alhambra Solar</p> <p>Approximately 28 miles</p>	No. Alhambra Solar is not within one mile of the 40-foot contour of ancient Lake Cahuilla in the vicinity	This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
	north and slightly east of the project site on the eastern side of the Salton Sea.	of the project site.	documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.
11	Acorn Greenworks Less than one mile west of northwestern boundary of the project site.	No. Acorn Greenworks does not appear to be within one mile of the 40-foot contour of ancient Lake Cahuilla	This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
12	<p style="text-align: center;">Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	<p>No. Calexico I-A is not within one mile of the 40-foot contour of ancient Lake Cahuilla</p>	<p>This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
13	<p style="text-align: center;">Calexico I-B</p> <p>Immediately adjacent to southern portion of project site.</p>	<p>No. Calexico I-B is not within one mile of the 40-foot contour of ancient Lake Cahuilla</p>	<p>This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after</p>

**TABLE 5.7-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO CULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Cultural resources
			a thorough review of the project site.
14	<p style="text-align: center;">Calexico II-A</p> <p>Approximately three miles southeast of eastern portion of project site.</p>	No. Calexico II-A is not within one mile of the 40-foot contour of ancient Lake Cahuilla	This project site is the first phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.
15	<p style="text-align: center;">Calexico II-B</p> <p>Approximately one mile east of eastern portion of project site.</p>	No. Calexico II-b is not within one mile of the 40-foot contour of ancient Lake Cahuilla	This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain cultural resources, it can reasonably be expected the project may have some unknown cultural resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on cultural resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.

5.7.4 CUMULATIVE CULTURAL RESOURCES IMPACTS

There are an estimated 1,396 cultural sites within the geographical scope. Of these sites, an estimated 1,353 sites occur outside the APE, and 43 sites occur within the APE. An estimated 242 sites would be potentially affected by the cumulative projects (including the Proposed Action), 199 of which would be potentially affected from six cumulative projects (excluding the Proposed Action). There are 15 cumulative projects that were not included in this analysis because the level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared. There were two cumulative projects that were also not included in this analysis because it was determined that these projects would not have an effect on cultural resources.

5.7.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

The Proposed Action has been designed to avoid the 43 known cultural resources and is not expected to contribute to direct impacts on these cultural resources. The exception is the potential for unanticipated damage or inadvertent discoveries of unknown resources during the construction phase of the Proposed Action. If any unanticipated resources are encountered during construction, measures to reduce impacts to these resources would be implemented. Construction of other projects located in the geographic area for the cumulative analysis (as presented in **Table 5.7-1** and **Table 5.7-2**) could also result in damage to previously unknown resources encountered during construction.

The Proposed Action would avoid all known cultural resources and impacts that may occur related to unanticipated resources would be mitigated. As with the Proposed Action, the other cumulative projects would be required to provide similar avoidance and mitigation for any potential impacts to known or unanticipated cultural resources to reduce impacts. Because the cultural resources within the geographic scope are important for their potential contribution to knowledge of history (Criterion D/4), mitigation measures to collect scientific value from archaeological cultural resources include systematic data recovery. With the implementation of mitigation there would be no net loss of the cumulative value/context of the cultural resources within the geographic scope. No cumulative loss or displacement of known cultural resources resulting from the construction of the Proposed Action and the projects within the same geographic context is expected, due to avoidance of known resources and implementation mitigation measures during construction, including monitoring. Individually and cumulatively, the cultural resources surveys and data collection performed for the Proposed Action and other projects in the cumulative analysis area contribute to scientific knowledge about the prehistoric and historic uses of the area, including information about prior inhabitants and their cultures.

B. Operations and Maintenance

As described above, the Proposed Action has been designed to avoid known cultural resources and thus would have no direct lasting effects on those resources. In addition, with implementation of mitigation measures listed in Section 4.7, adverse effects on any known or unknown historic and archaeological resources that could potentially be encountered during operation and maintenance activities would be mitigated by ensuring identification, evaluation, avoidance, and protection of those resources. Given these factors, the operation of the Proposed Action would not directly contribute to cumulative impacts on cultural resources within the geographic extent.

Direct impacts to cultural resources can be avoided or minimized through the implementation of mitigation measures that result in the avoidance of direct impacts to archaeological sites and the permanent preservation of culturally significant resources by reducing and/or controlling public access to culturally sensitive areas. These measures reduce the direct cumulative impacts of construction projects on cultural resources, and have resulted in beneficial cumulative effects by identifying and preserving cultural resources and contributing to knowledge about the prehistoric and historic resources in the area.

C. Decommissioning

The decommissioning of the Proposed Action, consistent with a BLM-approved decommissioning plan, would significantly reduce any project-related contributions to cumulative effects. In addition, it is unlikely that any unanticipated resources would be discovered during decommissioning activities, as such all cultural resources at the project site would probably have been previously identified during either construction or operation. Therefore, decommissioning would not contribute to any adverse cumulative impacts on cultural resources. In addition, with decommissioning and restoration, the project site would be restored a condition similar to pre-construction conditions, and any effect that the project may have on culturally important landscapes, views, or traditional uses of the area would be eliminated or substantially reduced.

5.7.4.2 CEQA SIGNIFICANCE DETERMINATIONS

Implementation of the Proposed Action would not have a cumulatively considerable impact to historic resources, as the project has been designed to avoid direct and indirect impacts to all such resources identified within the geographical scope for cumulative projects. Mitigation measures are proposed to help further ensure that the Proposed Action does not cumulatively affect any historic resources.

Implementation of the Proposed Action or an alternative would not contribute to cumulative impacts on archaeological resources, as the project has been designed to avoid direct and indirect impacts to all such resources identified within the geographical scope for cumulative projects. Mitigation measures are proposed to help further ensure that the Proposed Action or an alternative does not cumulatively affect any archaeological resources.

Implementation of the Proposed Action or an alternative would not result in the disturbance of any known human remains, including those interred outside of formal cemeteries. Mitigation measures are proposed to help avoid impacts associated with the disturbance of any unknown human remains that may be encountered during construction. Therefore, the project would not make a significant contribution to cumulative impacts related to disturbance of human remains.

5.7.4.3 NEPA IMPACT ANALYSIS

In order to assess cumulative effects and whether the Proposed Action's incremental effect when added to other past, present, and reasonably foreseeable future actions within the geographic scope would be adverse and cumulatively considerable, a quantification of cumulative cultural resource impacts from the past, present, and foreseeable future projects was prepared. There would be the potential for impacts to 199 cultural resource sites from the six cumulative projects within the defined geographic scope of the cumulative analysis. This represents 15 percent of the estimated total number (n=1353) of cultural resources within the geographic scope (excluding the project site). The Proposed Action would provide an additional 43 cultural resources to the geographical scope, which represents 17 percent of

the estimated total number (n=1396). Because the cultural resources within the geographic scope are important for their potential contribution to knowledge of history (Criterion D/4), mitigation measures associated with the development of each cumulative project, like the Proposed Action, would be expected to require to document and to collect information of scientific value from archaeological cultural resources impacted by those actions. Such recovery measures would reduce the cumulative impacts of these projects by preserving the information value of the potentially impacted cultural resources. There would be no net loss of the cumulative value/context of the cultural resources within the geographic scope.

Based on the detailed analysis provided above under the CEQA Impact Analysis, for purposes of NEPA, the Proposed Action would not result in a cumulative effect to cultural resources.

5.8 NOISE

5.8.1 GEOGRAPHIC SCOPE

Cumulative impacts to noise could occur if implementation of the proposed Centinela Solar Energy Project would combine with noise impacts of other cumulative local or regional projects. While the project would generate noise during operations, the combined noise levels of all on-site equipment (transformers, inverters, array trackers, substation, water treatment facility) at the nearest property line were projected to be below the County's most restrictive property line standard 45 dBA Leq. No impacts are anticipated from cumulative operational noise (refer to Section 4.8). Thus the geographic scope for cumulative noise impacts is based on the traffic analysis which examined a total of 21 intersections, 22 roadway/highway segments and 3 freeway segments in the study area. The selected intersections, roadway/highway segments and freeway segments were confirmed by County staff and are listed in Table 3.3-5, Table 3.3-6 and Table 3.3-7 in Section 3.3. Tables quantifying noise generated by each of the cumulative projects identified in Table 5.0-1 and 5.0-2 are not included in this section as cumulative project noise is discussed on a qualitative level.

5.8.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term noise impacts would occur during the construction and decommissioning periods in association with the addition of construction equipment. Long-term noise impacts would occur as a result of any changes in traffic patterns or volumes which would occur as a result of the presence of the project over its operational life (approximately 30+ years).

5.8.3 EXISTING CUMULATIVE CONDITIONS

5.8.3.1 Past, Present and Reasonably Foreseeable Projects

The cumulative noise analysis is based in part on cumulative traffic volumes. Therefore, the projects chosen for inclusion in the cumulative noise analysis are the same as those used for the cumulative transportation and circulation analysis. Refer to Table 5.3-1 and Table 5.3-2, in subsection 5.3, above.

5.8.4 CUMULATIVE NOISE IMPACTS

5.8.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Cumulative Construction Traffic Noise

The noise levels for the peak construction period of the Proposed Action or an alternative, combined with other cumulative projects as identified in Table 5.3-1 and Table 5.3-2 (Cumulative Transportation and Circulation) were compared with the existing opening year conditions to determine if cumulative off-site noise level impacts would occur. Using the *Draft Traffic Impact Analysis* prepared by LOS Engineering, noise contours were developed for the following traffic scenarios:

- **Opening Year 2011- 2012 Project Plus Cumulative Projects:** Current day noise conditions plus the peak construction period of the project and other cumulative projects.
- **Opening Year 2011-2012 vs. Opening Year 2011-2012 Plus Project Plus Cumulative:** Comparison of the existing noise levels and the related noise level increases from the combination of the proposed project peak construction traffic and all other cumulative projects in the vicinity of the site.

The existing noise levels and the distances to the 60 dBA CNEL contours for the roadways in the vicinity of the project site are given in Table 4.8-2 in Section 4.8 for the Opening Year 2011-2012 Scenario. The cumulative noise conditions are provided in Table 5.8-1. No factors that could affect noise levels, such as noise barriers or topography, were incorporated in the calculations.

**TABLE 5.8-1
YEAR 2011-2012 TRAFFIC NOISE LEVELS (WITH PROJECT + CUMULATIVE)**

Roadway Segment	ADT ¹	Vehicle Speeds (MPH) ¹	Noise Level @ 50-Foot (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
Brockman Road				
McCabe Road to Kubler Road	1,637	45	61.5	63
Kubler Road to SR-98	1,822	45	62.0	68
Drew Road				
I-8 to Fisher Road	2,671	55	65.7	119
Fisher Road to Kubler Road	801	55	60.4	53
Kubler Road to SR-98	803	55	60.4	54
Ferrell Road				
Kubler Road to SR-98	1,400	45	60.9	57
Fisher Road				
Drew Road to Wormwood Road	99	40	48.2	8
Forrester Road				
I-8 to McCabe Road	2,424	55	65.2	112

**TABLE 5.8-1
YEAR 2011-2012 TRAFFIC NOISE LEVELS (WITH PROJECT + CUMULATIVE)**

Roadway Segment	ADT ¹	Vehicle Speeds (MPH) ¹	Noise Level @ 50-Foot (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
Kubler Road				
Drew Road to Pulliam Road	268	40	52.6	16
Pulliam Road to Brockman Road	1,094	40	58.7	41
Brockman Road to Rockwood Road	327	40	53.4	18
Rockwood Road to Ferrell Road	375	40	54.0	20
McCabe Road				
Brockman Road to Forrester Road	1,675	45	61.6	64
Pulliam Road				
Fisher Road to Kubler Road	510	40	55.4	25
Kubler Road to SR-98	660	40	56.5	29
Rockwood Road				
Kubler Road to SR-98	112	40	48.8	9
SR-98				
Drew Road to Pulliam Road	3,327	65	68.4	181
Pulliam Road to Brockman Road	4,033	65	69.2	205
Brockman Road to Rockwood Road	3,664	65	68.8	193
Rockwood Road to Ferrell Road	3,564	65	68.7	189
Ferrell Road to Clark Road	4,645	65	69.8	226
Clark Road to Dogwood Road	5,892	65	70.9	264

Source: Ldn, 2011b.

¹ Project Traffic study prepared by LOS Engineering, Inc. (LOS, 2011).

Table 5.8-2 presents the comparison of the Opening Year 2011-2012 and the Opening Year 2011-2012 Plus Project and Cumulative noise levels. No factors that could affect noise levels, such as noise barriers or topography, were incorporated in the calculations.

5.0 CUMULATIVE IMPACTS

**TABLE 5.8-2
YEAR 2011-2012 vs. YEAR 2011-2012 PLUS PROJECT PLUS CUMULATIVE NOISE LEVELS**

Roadway Segment	Year 2012 Noise Level @ 50-Feet (dBA CNEL)	Year 2012 Plus Project Plus Cumulative Noise Level @ 50-Feet (dBA CNEL)	Project Related Noise Level Increase (dBA CNEL)	County Threshold	Exceeds County Threshold ?
Brockman Road					
McCabe Road to Kubler Road	55.6	61.5	5.9	5	Yes
Kubler Road to SR 98	54.4	62.0	7.6	5	Yes
Drew Road					
I-8 to Fisher Road	59.9	65.7	5.7	3	Yes
Fisher Road to Kubler Road	53.4	60.4	7.0	5	Yes
Kubler Road to SR 98	53.5	60.4	7.0	5	Yes
Ferrell Road					
Kubler Road to SR 98	58.6	60.9	2.2	5	No
Fisher Road					
Drew Road to Wormwood Road	42.4	48.2	5.8	5	Yes
Forrester Road					
I-8 to McCabe Road	61.5	65.2	3.7	3	No
Kubler Road					
Drew Road to Pulliam Road	46.7	52.6	5.8	5	Yes
Pulliam Road to Brockman Road	49.5	58.7	9.2	5	Yes
Brockman Road to Rockwood Road	51.6	53.4	1.8	5	No
Rockwood Road to Ferrell Road	52.6	54.0	1.4	5	No
McCabe Road					
Brockman Road to Forrester Road	57.9	61.6	3.8	5	No
Pulliam Road					
Fisher Road to Kubler Road	45.0	55.4	10.4	5	Yes
Kubler Road to SR 98	43.6	56.5	12.9	5	Yes
Rockwood Road					
Kubler Road to SR 98	48.6	48.8	0.2	5	No
SR 98					
Drew Road to Pulliam Road	66.9	68.4	1.4	3	No
Pulliam Road to Brockman Road	66.9	69.2	2.3	3	No
Brockman Road to Rockwood Road	66.9	68.8	1.9	3	No
Rockwood Road to Ferrell Road	66.9	68.7	1.7	3	No
Ferrell Road to Clark Road	67.7	69.8	2.1	3	No
Clark Road to Dogwood Road	69.6	70.9	1.2	3	No

Source: Ldn, 2011b.

Traffic related short-term noise increases during the peak construction of the Proposed Action or an alternative and cumulative projects has the potential to increase noise levels more than 5 dBA CNEL in the “normally acceptable” category on ten roadway segments as can be seen in **bold** in the last column of Table 5.8-2. Either no sensitive receptors exist along these roadway segments or the existing uses will be removed as part of the proposed project. Therefore, the Proposed Action or an alternative would not be expected to incrementally add to the roadway traffic noise levels of any cumulative projects. All cumulative solar projects in the vicinity of the project site are in the early stages of environmental review behind the proposed project. As a result, cumulative projects in the vicinity of the project site would not be under construction during the peak traffic period for the Proposed Action. Therefore, no direct cumulative construction noise impacts are anticipated.

Cumulative On-site Construction Equipment Noise

At a distance as close as 175 feet the point source noise attenuation from the grading activities and the nearest property line is -10.9dBA. This would result in an anticipated worst case eight-hour average combined noise level of less than 75dBA at the property line. During the installation of the PV panels at a distance of 130 feet would result in a noise level of less than 75 dBA. The mass grading and PV installation equipment is anticipated to average more than 500 feet from the nearest property line. Given this and the spatial separation of the equipment over the entire project site (approximately 2,067 acres), the noise levels of the grading and PV panel installation for both Phase I and Phase II are anticipated to comply with Imperial County’s 75 dBA standard at all project property lines for each Phase.

If cumulative grading operations are simultaneously occurring at a shared property line, noise levels may exceed the Imperial County threshold of 75 dBA. The two separate operations would be considered overlapping and would act as a single noise generator. To reduce the noise levels below the County’s 75 dBA threshold, the construction operations would need to be moved to a distance of 250 feet from the shared property line. This increase in distance would reduce the noise levels below the County’s property line standard of 75 dBA. Likewise, cumulatively, the project would not be expected to incrementally add to the construction noise of cumulative projects since the project complies with the property line standards as identified in **Table 5.3-1** and **Table 5.3-2**. As shown in these tables: 1) peak construction of the Proposed Action or an alternative would not coincide with peak construction phasing of any of the cumulative projects; or 2) worst-case concentrated construction noise levels for cumulative projects would be separated on average 500 feet (because not all the equipment will be working in the same area) so as to not cumulatively add to one another. No adverse cumulative noise impacts are anticipated.

B. Operations and Maintenance

Operational Traffic

Operations and maintenance of the project is estimated to require 15 to 21 average daily trips (ADTs) with five to seven AM and PM peak hour trips. During a typical year, the project is estimated to require up to ten daily water trucks for panel washing over approximately 15 business days. Panel washing is estimated to take place one to four times a year. During the washing period, the total project daily traffic on area roadways may increase to 40 or 50 ADT over a 15 business day period.

Operations and maintenance traffic generation is significantly less than construction traffic. To be conservative, construction trip generation was used to determine potential operational traffic impacts.

In other words, the construction phase was used for the analysis because it is calculated to generate significantly higher traffic (about 60 times more) than the project operations and maintenance phases (refer to Table 4.8-4 in Section 4.8). Operations of cumulative solar projects are anticipated to be similar and would only add a small amount of daily trips. In order to substantially increase the noise levels the traffic volumes would need to be more than doubled. Therefore, cumulative project operations will not increase the traffic volumes enough to make an audible increase in the noise levels.

Cumulative Operational Equipment Noise

The combined noise levels of all operational equipment on the CSE Facility site (the substation in combination with the water treatment facility and the pad mounted transformer/inverters and array tracker motors) were calculated for the Proposed Action. At the project site property line, the noise levels of 58 dBA from the transformer, 65 dBA for the inverter, 61 dBA from the array tracker motor and 71 dBA for the larger transformer at the substation along with a noise level of 77 dBA for the water treatment facility were all combined and propagated out to the nearest property line assuming no shielding from the proposed buildings. The combined operational noise levels at the nearest (eastern) property line were projected to be 44.8 dBA Leq and no noise impacts are anticipated from the proposed substation in the southeast corner of the project site. Based on this projected noise level, on-site equipment (the substation in combination with the water treatment facility and the pad mounted transformer/inverters and array tracker motors) would comply with the County's most restrictive property line noise standard of 45 dBA Leq (as identified in Table 4.8-1 in Section 4.8). Because the Proposed Action or an alternative would not result in adverse direct impacts to noise on the project level, no cumulative noise impacts are anticipated in association with operational equipment noise. Likewise, all other cumulative projects would be required to meet Imperial County's property line noise standards and are anticipated to comply based on site design and distance separations (i.e. not all the equipment would be adjacent to each other).

In the event that two solar projects are located next to each other with operational equipment near property lines, cumulative (additive) operational noise would occur between the two solar projects. However, by nature, solar facilities do not have sensitive receptors on site. Therefore, no cumulative impacts are anticipated.

BLM does not have explicit noise standards and would defer to the local agencies' standards. Most local agencies do not have established noise thresholds for wildlife and no sensitive receptors (e.g. homes, schools) exist on BLM land. The closest agency to the project site with a habitat noise threshold is San Diego County. Noise levels in habitat areas in San Diego County are limited to 60 dBA Leq during breeding or nesting season for listed endangered species. Since the Corona noise levels for the project are well below the San Diego County threshold, no cumulative noise impact is anticipated in Utility Corridor N. In addition, the Proposed Action or an alternative complies with Imperial County property line noise standards and therefore complies on BLM lands, directly and cumulatively.

Cumulative Corona Noise

The measured Corona Effect (refer to description in Section 3.8, subsection 3.8.2.1) noise levels associated with the proposed Gen-tie Line were found to be below the County's most restrictive nighttime standard of 45 dBA. Corona noise is based on the transmission lines at full capacity (i.e. not the project-related power transmission by itself, but the cumulative transmission of power through the transmission lines). No direct or cumulative Corona noise impacts are anticipated from the addition of the proposed Gen-tie Line. The portion of the Gen-tie Line extending into Utility Corridor N on BLM land

would not be subject to County noise standards. BLM does not have explicit noise standards and defers to the local agencies. Most local agencies do not have established noise thresholds for wildlife and no sensitive receptors (e.g. residents, schools) are on BLM land. The nearest agency with a habitat noise threshold is San Diego which limits noise levels in habitat areas to 60 dBA Leq during breeding or nesting season for listed endangered species. Since the Corona noise levels are well below the San Diego threshold, no cumulative noise impact is anticipated in Utility Corridor N.

C. Decommissioning

Noise from On-Site Decommissioning Activities

Equipment used during decommissioning activities would be similar to that used during construction including: crane, excavator, and air hammer (to break up concrete foundations). As such, decommissioning activities would generate a temporary, localized increase in ambient noise levels. These noise levels would be similar to, but less than, those generated during construction because decommissioning activities would be less intense and for a shorter duration of time. Because the Proposed Action or an alternative did not generate onsite noise impacts during construction, and no sensitive receptors are located nearby, no direct or indirect adverse cumulative on-site noise impacts are anticipated in association with decommissioning.

Noise from Traffic Associated with Decommissioning

Traffic volumes associated with decommissioning activities would likely be similar to traffic volumes associated with construction activities. However, because decommissioning would occur at least 30 years in the future, it is likely that vehicle engine technology would be different from current technology. Engine technologies that do not rely on internal combustion engines would likely generate lower noise levels than those produced by current vehicles. Reduced noise levels are already apparent with hybrid vehicles. Consequently, noise impacts from traffic associated with decommissioning activities would likely be somewhat less than the noise levels estimated for construction-related traffic (Note: Construction related traffic noise was determined to be below thresholds). No direct or indirect cumulative traffic noise impacts are anticipated in association with decommissioning.

5.8.4.2 CEQA SIGNIFICANCE DETERMINATIONS

Noise Levels In Excess of Standards/Temporary Increase in Noise

- 1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- 4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Construction

Cumulative Construction Traffic Noise

Traffic related short-term noise increases during the peak construction of the proposed project or an alternative and cumulative projects has the potential to increase noise levels more than 5 dBA CNEL in the “normally acceptable” category on ten roadway segments as can be seen in **bold** in the last column of **Table 5.8-2**, above. Either no sensitive receptors exist along these roadway segments or the existing uses will be removed as part of the proposed project. Therefore, although the Proposed Action or an

alternative would result in a temporary increase in ambient noise levels existing without the proposed project, it would not expose sensitive receptors to noise levels above what is normally acceptable as no noise sensitive receptors would be subject to the increases. All cumulative solar projects in the vicinity of the project site are in the early stages of environmental review behind the proposed project. As a result, cumulative projects in the vicinity of the project site would not be under construction during the peak traffic period for the proposed project. Therefore, the proposed project would result in a less than cumulatively considerable impact to noise levels in excess of standards and less than cumulatively considerable temporary noise increases under CEQA.

Cumulative On-site Construction Equipment Noise

Construction of the Proposed Action or an alternative is anticipated to result in combined noise levels below the County of Imperial's 75 dBA standard at all project property lines for both Phase I and Phase II construction. No noise impacts from on-site construction equipment are anticipated for the project by itself. Likewise, the proposed project or an alternative would result in less than cumulative considerable contributions to cumulative noise levels because: 1) peak construction of the proposed project or an alternative would not coincide with construction phasing of any of the cumulative projects; or 2) worst-case construction noise levels for cumulative projects would be separated by enough distance so as not to cumulatively add to one another. Therefore, cumulative on-site construction equipment noise is considered less than cumulatively considerable under CEQA.

Operations and Maintenance

Noise Levels In Excess of Standards/Permanent Increase in Noise

- 1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- 3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Operational Traffic

Operations and maintenance traffic generation is significantly less than construction traffic. The project does create a short-term noise increase during the peak construction of Phase I of more than 5dBA CNEL in the "normally acceptable" category on four roadway segments. No sensitive receptors are along these receptors. Therefore, the proposed project's contribution to operational traffic noise is considered less than cumulative considerable. Overall, the proposed project would not result in a cumulatively considerable impact to noise levels or exposure of sensitive receptors to noise levels in excess of standard under CEQA.

Cumulative Operational Equipment Noise

The combined operational noise levels at the nearest (eastern) property line were projected to be 44.8dBA_{Leq} and no noise impacts are anticipated from the proposed substation in the southeast corner of the project site. Therefore, on-site equipment (the substation in combination with the water treatment facility and the pad mounted transformer/inverters and array tracker motors) would comply with the County's most restrictive property line noise standard of 45 dBA Leq (as identified in Table 4.8-1 in Section 4.8). No sensitive receptors are near the proposed project. Likewise, the proposed project will meet County noise standards. Therefore, the proposed project would result in less than

cumulatively considerable contributions to noise levels in excess of standards and a less than cumulatively considerable increase in ambient noise levels. Cumulative operational equipment noise impacts of the proposed project or an alternative are considered less than cumulatively considerable under CEQA.

Cumulative Corona Noise

The measured Corona Affect (refer to description in Section 3.8, subsection 3.8.2.1) noise levels associated with the proposed Gen-tie Line were found to be below the County's most restrictive nighttime standard of 45 dBA. Therefore, the proposed Gen-tie Line would have a less than cumulatively considerable contribution to Corona noise. No cumulatively considerable Corona noise impacts are anticipated from the addition of the proposed Gen-tie Line under CEQA.

Decommissioning

Temporary Increase in Noise

- 4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Noise from On-Site Decommissioning Activities

Equipment used during decommissioning activities would be similar to that used during construction including: crane, excavator, and air hammer (to break up concrete foundations). As such, decommissioning activities would generate a temporary, localized increase in ambient noise levels. These noise levels would be similar to, but less than, those generated during construction because decommissioning activities would be less intense and for a shorter duration of time. On-site noise impacts in association with decommissioning the proposed would be temporary and are anticipated to be similar to construction noise levels which were all determined to be within thresholds or "normally acceptable" limits. Therefore, the project is anticipated to have no cumulative contribution to temporary noise associated with decommissioning. No cumulative impact would occur under CEQA.

Traffic Noise Associated with Decommissioning

Traffic volumes associated with decommissioning activities would likely be similar to construction traffic volumes. However, because decommissioning would occur at least 30 years in the future, it is likely that vehicle engine technology would be different from current technology. Engine technologies that do not rely on internal combustion engines would likely generate lower noise levels than those produced by current vehicles. Reduced noise levels are already apparent with hybrid vehicles. Consequently, noise impacts from traffic associated with decommissioning the Proposed Action would likely be somewhat less than the noise levels estimated for construction-related traffic which was determined to be below thresholds. Therefore, the proposed project's contribution to traffic noise associated with decommissioning activities is considered less than cumulatively considerable. Likewise, a less than cumulatively considerable impact to traffic noise would occur under CEQA.

5.8.4.3 NEPA IMPACT ANALYSIS

Short-term traffic noise increases during the peak construction of the Proposed Action or an alternative and cumulative projects has the potential to increase noise levels more than 5 dBA CNEL. However, no sensitive receptors exist along these roadway segments or the existing uses will be removed as part of the proposed project. Therefore, the Proposed Action or an alternative would not be expected to

incrementally add to the roadway traffic noise levels of any cumulative projects and no direct cumulative construction noise impacts are anticipated. Likewise, no adverse cumulative noise impacts are anticipated from on-site equipment noise because: 1) peak construction of the Proposed Action or an alternative would not coincide with peak construction phasing of any of the cumulative projects; or 2) worst-case concentrated construction noise levels for cumulative projects would be separated on average 500 feet (because not all the equipment will be working in the same area) so as to not cumulatively add to one another.

Operations and maintenance traffic generation is significantly less than construction traffic and no adverse noise impacts are anticipated in association with the Proposed Action or an Alternative. Operations of cumulative solar projects are anticipated to be similar and would only add a small amount of daily trips. Therefore, the Proposed Action or an alternative's contribution (individually or in combination with other cumulative projects' operational traffic) is not anticipated to result in an audible increase in the noise levels. No adverse cumulative noise impacts would occur with regard to operational traffic.

On-site equipment (the substation in combination with the water treatment facility and the pad mounted transformer/inverters and array tracker motors) would comply with the County's most restrictive property line noise standard of 45 dBA Leq (as identified in Table 4.8-1 in Section 4.8). In the event that two solar projects are located next to each other with operational equipment near property lines, cumulative (additive) operational noise would occur between the two solar projects. However, by nature, solar facilities do not have sensitive receptors on site. Therefore, no adverse cumulative operational equipment noise impacts are anticipated.

The measured Corona Effect (refer to description in Section 3.8, subsection 3.8.2.1) noise levels associated with the proposed Gen-tie Line were found to be below the County's most restrictive nighttime standard of 45 dBA. Therefore, no adverse direct or cumulative Corona noise impacts are anticipated from the addition of the proposed Gen-tie Line.

Equipment used during decommissioning activities would be similar to that used during construction. Because the Proposed Action or an alternative did not generate adverse onsite noise impacts during construction, and no sensitive receptors are located nearby, no direct or indirect adverse cumulative on-site noise impacts are anticipated in association with decommissioning.

Noise impacts from traffic associated with decommissioning activities would likely be somewhat less than the noise levels estimated for construction-related traffic (which was determined to be below thresholds) based on improved engine technologies (e.g. quieter engines). Thus, no direct adverse cumulative traffic noise impacts are anticipated in association with decommissioning.

5.9 AGRICULTURAL RESOURCES

Cumulative impacts on agricultural resources take into account the proposed action's impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on agricultural resources, an assessment is made of the impacts on individual resources as well as the inventory of agricultural resources within the cumulative impact analysis area.

5.9.1 GEOGRAPHIC SCOPE

The cumulative impacts on agricultural resources is defined as the incremental physical impact of the Proposed Action when added to other closely related past, present, and reasonably foreseeable probable future projects. The geographic scope of cumulative impacts related to agricultural resources is the Imperial Valley located in Imperial County. The Imperial Valley Agricultural Complex consists of approximately 500,000 acres of more-or-less contiguous farm fields located in the Imperial Valley and surrounded by desert and mountain habitat.

5.9.2 TIMEFRAME

The timeframe refers to the duration over which an impact would occur: short-term or long-term. Short-term impacts to cultural resources would occur during the construction and decommissioning periods in association with the addition of construction equipment to the landscape. Long-term impacts to cultural resources would occur as a result of any changes in traffic patterns or volumes which would occur as a result of the presence of the project over its operational life (approximately 30+ years).

Determining the temporal scope requires estimating the length of time the effects of the proposed action will last, either individually or in combination with other anticipated effects. The temporal scope of impacts to agricultural resources during the development of cumulative projects would be the through the end of project decommissioning, because any direct or indirect effects of the project would only occur during the life of the project.

5.9.3.1 EXISTING CUMULATIVE CONDITIONS

Cumulative conditions for agricultural resources consist of both private and BLM lands. All of the private parcels are agriculture lands, while native desert scrub is on BLM land. The private parcels are currently utilized for agricultural production, primarily non-food crops such as Bermuda grass and alfalfa. Much of this land is classified as Important Farmland under the Farmland Mapping and Monitoring Program.

5.9.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.9-1** and **Table 5.9-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.9-1** and **Table 5.9-2**, their potential effects were considered in the cumulative impacts analyses in this EA/EIR for the geographic area described above. These projects are in the various stages of permitting or construction.

**TABLE 5.9-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AGRICULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
A	<p>“S” Line Upgrade 230-kV Transmission Line Project (Imperial Irrigation District)</p> <p>Approximately four miles north of the project site.</p>	<p>No. This project does not affect agricultural resources.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. It was determined that this project would not have an adverse effect on agricultural resources.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>No. This project does not affect agricultural resources.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of BLM land and approximately 360 acres of privately owned land. Approximately 1,931 acres of this project site is designated as “Prime Farmland if Irrigated”, although it is not under agricultural production. It was determined that the project would not result in adverse effects due to the permanent conversion farmland and no mitigation was required.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>No. This project does not affect agricultural resources.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on BLM land that is not under agricultural production. It was determined that this project would not have an adverse effect on agricultural resources.</p>
D	<p>Ocotillo Sol</p> <p>Solar field is</p>	<p>No. This project does not affect agricultural resources.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There are currently no published environmental</p>

**TABLE 5.9-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AGRICULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
	approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.		documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located on BLM land that is not under agricultural production, it can reasonably be expected the project would have no adverse effects on agricultural resources. The determination will be made by the lead agency in the environmental document.
E	SDG&E Geotechnical Investigation Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.	No. This project does not affect agricultural resources.	This project is a geotechnical investigation on one acre of BLM land. The project site is located on BLM land that is not under agricultural production and it was determined that the project would have no adverse effects on agricultural resources.
F	North Gila to Imperial Valley #2 Transmission Line Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.	No. The level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on agricultural land in the Imperial Valley, and given that most agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow the

**TABLE 5.9-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AGRICULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
			precedent in the region from past projects and require mitigation measures to reduce this impact to a less than significant level. The determination will be made by the lead agency in the environmental document.
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	Yes. This project is in the Imperial Valley and would affect agricultural resources.	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on land managed by the BLM and approximately 19.19 acres are on privately owned land. It was determined that the project would temporarily impact 8.11 acres of farmland and permanently impact 2.49 acres of farmland. These impacts on agricultural lands were determined to be less than significant. There were no other impacts on agricultural resources identified.</p>

**TABLE 5.9-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AGRICULTURAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>No. This project does not affect agricultural resources.</p>	<p>This project is a 2,000-acre solar power project on lands managed by the BLM. There are currently no published environmental documents available for this project; therefore, it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located on BLM land that is not under agricultural production, it can reasonably be expected the project would have no adverse effects on agricultural resources. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.9-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO AGRICULTURAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
1	Linda Vista Approximately eight miles northeast of project site.	No. The level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. An environmental document is currently being prepared for this project, although the impact conclusions are not currently published. It is anticipated that either: 1) the project is located on agricultural land and the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level; or 2) the project is not on agricultural land and there will be no impact.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The County Center II Expansion/County and Imperial County Office of Education is in the Imperial Valley and would affect agricultural resources.	It was determined that this project would result in the conversion of approximately 160 net buildable acres of land previously used for agricultural production to non-agricultural uses. The 160 acres is identified as Farmland of Statewide Importance. The loss of Farmland of Statewide Importance was considered a potentially significant impact. However, the lead agency has required mitigation that will reduce the impact to a less than significant level. There were no other agricultural impacts identified in the environmental document.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. Imperial Solar Energy Center West is in the Imperial Valley and would affect agricultural resources.	It was determined that this project would result in the conversion of approximately 1,056.9 net buildable acres of land previously used for agricultural production to non-agricultural uses. Approximately 1,048.4 acres of the site is identified as Farmland of Local Importance and 8.5 acres is identified as Other Land, which has not been utilized for agricultural production for over ten years. The loss of Farmland of Local Importance was considered a potentially significant impact. However, the lead agency has required mitigation that will reduce the impact to a less than

**TABLE 5.9-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
			significant level. There were no other agricultural impacts identified in the environmental document.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. Imperial Solar Energy Center South is in the Imperial Valley and would affect agricultural resources.	It was determined that this project would result in the conversion of approximately 820.7 net acres of buildable land currently in agricultural production to non-agricultural uses. Approximately 478.9 acres is identified as Prime Farmland and 341.8 acres is identified as Farmland of Statewide Importance. The loss of this Prime Farmland and Farmland of Statewide Importance was considered a potentially significant impact. However, the lead agency has required mitigation that will reduce the impact to a less than significant level. There were no other agricultural impacts identified in the environmental document.
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.	Yes. Mount Signal Solar Farm I is in the Imperial Valley and would affect agricultural resources.	This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land. There is not currently a published environmental document that provides impact conclusions. However, given that the project is located on agricultural land in the Imperial Valley, and given that most agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level.
6	Campo Verde	Yes. Campo Verde is in the Imperial Valley and would affect agricultural	This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land. There is not currently a

**TABLE 5.9-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
	Approximately two miles northwest of the northern-most portion of the project site.	resources.	published environmental document that provides impact conclusions. However, given that the project is located on agricultural land in the Imperial Valley, and given that most agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level.
7	Mayflower Solar Farm Project Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. The level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. It is anticipated that either: 1) the project is located on agricultural land and the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level; or 2) the project is not on agricultural land and there will be no impact.
8	Arkansas Solar Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.	No. The level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. It is anticipated that either: 1) the project is located on agricultural land and the lead agency will follow their precedent from past projects and require

**TABLE 5.9-2
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
			mitigation measures to reduce this impact to a less than significant level; or 2) the project is not on agricultural land and there will be no impact.
9	<p style="text-align: center;">Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The level of quantitative data available regarding this project was insufficient to determine the project’s potential impacts at the time this evaluation was prepared.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. It is anticipated that either: 1) the project is located on agricultural land and the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level; or 2) the project is not on agricultural land and there will be no impact.</p>
10	<p style="text-align: center;">Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The level of quantitative data available regarding this project was insufficient to determine the project’s potential impacts at the time this evaluation was prepared.</p>	<p>Undetermined. No published CEQA document is available for the project. Therefore it is not possible to provide an impact conclusion under CEQA. This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. It is anticipated that either: 1) the project is located on agricultural land and the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level; or 2) the project is not on agricultural land and there will be no impact.</p>

**TABLE 5.9-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
11	<p>Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	<p>No. The level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. It is anticipated that either: 1) the project is located on agricultural land and the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level; or 2) the project is not on agricultural land and there will be no impact.</p>
12	<p>Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	<p>Yes. Calexico I-A is in the Imperial Valley and would affect agricultural resources.</p>	<p>This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There is not currently a published environmental document that provides impact conclusions. However, given that the project is located on agricultural land in the Imperial Valley, and given that most agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level.</p>
13	<p>Calexico I-B</p> <p>Immediately adjacent to southern portion of project site.</p>	<p>Yes. Yes. Calexico I-B is in the Imperial Valley and would affect agricultural resources.</p>	<p>This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There is not currently a published environmental document that provides impact conclusions. However, given that the project is located on agricultural land in the Imperial Valley, and given that most</p>

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LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
			agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	Yes. Yes. Calexico II-A is in the Imperial Valley and would affect agricultural resources.	This project site is the first phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There is not currently a published environmental document that provides impact conclusions. However, given that the project is located on agricultural land in the Imperial Valley, and given that most agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level.

**TABLE 5.9-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Agricultural Resources
15	<p>Calexico II-B</p> <p>Approximately one mile east of eastern portion of project site.</p>	<p>Yes. Yes. Calexico II-B is in the Imperial Valley and would affect agricultural resources.</p>	<p>This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There is not currently a published environmental document that provides impact conclusions. However, given that the project is located on agricultural land in the Imperial Valley, and given that most agricultural land in the region is designated as Important Farmland due to the soil quality in the region, it can reasonably be expected that the project impacts would be determined to be potentially significant. Additionally, it can be reasonably expected that the lead agency will follow their precedent from past projects and require mitigation measures to reduce this impact to a less than significant level.</p>

5.9.4 CUMULATIVE AGRICULTURAL RESOURCES IMPACTS

Approximately half of Imperial County, or 540,942 acres, is under agricultural production. There is an estimated 10,599.6 acres of agricultural land within the geographical scope that is potentially affected by the cumulative projects. Of this agricultural acreage, an estimated 2,037.6 acres has been determined to be affected by cumulative projects, 6,495 acres has been proposed for development but not yet evaluated, and 2,067 acres of agricultural land is within the project site. There are 10 cumulative projects (excluding the Proposed Action) that would potentially impact 8,532.6 acres of agricultural land. There are seven cumulative projects that were not included in this analysis because the level of quantitative data available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared. There were six cumulative projects that were also not included in this analysis because it was determined that these projects would not have an effect on agricultural resources.

5.9.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

The Department of Conservation's 2008 inventory of Important Farmland in Imperial County estimated 540,942 acres of Important Farmland out of a total of 1,028,509 acres in the County--approximately half of the County. The inventory estimated 195,589 acres of Prime Farmland, 311,048 acres of Statewide Importance, 2,196 of Unique, and 32,109 acres of Farmland of Local Importance occur in the County. The Prime Farmland and Farmland of Statewide Importance within the project site comprise approximately 0.4 percent of the total Important Farmland in the County.

The Department of Conservation's 2008 inventory showed that there was a net loss of 2,202 acres of Important Farmlands in Imperial County from 2006-2008. Farmland conversions occurred for a variety of reasons, including fallowing of lands resulting in a conversion to a non-irrigated classification, and conversion to urban and other uses due to development of farmsteads, rural commercial facilities, low-density housing, mining facilities, and dairy expansions. The trend in the conversion of agricultural land is expected to continue due to development pressure, and other factors.

As presented in **Table 5.9-1** and **Table 5.9-2**, there are 23 projects considered in this cumulative analysis. Most of these projects are energy related projects located up to 30 miles from the project site. Fifteen of these projects are located on private lands, which are predominately agricultural, and would individually have similar agricultural impacts when compared to the Proposed Action. The impacts of these individual projects include conversion of Important Farmland, and some include conflicts with Williamson Act Contracts. The other eight projects are on BLM lands and would have limited to no impacts on agricultural lands.

Construction activities associated with the Proposed Action would directly convert Prime Farmland (138 acres), Farmland of Statewide Importance (1,927 acres), and Unique Farmland (two acres) to a nonagricultural use. The total agricultural land converted from the Proposed Action would total 2,067 acres. Combined with the cumulative projects, the total agricultural land conversion is estimated to be 10,599.6 acres. The Proposed Action would contribute approximately 19.5 percent of the total agricultural land conversion by the cumulative projects. The cumulative projects combined would contribute to conversion of approximately 1.9 percent of the farmland in Imperial County.

Additionally, the construction activities would directly require the termination of Williamson Act contracts on three parcels totaling 335 acres. The construction activities associated with the Proposed Action would result in the reclassification of the project site to a nonagricultural use during the operational life of the project, and it would be ineligible for a Williamson Act Contract during that time.

Mitigation measures will be imposed on the project which would minimize the project's contribution to the cumulative impact to the extent possible. Mitigation Measure AR-1 would require the Applicant to conserve Important Farmland through a conservation easement, in an amount equal to the amount converted, as compensation for the loss of the agricultural resources. Mitigation Measure AR-2 would ensure that there are no conflicts with a Williamson Act contract. Mitigation Measure AR-3 would require decommissioning activities to involve the implementation of an Agricultural Reclamation Plan, which would involve activities for returning the project site to a condition that supports agricultural production at the end of the operational life of the project. The implementation of the Agricultural Reclamation Plan would eventually return the project site to agricultural lands as well as make the project site eligible for reclassification to the original Important Farmland classifications and for Williamson Act contracts.

B. Operations and Maintenance

As described above, the construction phase of the Proposed Action would directly impact important farmland and require the termination of Williamson Act contracts. While this impact would take place during the construction phase, it would continue to exist throughout the operations and maintenance phase of the project. Mitigation Measure AR-1, which would require compensation for the loss of the agricultural resources through conservation easements, would be in effect during the operations and maintenance phase of the project. Additionally, Mitigation Measure AR-2, which would be implemented during the construction phase, would also ensure that there are no conflicts with a Williamson Act contract during the operations and maintenance phase.

C. Decommissioning

The decommissioning phase of the Proposed Action would effectively reverse the initial impact on agricultural resource returning the project site to a condition that supports agricultural production at the end of the operational life of the project. The implementation of the Agricultural Reclamation Plan would eventually return the project site to agricultural lands as well as make the project site eligible for reclassification to the original Important Farmland classifications and for Williamson Act contracts.

5.9.4.2 CEQA SIGNIFICANCE DETERMINATIONS

The Proposed Action includes cumulative impacts to agricultural resources; however, mitigation measures have been developed to minimize the impacts to the extent feasible. These mitigation measures include compensatory measures such as the purchase of conservation easements in an amount equal to the area converted. Additionally, implementation of an Agricultural Reclamation Plan would involve activities for returning the project site to a condition that supports agricultural production at the end of the operational life of the project. With the implementation of mitigation measures, the Proposed Action would not have a cumulatively considerable impact to agricultural resources.

5.9.4.3 NEPA IMPACT ANALYSIS

No portion of the Proposed Action within BLM lands is utilized for agriculture, nor is the land designated by BLM as agricultural lands. The portion of the Proposed Action within BLM lands is located entirely

within the CDCA-designated Utility Corridor “N.” The Proposed Action is designed to be consistent with the CDCA Plan, Yuha Desert ACEC Management Plan, and FTHL RMS. As such, development of the Proposed Action would not convert farmland to non-agricultural use or conflict with existing zoning for agriculture use. Therefore, the transmission line and access road components of the Proposed Action would not cumulatively impact agricultural resources located on BLM lands.

There is an estimated 10,599.6 acres of agricultural land within the geographical scope that is potentially affected by the cumulative projects. Of this agricultural acreage, an estimated 2,037.6 acres has been determined to be affected by cumulative projects, 6,495 acres has been proposed for development but not yet evaluated, and 2,067 acres of agricultural land is within the project site. Given that approximately half of Imperial County, or 540,942 acres, is under agricultural production, the cumulative projects combined would contribute to a reduction of 1.9 percent of agricultural land under production within the geographical scope. The Proposed Action would contribute approximately 19.5 percent of the total agricultural land conversion by the cumulative projects.

Implementation of Mitigation Measure AR-1 would require the Proposed Action to conserve Important Farmland through a conservation easement, in an amount equal to the amount converted (2,067 acres), as compensation for the loss of the agricultural resources. This mitigation would also be imposed on the other cumulative projects that result in the conversion of agricultural land within the geographic scope (8,532.6 acres). There are seven cumulative projects that were not included in this analysis because the level of quantitative data available regarding the projects was insufficient to determine the project’s potential impacts at the time this evaluation was prepared. There were six cumulative projects that were also not included in this analysis because it was determined that these projects would not have an effect on agricultural resources.

Mitigation Measure AR-2 would ensure that there are no conflicts with a Williamson Act contract. Mitigation Measure AR-3 would require decommissioning activities to involve the implementation of an Agricultural Reclamation Plan, which would involve activities for returning the project site to a condition that supports agricultural production at the end of the operational life of the project. The implementation of the Agricultural Reclamation Plan would eventually return the project site to agricultural lands as well as make the project site eligible for reclassification to the original Important Farmland classifications and for Williamson Act contracts.

5.10 HAZARDS AND HAZARDOUS MATERIALS

Cumulative impacts on hazards and hazardous materials take into account the proposed action’s impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on hazards and hazardous materials, an assessment is made of the impacts on individual resources as well as the hazards and hazardous materials within the cumulative impact analysis area.

5.10.1 GEOGRAPHIC SCOPE

The geographic scope of the cumulative effects analysis for hazards and hazardous materials is a one-mile radius around the project site. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials. This geographic scope encompasses an area larger than the project site and provides a reasonable context wherein cumulative actions could affect hazards and hazardous materials.

5.10.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts associated with hazards and hazardous materials would occur during the construction and decommissioning periods in association with the use of, and potential for exposure to, hazardous materials. Long-term impacts associated hazards and hazardous materials would occur as a result of prolonged exposure to hazards or hazardous materials associated with the project over its operational life (approximately 30+ years).

5.10.3 EXISTING CUMULATIVE CONDITIONS

Phase I Environmental Site Assessment's (ESAs) are typically prepared for projects within the cumulative analysis area to determine hazardous risks. A Phase I ESA was performed within the project site to determine the existing conditions relative to hazards. The reconnaissance included observations of the following:

- **Surface Staining and/or Stressed Vegetation:** An area comprised of hydrocarbon stained soil.
- **Drums, Aboveground Storage Tanks, and Containers:** There are two large above-ground steel fuel storage tanks with a concrete containment area, several 55-gallon drums partially filled with an unknown substance (potentially gasoline or motor oil), and a propane tank.
- **Underground Storage Tanks:** No evidence of underground storage tanks (USTs) was documented on the project site.
- **Trash and Debris:** Household debris and tires were observed, as well as illegal solid waste scattered around an automobile service area. The junk pile contains various household solid waste items such as a water heater, computer monitor, oil stained carpet and used motor oil cans which contained oil residue.
- **Fill Material:** No evidence of fill material was documented on the project site.
- **Transformers:** Transformers were noted on four of the on-site power poles and two power poles at IID owned tile drainage water sumps. No evidence of leakage from the transformers was noted. No evidence of PCB contamination is present.
- **Vents, Air Stacks, and Odors:** No vents, air stacks or odors were noted on the project site.
- **Groundwater and Wells:** Groundwater was encountered at depths ranging from 14 feet to 24 feet below ground surface and groundwater levels could rise to as high as 8 feet below ground surface. Oil and gas exploration leases dating from the early 1980's exist within the project site; however, no exploratory oil or gas wells have been constructed.
- **Alterations in Vegetation:** No evidence of recent alterations in vegetation was documented.
- **Pits, Ponds, and Lagoons:** No pits, ponds, or lagoons were documented.
- **Pesticides and Herbicides:** Aerial and ground application of pesticides and chemical fertilizers have historically been used on the agricultural lands. A 1994 water quality study revealed that arsenic, selenium and nitrates were all below the regulatory limits for drinking water. No pesticide or chemical spills were noted. Field tests revealed pesticide residues on farmlands are

typically at 25 to 50 percent of regulatory action levels. During site reconnaissance, no evidence was observed indicating that the project site would have pesticide residues atypical of regulatory action levels.

- **Environmental Database Search:** No sites were found on or within a 1-mile search radius of the project site.

5.10.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.10-1** and **Table 5.10-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.10-1** and **Table 5.10-2**, their potential effects were considered in the cumulative impacts analyses in this EA/EIR for the geographic area described above. These projects are in the various stages of permitting or construction.

**TABLE 5.10-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>No. The “S” Line Upgrade 230-kV Transmission Line Project is located outside the one-mile radius.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. During construction, operations, and decommissioning, the project may result in potential risks to public health related airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. During operations, the project may result in risks associated with the use and storage of quantities of hydrogen on the site, potential spills of hazardous materials, transportation of hazardous materials, and site security. These impacts, however, would be reduced with the implementation of project design features, and other measures to levels less than significant.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>No. The Imperial Valley Solar project is located outside the one-mile radius.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of land managed by the BLM and approximately 360 acres of privately owned land. During construction, operations, and decommissioning, the project may result in potential risks to public health related airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. During operations, the project may result in risks associated with the use and storage of quantities of hydrogen on the site, potential spills of hazardous materials, transportation of hazardous materials, and site security. These impacts, however, would be reduced with the implementation of project design features, and other measures to</p>

**TABLE 5.10-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
			levels less than significant.
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation (CACA-047658)</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>No. This project would not result in risks associated with hazards or hazardous materials.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on BLM land. It was determined that this project would not have an adverse effect as a result of hazards or hazardous materials.</p>
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. The a portion of the Ocotillo Sol project is within the one-mile radius.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The</p>

**TABLE 5.10-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
			determination will be made by the lead agency in the environmental document.
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>No. This project would not result in risks associated with hazards or hazardous materials.</p>	<p>This project is a geotechnical investigation on one acre of BLM land. The project site is located on BLM land and it was determined that this project would not have an adverse effect as a result of hazards or hazardous materials.</p>
F	<p>North Gila to Imperial Valley #2 Transmission Line (Southwest Transmission Partners)</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>No. The North Gila to Imperial Valley #2 Transmission Line is located outside the one-mile radius.</p>	<p>This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design</p>

**TABLE 5.10-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
			features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>No. The Dixieland Connection to Imperial Irrigation District Transmission System is located outside the one-mile radius.</p>	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on land managed by the BLM and approximately 19.19 acres are on privately owned land. During construction, operations, and decommissioning, the project may result in potential risks to public health related airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. During operations, the project may result in risks associated with the use and storage of quantities of hydrogen on the site, potential spills of hazardous materials, transportation of hazardous materials, and site security. These impacts, however, would be reduced with the implementation of project design features, and other measures to levels less than significant.</p>
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is</p>	<p>No. The Solar Reserve Imperial Valley project is located outside the one-mile radius.</p>	<p>This project is a 2,000-acre solar power project on lands managed by the BLM. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts</p>

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LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
	approximately 30 miles east of the Imperial Valley Substation.		would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.

**TABLE 5.10-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
1	Linda Vista Approximately eight miles northeast of project site.	No. The Linda Vista project is located outside the one-mile radius.	This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.

**TABLE 5.10-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	No. The County Center II Expansion/County and Imperial County Office of Education project is located outside the one-mile radius.	During construction, operations, and decommissioning, the project may result in potential risks to public health related airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. During operations, the project may result in risks associated with the use and storage of quantities of hydrogen on the site, potential spills of hazardous materials, transportation of hazardous materials, and site security. These impacts, however, would be reduced with the implementation of project design features, and other measures to levels less than significant.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	No. The Imperial Solar Energy Center West project is located outside the one-mile radius.	During construction, operations, and decommissioning, the project may result in potential risks to public health related airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. During operations, the project may result in risks associated with the use and storage of quantities of hydrogen on the site, potential spills of hazardous materials, transportation of hazardous materials, and site security. These impacts, however, would be reduced with the implementation of project design features, and other measures to levels less than significant.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. The Imperial Solar Energy Center South project is within the one-mile radius.	During construction, operations, and decommissioning, the project may result in potential risks to public health related airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. During operations, the project may result in risks associated with the use and storage of quantities of hydrogen on the site, potential spills of hazardous materials, transportation of

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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
			hazardous materials, and site security. These impacts, however, would be reduced with the implementation of project design features, and other measures to levels less than significant.
5	<p>Mount Signal Solar Farm I</p> <p>Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.</p>	<p>Yes. The Mount Signal Solar Farm I project is within the one-mile radius.</p>	<p>This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.</p>
6	<p>Campo Verde</p> <p>Approximately two miles northwest of the northern-most portion of the project site.</p>	<p>No. Campo Verde project is located outside the one-mile radius.</p>	<p>This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that</p>

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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
			these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
7	<p>Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	No. The Mayflower Solar Farm Project is located outside the one-mile radius.	This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
8	<p>Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	No. The Arkansas Solar project is located outside the one-mile radius.	This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust;

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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
			equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
9	<p style="text-align: center;">Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	No. The Sonora Solar project is located outside the one-mile radius.	This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
10	<p style="text-align: center;">Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the</p>	No. The Alhambra Solar project is located outside the one-mile radius.	This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects.

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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
	eastern side of the Salton Sea.		However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
11	Acorn Greenworks Less than one mile west of northwestern boundary of the project site.	Yes. The Acorn Greenworks project is within the one-mile radius.	This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
12	Calexico I-A	Yes. The Calexico I-A project is within the one-mile radius.	This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There are

**TABLE 5.10-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
	Immediately adjacent to southern and eastern portions of the project site		currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
13	Calexico I-B Immediately adjacent to southern portion of project site.	Yes. The Calexico I-B project is within the one-mile radius.	This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
14	Calexico II-A	Yes. The Calexico II-A project is within	This project site is the first phase of a solar array field on 1,465

**TABLE 5.10-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hazards and Hazardous Materials
	Approximately three miles southeast of eastern portion of project site.	the one-mile radius.	acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. The Calexico II-B project is within the one-mile radius.	This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, it can reasonably be anticipated that during construction, operations, and decommissioning, the project may result in potential risks to public health related to airborne dust; equipment and vehicle emissions; use, handling, storage, and disposal of hazardous materials; and disturbance of contaminated materials. It can also be reasonably anticipated that these impacts would be reduced with the implementation of project design features, and other measures to levels less than significant. The determination will be made by the lead agency in the environmental document.

5.10.4 CUMULATIVE HAZARDS AND HAZARDOUS MATERIALS IMPACTS

There are 23 cumulative projects, eight of which are within the geographic scope (excluding the Proposed Action). Of these eight cumulative projects within the geographic scope, one project has the potential to have environmental effects associated with hazards and hazardous materials, but design measures and mitigation have been incorporated to reduce the effects. Seven of these cumulative projects do not have published environmental documents available so it is not possible to provide a definitive conclusion of the project's environmental effects associated with hazards and hazardous materials. However, it can reasonably be anticipated that during construction, operations, and decommissioning, these seven cumulative projects could result in potential effects associated with hazards and hazardous materials. It can also be reasonably anticipated that these potential effects would be reduced with the implementation of project design features, and other measures. The determination will be made by the lead agency in the environmental document.

5.10.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Pesticide Residue: Much of the cumulative analysis area has been under agricultural production dating back 60 or more years. Typical agricultural practices in this area during this timeframe consist of aerial and ground application of pesticides and application of chemical fertilizers to both ground and irrigation water. As a result, there is a potential for residual, low-level concentrations of pesticides and other agricultural chemicals to be present in soil and/or groundwater throughout the region. There are no spills or accidental releases of agricultural chemicals that were noted in the Phase I ESA, which includes coverage of the geographic scope including eight cumulative projects within a one-mile radius of the project site. The Proposed Action, and the eight cumulative projects within the geographic scope, do not contain a residential or commercial component that would expose a significant number of people to pesticides/herbicides. Construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact from chemical residues.

On-site Hazards: The Phase I ESA noted small hydrocarbon stains on soils surfaces in an area of the project site that was used for vehicle parking and repair. The stains originated from leakage from parked vehicles or repair of vehicles and are not believed to affect more than 6- to 12-inches of the surface oils at the stain locations. Other unauthorized solid waste piles including a computer monitor, used oil filters, a water heater and other items were observed. It is not uncommon to find similar conditions on agricultural properties throughout the geographic scope. When these conditions are found, measures are taken to correct the condition. The Proposed Action includes mitigation measures that address remediation activities necessary to remove residual hazards from the project site and to ensure that corrective measures are taken if any previously unidentified hazards are discovered during construction. There is one cumulative project that will also require remediation activities necessary to remove residual hazards from the project site and to ensure that corrective measures are taken if any previously unidentified hazards are discovered during construction. It is anticipated that the seven cumulative projects that do not yet have published environment documents, will also require BMPs that address remediation and corrective measures necessary for each particular projects. The impact from the on-site hazards during construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

Hazardous Materials on Adjacent Properties: Database searches within the geographic scope of the cumulative projects (a one-mile radius of the project site) revealed no hazardous material sites. Construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact from hazardous materials on adjacent properties.

Herbicide Use: Herbicide would be applied to control weed growth during the construction phase of the Proposed Action as well as eight cumulative projects within the geographic scope. Use of herbicides during construction for these projects must be performed in accordance with all recommended application procedures as identified on product labels as well as in cooperation with the County Agricultural Commissioner. The Proposed Action includes BMPs that require a weed control plan be developed and approved by the County Agricultural Commissioner prior to the application of herbicides during construction and the operational life of the project. There is one cumulative project that will require the implementation of BMPs that address application of herbicide during construction and the operation of the project. It is anticipated that the seven cumulative projects that do not yet have published environment documents, will also require BMPs that address herbicide application. The impact from the herbicide use during construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

Hazardous Materials - Transport: Some hazardous materials would be transported for use at the project site, as well as the eight cumulative projects within the geographic scope, during the construction phase of these projects. These include diesel fuel, oil and grease for heavy equipment as well as paints and solvents. Large quantities of these materials are not anticipated to be transported. The transport of all hazardous materials transported to these sites will be in compliance with applicable laws and regulations. The impacts from the transport of hazardous materials during construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

Hazardous Materials - Use and Storage: A variety of hazardous materials would be used during the construction phase of the Proposed Action and the eight cumulative projects within the geographic scope. Such materials will include gasoline, diesel fuel, oils and lubricants for operation and maintenance of heavy equipment. Solvents, detergents, degreasers, are also used in association with heavy equipment. Other materials such as paints, ethylene glycol, and welding materials may all be used to varying extents during construction of these cumulative projects. No acutely toxic hazardous materials would be used during construction of these cumulative projects. Further, none of the materials used are anticipated to pose a significant potential risk. The Proposed Action includes Best Management Practices (BMPs) that address the safe handling of hazardous materials, including compliance with all local, state and federal regulations and keeping all such materials in segregated storage with secondary containment as required. There is one cumulative project that will require the implementation of BMPs that address safe handling. It is anticipated that the seven cumulative projects that do not yet have published environment documents, will also require BMPs that address the safe handling of hazardous materials. The impact from the use and storage of hazardous materials during construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

Hazardous Materials - Disposal: Left-over or spent materials would be generated during the construction phase of the Proposed Action and the cumulative projects. These materials could include empty containers, used oil filters, used batteries, used hydraulic fluid, oils, and grease. The Proposed Action includes BMPs that address the proper handling and disposal of materials by prohibiting

hazardous materials from being drained onto the ground or into streams or drainage areas. All construction waste, including petroleum products, and other potentially hazardous materials, will be transferred to a disposal facility authorized to accept such materials. All hazardous wastes shipped off-site for disposal will be transported by a licensed and permitted hazardous waste hauler. There is one cumulative project that will require the implementation of BMPs that address the disposal of hazardous materials. It is anticipated that the seven cumulative projects that do not yet have published environment documents, will also require BMPs that address the disposal of hazardous materials. Compliance with these BMPs and haul methods would be effective to ensure proper disposal of hazardous materials. The impact from the disposal of hazardous materials during construction activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

B. Operations and Maintenance

Herbicides: A long-term strategy for weed control and management would be implemented during operation of and maintenance phase of the Proposed Action and the eight cumulative projects within the geographic scope. This would include a Weed Management Plan, approved by the BLM for all projects on BLM land, to be implemented during operations and maintenance to remove weedy plant species. If herbicides are used, they would be applied in accordance with all recommended application procedures as identified on product labels as well as in cooperation with the County Agricultural Commissioner for application on County lands. The impact from the herbicide use during operations and maintenance activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

Transport, Use and Storage, Disposal of Hazardous Materials: The Proposed Action and the eight cumulative projects and each similar in that they are solar facilities proximate to each other and each are anticipated to have small quantities of hazardous materials transported to the cumulative sites to be stored and used on-site for miscellaneous, general maintenance activities. Hazardous materials are expected to include consumer-sized containers of oils, grease, paints and solvents, as well as small quantities of fuel. Dielectric insulating oil would be used in some electrical equipment, such as the on-site transformer(s). Oil containing equipment would be required as a spill containment system designed to contain all the oil in the event of a leak. If diesel-fueled back-up pumps are required for fire protection, appropriate secondary containment would be provided for the diesel fuel tank. If pre-treatment, such as softening, is necessary for on-site water treatment, water treatment chemicals needed for that process would be used and stored at the facility. Hazardous materials will be stored in appropriate containers at each cumulative project site as needed to support facility operations.

All activities involving the transport, storage, and use of hazardous materials is done in accordance with the Imperial County Fire Department, Imperial County Office of Emergency Services, the Department of Toxic Substances Control (DTSC), and Certified United Program Agencies (CUPA) rules and regulations. A Hazardous Materials Management Plan or other similar plan, as applicable, will be developed for the Proposed Action and the eight cumulative projects to ensure the safe transport, storage, use, and disposal of hazardous materials on the project site. The impacts from the transport of hazardous materials during operations and maintenance activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

Airport Land Use Compatibility Plan: The Proposed Action requires a variance for height exceedance of the proposed transmission towers. The Airport Land Use Commissioners has determined that the

Variance to install a 230-kV transmission line extending from the proposed PV solar field is consistent with the 1996 Airport Land Use Compatibility Plan (ALUCP). At the recommendation of the Airport Land Use Commission (ALUC), the Proposed Action will include lighting and marker balls on segments of the Gen-tie Line that span the Westside Main Canal and SR 98 to improve visibility and serve as a safety feature for aircraft. Thus, no cumulative impacts associated with the airport land use compatibility plan would occur as part of construction phase of the Proposed Action.

C. Decommissioning

The decommissioning phase of the Proposed Action, as well as the eight cumulative projects within the geographic scope, would involve large quantities of solid and industrial wastes from dismantling of the Proposed Action. This would include: 1) broken concrete from tower and building foundations, 2) water treatment pond liners, 3) gravel from on-site roads or electrical substations, 4) metal from fencing, tower structures, wiring and water storage tanks, 5) transformers, inverters, and the substation, and 6) the septic system. Commercially reasonable efforts will be made to recycle or reuse materials from the decommissioning phase. All other materials will be disposed of at a licensed facility.

The Proposed Action, as well as all cumulative projects, will require compliance with applicable laws, as well as standards enforced by the regulatory agencies. This would reduce the risks associated decommissioning of the Proposed Action and the cumulative projects. After decommissioning activities, the use of hazardous materials associated with the Proposed Action and the cumulative projects would no longer exist. The impact from the decommissioning activities associated with the Proposed Action and the cumulative projects combined are not expected to result in a cumulative impact.

5.10.4.2 CEQA SIGNIFICANCE DETERMINATIONS

There are 15 cumulative projects that are not within a one-mile radius of the project site and are considered outside of the geographic scope for the consideration of cumulative effects from hazardous materials sites. The Proposed Action and eight cumulative projects could contribute to cumulative adverse effects from hazards and hazardous materials; however, these impacts are localized in nature and site specific. Potential impacts are not expected to combine with similar impacts of past, present, or reasonably foreseeable projects. Mitigation measures have been developed to minimize the impacts of the Proposed Action and one cumulative project during construction, operations and maintenance, and decommissioning to the extent feasible. It is anticipated that the seven cumulative projects that do not yet have published environmental documents, will be required to implement similar mitigation measures. With the implementation of mitigation measures, the Proposed Action would not have a cumulatively considerable impact to hazards and hazardous materials.

5.10.4.3 NEPA IMPACT ANALYSIS

There are 15 cumulative projects that are not within the one-mile radius of the project site and are considered outside of the geographic scope for the consideration of cumulative effects from hazardous materials sites. There are eight cumulative projects (excluding the Proposed Action) that could contribute to cumulative adverse effects from hazards and hazardous materials. Of these eight cumulative projects within the geographic scope, one project has the potential to have environmental effects associated with hazards and hazardous materials, but design measures and mitigation have been incorporated to reduce the effects. Seven of these cumulative projects do not have published environmental documents available so it is not possible to provide a definitive conclusion of the project's environmental effects associated with hazards and hazardous materials. However, it can

reasonably be anticipated that during construction, operations, and decommissioning, these seven cumulative projects could result in potential effects associated with hazards and hazardous materials. It can also be reasonably anticipated that these potential effects would be reduced with the implementation of project design features, and other measures.

The Proposed Action includes the implementation of mitigation measure HM-1, HM-2, and HM-3 to reduce the potential effects associated with hazards and hazardous materials. Implementation of HM-1 would remediate activities to ensure that potential hazards associated with hazardous materials are eliminated. HM-2 would address any potential sources of contamination not identified as part of the Phase I Environmental Assessments. HM-3 would address ALUC concerns regarding visibility of towers and the segment of the Gen-tie Line spanning the Westside Main Canal and SR 98 Line related to aircraft safety. Thus, the Proposed Action's incremental contribution to cumulative impacts is minimal and mitigated.

5.10 HYDROLOGY AND WATER QUALITY

As indicated in Section 4.11.2.2, there were several issues that were scoped out as part of the Initial Study, including groundwater. This issue was scoped out because the proposed project does not intend to use groundwater and water will continue to percolate through the ground as a majority of the surfaces on the project site will remain pervious following installation of the solar field and Gen-tie Line. As such, groundwater is not discussed within this cumulative analysis.

Cumulative impacts on hydrology and water quality take into account the proposed action's impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on hydrology and water quality, an assessment is made of the impacts on the hydrology and water quality within the cumulative impact analysis area.

5.11.1 GEOGRAPHIC SCOPE

The geographic extent of this cumulative impacts analysis for hydrology and water quality impacts under the Proposed Action or an alternative includes local and regional projects within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region. The hydrologic unit code is 18100200 of the USDA National Resources Conservation Services, (NRCS).

Regional drainage patterns generally direct storm water runoff through the agricultural fields, and convey all tributary storm water runoff via existing outlet structures to the Imperial Irrigation District (IID) Drains located throughout the project site. The Salton Sea lies at the lowest point in the watershed and collects runoff and agricultural drainage from most of Imperial County, as well as other counties.

The principal sources of inflow to the Salton Sea include: the Alamo River, New River, Whitewater River/Coachella Valley Storm Channel, direct drainage from Imperial and Coachella Valleys, subsurface inflow from groundwater, San Felipe Creek, Salt Creek, other smaller local drainages, and direct precipitation onto the Salton Sea.

5.11.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to hydrology and water quality would occur during the construction and decommissioning periods in association with the addition of construction equipment to the landscape. Long-term impacts to hydrology and water quality would occur as a result of any changes in traffic patterns or volumes

which would occur as a result of the presence of the project over its operational life (approximately 30+ years).

5.11.3 EXISTING CUMULATIVE CONDITIONS

The cumulative analysis area is comprised of public and private lands. A wide variety of past and present development projects within this region contribute to the cumulative conditions for hydrology and water quality in the cumulative analysis area. Drainage patterns in the private lands of portion of the cumulative analysis area generally direct storm water runoff through agricultural fields to tributary storm water runoff facilities that enter into Imperial Irrigation District (IID) drains located throughout the region. Drainage patterns in the public lands portion of the cumulative analysis area naturally directs storm water runoff into natural washes and generally direct runoff into IID drains at some point.

Much of the private and public land within the cumulative analysis area is located in Flood Zone X, which is determined to be outside of the 0.2 percent annual chance floodplain. There are areas within the cumulative analysis area that are within Flood Zone A, which is determined to be within the 100-year floodplain. These areas are generally adjacent to surface water facilities and natural washes.

Groundwater on the project site is located at depths ranging from 14 feet to 24 feet below ground surface, and could rise to as high as eight feet below ground surface. Groundwater in the project area has a high salt content. Most of the agricultural fields in the cumulative analysis area are underlain by tile drainage systems to remove excess water and remove soluble salts and compounds leached from the soil during irrigation. A USGS water quality study in 1994 indicated that the irrigation drains contained less than the regulatory limits of arsenic, selenium, and nitrites for drinking water.

Three general categories describe the surface water in cumulative analysis area: freshwater, brackish water, and saline water. Freshwater (with total dissolved solids [TDS] generally less than 1,000 parts per million [ppm]) include the All-American Canal and other canals and laterals which deliver irrigation water to the agricultural fields within the region. The brackish waters (with TDS in the range of 2,000 to 4,000 ppm) include the Alamo River, New River and the agricultural drains that flow into these rivers or directly into the Salton Sea. The Salton Sea represents the saline water category. Salinity concentrations are currently slightly higher than those of ocean water (the Salton Sea's current TDS is approximately 44,000 ppm).

5.11.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.11-1** and **Table 5.11-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.11-1** and **Table 5.11-2**, their potential effects were considered in the cumulative impacts analyses in this EIS/EIR for the geographic area described above. These projects are in various stages of permitting or construction.

**TABLE 5.11-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>Yes. The “S” Line Upgrade 230-kV Transmission Line Project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. Imperial Valley Solar is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of land managed by the BLM and approximately 360 acres of privately owned land. With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on federal land that is not under agricultural production. Primary source of construction related impacts are access roads and transmission towers due to the potential of disturbing sediments and releasing contaminants. With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.</p>

**TABLE 5.11-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF
CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
D	<p align="center">Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. Ocotillo Sol is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>Yes. The SDG&E Geotechnical Investigation is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a geotechnical investigation on one acre of BLM land. With the implementation of mitigation measures impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.</p>

**TABLE 5.11-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF
CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
F	<p align="center">North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. The North Gila to Imperial Valley #2 Transmission Line is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
G	<p align="center">Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. The Dixieland Connection to Imperial Irrigation District Transmission System is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on land managed by the BLM and approximately 19.19 acres are on privately owned land. With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.</p>

**TABLE 5.11-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF
CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
H	<p align="center">Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gentle Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>Yes. The Solar Reserve Imperial Valley project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project is a 2,000-acre solar power project on lands managed by the BLM. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
1	Linda Vista Approximately eight miles northeast of project site.	Yes. Linda Vista is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.	This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The County Center II Expansion/County and Imperial County Office of Education project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.	With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. Imperial Solar Energy Center West is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.	With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.

**TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. Imperial Solar Energy Center South is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.	With the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures, impacts to hydrology and water quality resources would be mitigated to levels considered to be less than significant.
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.	Yes. Mount Signal Solar Farm I is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.	This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.

TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
6	<p style="text-align: center;">Campo Verde</p> <p>Approximately two miles northwest of the northern-most portion of the project site.</p>	<p>Yes. Campo Verde is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
7	<p style="text-align: center;">Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Mayflower Solar Farm Project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
8	<p style="text-align: center;">Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Arkansas Solar project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
9	<p style="text-align: center;">Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Sonora Solar project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
10	<p>Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Alhambra Solar project is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
11	<p>Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	<p>Yes. Acorn Greenworks is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
12	<p>Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	<p>Yes. Calexico I-A is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
13	<p>Calexico I-B</p> <p>Immediately adjacent to southern portion of project site.</p>	<p>Yes. Calexico I-B is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.11-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO HYDROLOGY AND WATER QUALITY**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Hydrology and Water Quality
14	<p>Calexico II-A</p> <p>Approximately three miles southeast of eastern portion of project site.</p>	<p>Yes. Calexico II-A is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is the first phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>
15	<p>Calexico II-B</p> <p>Approximately one mile east of eastern portion of project site.</p>	<p>Yes. Calexico II-B is within the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.</p>	<p>This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering drainage, flooding, erosion, and runoff issues are largely consistent throughout property in the region, it can reasonably be expected that the project would have no adverse effects on hydrology and water quality with the implementation of mitigation measures addressing construction and operation phases, Project Design Features, and other measures. The determination will be made by the lead agency in the environmental document.</p>

5.11.4 CUMULATIVE HYDROLOGY AND WATER QUALITY IMPACTS

5.11.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Drainage and Flooding: The cumulative analysis area is generally flat, flood-irrigated agricultural fields within Imperial County and natural desert environments managed by BLM. Each project within the cumulative analysis area is subject to the Imperial County Drainage Improvement Requirements, which requires storm drainage improvements designed to control drainage and flooding. Projects within the cumulative analysis area generally include detention basins that comprise their own tributary drainage area, and in some cases have very minor contributions extending beyond their project area. Each detention basin is designed with the capacity to detain its own tributary storm flow and to meet the Imperial County Drainage Improvement Requirements. Storm-water runoff generated as a result of project improvements is intended to be detained on-site and infiltrate/evaporate. Detention volumes are achieved within each drainage basin, by limiting storm water drainage with the use of flow control structures that ultimately discharge into a drainage facility.

Storm water within the cumulative analysis area is predominately sheet flow until it concentrates at point-of-discharge structures owned by the IID. These storm drainage facilities are installed or improved during the construction phase of the cumulative projects. The construction phase of the Proposed Action, when combined with the cumulative projects would not result in a cumulatively considerable impact on hydrology or water quality from drainage and flooding.

Erosion, Sedimentation and Runoff Pollutants: Construction activities, including excavation and grading, within the cumulative analysis area would result in various activities that could create erosion, sedimentation, and pollutant runoff. Construction activities in the cumulative analysis area are performed in accordance with the Imperial County Drainage Improvement Requirements, which control soil runoff and erosion by limiting drainage within the drainage basins. During construction of the Proposed Action and the cumulative projects, runoff controls would prevent off-site transport of sediment and other potential pollutants. In addition, soil erosion and sedimentation during construction would be controlled in accordance with the Construction General Permit, which regulates discharges of pollutants in storm water associated with construction activity. The Construction General Permit requires preparation, implementation and maintenance of a Stormwater Pollution Prevention Plan (SWPPP) for the Proposed Action and each cumulative project. Typical soil erosion and sedimentation BMPs employed in a SWPPP include installation of straw wattles, fabric blankets, and silt fencing, among others. These practices would help reduce the likelihood for pollutants entering storm water runoff during construction of each of these cumulative projects. Based on implementation of the requirements summarized above, the construction phase of the Proposed Action, when combined with the cumulative projects would not result in a cumulatively considerable impact on hydrology or water quality from soil erosion, sedimentation or runoff pollutants.

B. Operations and Maintenance

Drainage and Flooding: During operation and maintenance activities, the Proposed Action's storm drainage would function according to the drainage design and improvements that would be installed during construction. This would include detention basins, each designed with the capacity to detain its own tributary storm flow and to meet the Imperial County Drainage Improvement Requirements. Storm-water runoff would be detained on-site and infiltrate or evaporate. Detention volumes would be

achieved within each drainage basin, by limiting storm water drainage via flow control structures that ultimately discharge into a drainage facility. Each cumulative project within the geographic scope would require the installation of drainage facilities during construction, which would function during the operations and maintenance phase. Drainage design would vary from site to site, but would generally include facilities similar to the Proposed Action. Operations and maintenance of the Proposed Action, when combined with the cumulative projects would not result in a cumulatively considerable impact on hydrology or water quality from drainage and flooding.

Erosion, Sedimentation and Runoff Pollutants: During operation and maintenance activities associated with Proposed Action and the cumulative projects, soil erosion and sedimentation would be controlled in accordance with a Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (General Industrial Permit). The General Industrial Permit applies to all new or existing storm water discharges in the cumulative analysis area and requires that a SWPPP be prepared, implemented, and maintained for each project. The purpose of the SWPPP is to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges. In addition, the SWPPP includes site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges that must be implemented during operation and maintenance activities. The Proposed Action, as well as many of the cumulative project, will include design features such as permeable roads (e.g. aggregate for internal roads and turnaround areas) to minimize stormwater runoff. Based on implementation of the requirements summarized above, operation and maintenance of the Proposed Action, when combined with the cumulative projects, would not cumulatively affect hydrology and water quality with regard to soil erosion, sedimentation or runoff pollutants.

C. Decommissioning

The operating life of the Proposed Action, with appropriate maintenance, repair and component replacements, is expected to be 30+ years. At the end of its operational life, the components would be decommissioned and deconstructed. Concrete foundations, if used for poles and towers, would be removed and demolished and driven piles would be removed from the ground. Other concrete foundations, such as those for buildings and inverter pads, would be demolished and removed or used onsite for fill as needed. Gravel roads will be removed and the material either used on site for fill or removed. Excavation areas (e.g. road and foundation removal) would be backfilled and restored to an appropriate contour.

Most of the cumulative projects are solar project that will have an operational life of approximately 30 years. These projects would also result in a decommissioning phase at the end of the operational life of the project. The activities during this phase would be consistent with those described above from the Proposed Action. A few cumulative projects (those that are not solar projects) are considered permanent. These projects would not have a decommissioning phase.

The BMPs and requirements developed for construction activities to reduce erosion, sedimentation and runoff pollutants would be applied to similar activities during the decommissioning phase for the Proposed Action and the cumulative projects that are subject to decommissioning. As such, erosion control measures would be implemented to avoid and/or minimize potential erosion or siltation on- or off-site that could result during decommissioning activities. Modification to the drainage patterns would be minimal, but both pervious (gravel roads) and impervious (foundations, common services area) would be removed. Implementation of the decommissioning phase of the Proposed Action, when

combined with the cumulative projects, would not cumulatively affect hydrology and water quality with regard to drainage, flooding, soil erosion, sedimentation or runoff pollutants.

5.11.4.2 CEQA SIGNIFICANCE DETERMINATIONS

A qualitative analysis of cumulative water quality impacts associated with storm water runoff during construction activities is provided. Numeric data for construction-related storm water discharge is not available for the majority of the construction projects considered in this analysis; nor was the Proposed Action's impacts with respect to this issue area quantified numerically. The methodology is based on the comprehensive regulatory structure of the Construction General Permit, which would apply to each of the identified cumulative projects because each exceeds the one-acre size threshold for coverage under the Construction General Permit. The Statewide Construction General Permit requires development and implementation of rain event action plans, adherence to numeric effluent limits, monitoring, and reporting, as well as implementation of numeric action plans in certain cases. Further, the Construction General Permit requires post-construction storm water runoff site planning to achieve onsite water balance. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the Clean Water Act, and addresses the cumulative impacts of numerous construction activities throughout the State. The State Water Board found that "discharges in compliance with this General Permit will not result in the lowering of water quality standards" and that compliance with the General Permit "will result in improvements in water quality." Order No. 2009-0009-DWQ, page 2.

The construction of the Proposed Action is expected to result in short-term water quality impacts. It is expected that some of the cumulative projects, which are not yet built, could be under construction at the same time as the Proposed Action. Therefore, short-term cumulative water quality impacts may occur during simultaneous construction of the Proposed Action and other cumulative projects. However, compliance with the SWRCB's National Discharge Pollution Discharge Elimination System (NPDES) general permit for activities associated with construction would reduce water quality impacts. As with the Proposed Action, each of the cumulative projects would be required to comply with the Construction General Permit.

The Proposed Action is not expected to result in long-term operations-related impacts related to water quality. The Proposed Action would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. All of the cumulative projects would require compliance with some type of water quality plan, policy, or permit. Examples, include the SWRCB's NPDES general permit for industrial activities, as well as rules found in the Federal Clean Water Act, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the California Regional Water Quality Control Board. Local agencies, including El Centro, and Imperial County, have NPDES permits in place that require all development projects to incorporate structural and non-structural BMPs to preclude significant water quality impact from non-point source pollutants.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the majority of the project site is within Zone X, an area determined to be outside of the 0.2percent annual chance floodplain. Most of the cumulative projects are also within Zone X as a result of man-made drains associated with agriculture in the region. There is a small portion of the project site, and cumulative projects that are within Zone A, which is subject to a 1 percent annual chance of a flood; however, the Proposed Action and the cumulative projects do not propose the placement of housing or structures within a 100-year flood hazard area.

A number of laws, policies and regulations control water quality impacts of development and reduce the impacts to mandated levels. With implementation of SWRCB, CRRWQCB, BLM, County and City policies, plans, and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards, the Proposed Action, combined with the cumulative projects, would have a less than cumulatively considerable impact with regard to hydrology and water quality.

5.11.4.3 NEPA IMPACT ANALYSIS

The construction of the Proposed Action is expected to result in short-term water quality impacts. It is expected that some of the cumulative projects, which are not yet built, could be under construction at the same time as the Proposed Action. Therefore, substantial short-term cumulative water quality impacts may occur during simultaneous construction of the Proposed Action and other cumulative projects. However, compliance with the SWRCB's National Discharge Pollution Discharge Elimination System (NPDES) general permit for activities associated with construction would reduce water quality impacts. As with the Proposed Action, each of the cumulative projects would be required to comply with the Construction General Permit. The State Water Resources Control Board has determined that the Construction General Permit provides sufficient and appropriate management requirements to protect the quality of receiving waters from discharges of storm water from construction sites. Order No. 2009-0009-DWQ, page 2. Because the proposed project, and each of the cumulative projects, must comply with the permit, cumulative construction activities will not adversely impact receiving waters.

The Proposed Action is not expected to result in long-term operations-related impacts related to water quality. The Proposed Action would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. Some Cumulative Projects would require compliance with the SWRCB's National Discharge Pollution Discharge Elimination System (NPDES) general permit for industrial activities, as well as rules found in the Federal Clean Water Act, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the California Regional Water Quality Control Board. Other Cumulative Projects would require compliance with a City or County NPDES permit, including implementation of structural and non-structural BMPs to preclude significant water quality impact from non-point source pollutants. With implementation of SWRCB, CRRWQCB, and County policies, plans, and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards, cumulative water quality impacts associated with the operation of the Proposed Action would be reduced. Because the Project will not result in long-term water quality impacts, it will not contribute to cumulative impacts. In addition, the comprehensive regulatory regime for operational water quality effects will prevent adverse cumulative impacts.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the majority of the project site is within Zone X, an area determined to be outside of the 0.2 percent annual chance floodplain. Most of the cumulative projects are also within Zone X as a result of man-made drains associated with agriculture in the region. There is a small portion of the project site, and cumulative projects that are within Zone A, which is subject to a 1 percent annual chance of a flood; however, the Proposed Action and the cumulative projects do not propose the placement of housing or structures within a 100-year flood hazard area. Additionally, construction of these projects is required to comply with federal, state, and local regulations regarding development within a 100-year floodplain. The Cumulative Projects will be constructed in a manner that prevents adverse flooding onsite and offsite. The Cumulative Projects must be designed to manage increases in peak flow rates and volumes; in some cases, mitigation may require additional flood control structures. Because the Proposed Action will not result in long-term flooding impacts, it will not contribute to cumulative impacts. In addition, the

comprehensive regulatory regime for development, including prevention of flooding impacts from the cumulative projects, will prevent adverse cumulative impacts.

5.12 BIOLOGICAL RESOURCES

5.12.1 GEOGRAPHIC SCOPE

The cumulative impacts on biological resources is defined as the incremental physical impact of the Proposed Action when added to other closely related past, present, and reasonably foreseeable probable future projects. The geographic scope for considering cumulative impacts on flat-tailed horned lizard (FTHL) includes the creosote bush-white burr sage scrub and desert wash vegetation communities contiguous to and within the Yuha Basin FTHL Management Area (MA). Within the Proposed Action vicinity, the BLM California Desert District administers three separate management areas for FTHL; the Proposed Action occurs in the Yuha Basin FTHL MA. FTHL may also occupy or use areas adjacent to the Yuha Basin FTHL MA with suitable habitat. FTHL use creosote bush white-burr sage scrub and desert vegetation for cover and foraging. However, the frequency with which FTHL migrate or travel between MAs is unknown; for these reasons, the geographic scope for considered cumulative impacts includes the Yuha Basin FTHL MA and suitable habitat, which includes creosote sage scrub and desert wash vegetation.

The geographic scope for considering cumulative impacts for migratory birds, including raptors, is the Imperial Valley, which is part of the Pacific Migration Flyway for birds migrating between as far south as South America and as far north as the arctic circle, and serves as an important stopover site for many species for rest and foraging, and, for some, as breeding grounds. Although burrowing owls and some raptors do not migrate along the Pacific Migration Flyway, the species occur throughout the Imperial Valley; therefore, the Imperial Valley is the geographic scope considered for the evaluation of cumulative impacts for burrowing owl. The evaluation includes a discussion of impacts to nesting/burrowing habitat, which occurs throughout the Imperial Valley, as well as a more focused discussion on impacts to the species' foraging habitat, which includes creosote bush white-burr sage scrub vegetation and agricultural land.

The geographic scope for considering cumulative impacts for jurisdictional waters is the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region. The hydrologic unit code is 18100200 of the USDA National Resources Conservation Services, (NRCS). Regional drainage patterns generally direct storm water runoff through the agricultural fields, and convey all tributary storm water runoff via existing outlet structures to the Imperial Irrigation District (IID) Drains. The Salton Sea lies at the lowest point in the watershed and collects runoff and agricultural drainage from most of Imperial County, as well as other counties. The principal sources of inflow to the Salton Sea include: the Alamo River, New River, Whitewater River/Coachella Valley Storm Channel, direct drainage from Imperial and Coachella Valleys, subsurface inflow from groundwater, San Felipe Creek, Salt Creek, other smaller local drainages, and direct precipitation onto the Salton Sea.

Biological resources addressed in Section 4.12, but not discussed in this section (5.12 Cumulative Impacts/Biological Resources) are not evaluated for cumulative effects because the impacted resource is either not considered sensitive, or the Proposed Action's contribution to impacts with respect to the resource is not cumulatively considerable and is incrementally so minor, that a cumulative discussion would not provide useful information for the public or decision makers. In some instances, as discussed below, an effect on a resource is evaluated in the analysis of another impact. For example, loss of FTHL habitat discussed in this section also addresses creosote shrub scrub vegetation community.

5.12.2 TIMEFRAME

The timeframe refers to the duration over which an impact would occur: short-term or long-term. Short-term impacts to biological resources would occur during the construction and decommissioning periods in association with earth-moving and ground disturbance. Long-term impacts to biological resources would occur as a result of any changes to habitat or wetland areas cause by development of the project over its operational life (approximately 30+ years).

Determining the temporal scope requires estimating the length of time the effects of the proposed action will last, either individually or in combination with other anticipated effects. The temporal scope of impacts to biological resources during the development of cumulative projects would be through the end of project decommissioning, because any direct or indirect effects of the project would only occur during the life of the project.

5.12.2 EXISTING CUMULATIVE CONDITIONS

The existing cumulative conditions include twenty-one vegetation communities, including sensitive habitats such as creosote bush–white bursage scrub, mesquite woodland, and desert wash. There is one priority plant species within the survey area: ribbed cryptantha. There are several special status species in the survey area including: southwestern willow flycatcher, Yuma clapper, mountain plover, Sandhill crane, burrowing owl, pallid bat, California leaf-nosed bat, golden eagle, Colorado Desert fringe-toed lizard, and flat-tailed horned lizard. A wetland delineation identified protected wetlands within the project area, which includes both USACE and CDFG jurisdictional waters.

5.12.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.12-1** and **Table 5.12-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.12-1** and **Table 5.12-2**, their potential effects were considered in the cumulative impacts analyses in this EA/EIR for the geographic area described above. These projects are in the various stages of permitting or construction.

**TABLE 5.12-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>Yes. The “S” Line Upgrade 230-kV Transmission Line Project is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. Approximately 2.15 acres is on BLM lands and the rest is on private land. Approximately 2.15 acres are within the FTHL MA. Impacts would occur to the burrowing owl, FTHL, and migratory birds, however, mitigation reduces impacts to less than significant.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. The Imperial Valley Solar project is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of federal land managed by the Bureau of Land Management (BLM) and approximately 360 acres of privately owned land. Disturbance to approximately 6,000 acres of FTHL suitable habitat with compensatory mitigation for approximately 6,619.9 acres. Loss of approximately 312 acres of CDFG jurisdictional streambeds and 92.8 acres of Sonoran creosote bush scrub (SCBS) within the FTHL MA;. Compensatory land for SCBS will include 312 acres of compensatory habitat for loss of CDFG jurisdictional streambeds. There are also potential impacts to burrowing owl and migratory birds. Mitigation reduces impacts to less than significant.</p>

**TABLE 5.12-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
C	<p align="center">Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation project is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on federal land. During construction, the project would temporarily disturb approximately 982 acres of sensitive vegetation (353 acres of non-sensitive vegetation) and would permanently impact approximately 441 acres of sensitive vegetation (48 acres of non-sensitive vegetation). During operation, the project would cause permanent impacts to vegetation communities (displacement of vegetation with project features such as towers or permanent access roads). In total, the project would permanently impact approximately 441 acres of sensitive vegetation (48 acres of non-sensitive vegetation). There are potential impacts to burrowing owl, migratory birds, and FTHL. The potential impacts are mitigated through avoidance, minimization, or compensatory mitigation.</p>
D	<p align="center">Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. Ocotillo Sol is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.12-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>Yes. The SDG&E Geotechnical Investigation is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a geotechnical investigation on one acre of BLM land. The project site is located on federal land. There are potential impacts to a variety of biological resources; however, the potential impacts are mitigated through avoidance.</p>
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. The North Gila to Imperial Valley #2 Transmission Line is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. It has been calculated that the project would impact three acres of FHTL in the MA. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.12-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. The Dixieland Connection to Imperial Irrigation District Transmission System is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on federal land managed by the Bureau of Land Management (BLM) and approximately 19.19 acres are on privately owned land. This project lies in the Yuha Basin ACEC in the Yuha Desert Management Area. The project could impact FTHL, burrowing owl, and migratory birds. This project shares the access route and alignment with ISEC West’s preferred alternative route; therefore, would not contribute additional habitat impacts in addition to those already considered for the ISEC West project.</p>
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>Yes. Solar Reserve Imperial Valley is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project is a 2,000-acre solar power project on lands managed by the BLM. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.12-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
1	Linda Vista Approximately eight miles northeast of project site.	Yes. Linda Vista is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The County Center II Expansion/County and Imperial County Office of Education is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project would result in the conversion of approximately 160 acres of land previously used for agricultural production to non-agricultural uses. The 160 acres serves as foraging habitat for a variety of biological resources. The potential impacts are mitigated through avoidance, minimization, or compensatory mitigation.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. Imperial Solar Energy Center West is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project would result in the conversion of approximately 1,056.9 acres of land previously used for agricultural production to non-agricultural uses. There are potential impacts to burrowing owl, migratory birds, and FTHL. This project would permanently impact up to 13.7 acres of FTHL habitat within the MA. The potential impacts are mitigated through avoidance, minimization, or compensatory mitigation.

**TABLE 5.12-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. Imperial Solar Energy Center South is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project would result in the conversion of approximately 820.7 acres of land currently in agricultural production to non-agricultural uses. The transmission line ROW corridor, within BLM lands comprises approximately 82.7 acres. There are potential impacts to burrowing owl, migratory birds, and FTHL. This project would permanently impact up to 2.8 acres and temporarily impact up to 7.3 acres, for a total of 10.1 acres of FTHL habitat within the MA. The potential impacts are mitigated through avoidance, minimization, or compensatory mitigation.
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.	Yes. Mount Signal Solar Farm I is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. A portion of the project lies in the Yuha Basin ACEC in the Yuha Desert Management Area for flat-tailed horned lizard. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.
6	Campo Verde Approximately two miles northwest of the northern-most portion of the project site.	Yes. Campo Verde is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.

**TABLE 5.12-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
7	Mayflower Solar Farm Project Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. The Mayflower Solar Farm Project is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.
8	Arkansas Solar Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. Arkansas Solar is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.
9	Sonora Solar Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. Sonora Solar is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.

**TABLE 5.12-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
10	Alhambra Solar Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. Alhambra Solar is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.
11	Acorn Greenworks Less than one mile west of northwestern boundary of the project site.	Yes. Acorn Greenworks is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.
12	Calexico I-A Immediately adjacent to southern and eastern portions of the project site	Yes. Calexico I-A is in the geographic scope for burrowing owl, FTHL, and migratory birds.	This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.

**TABLE 5.12-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION FOR THE ANALYSIS OF
CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
13	<p>Calexico I-B</p> <p>Immediately adjacent to southern portion of project site.</p>	<p>Yes. Calexico I-B is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.</p>
14	<p>Calexico II-A</p> <p>Approximately three miles southeast of eastern portion of project site.</p>	<p>Yes. Calexico II-A is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project site is the first phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.</p>

**TABLE 5.12-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Biological Resources
15	<p>Calexico II-B</p> <p>Approximately one mile east of eastern portion of project site.</p>	<p>Yes. Calexico II-B is in the geographic scope for burrowing owl, FTHL, and migratory birds.</p>	<p>This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. The project will require detailed surveys and technical studies to determine the impacts to biological resources. The determination will be made by the lead agency in the environmental document.</p>

5.12.4 CUMULATIVE BIOLOGICAL RESOURCES IMPACTS

Cumulative impacts on biological resources take into account the Proposed Action or an alternative’s impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on biological resources, an assessment is made of the impacts on individual resources as well as the inventory of biological resources within the cumulative impact analysis area. This cumulative analysis is focused on the Proposed Action or an alternative’s potential contributions to cumulative impacts to biological resources in the area.

5.12.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Construction activities could result in cumulative impacts on federal and/or state listed species, as well as BLM sensitive wildlife species, including those discussed below.

Flat-Tailed Horned Lizard

Flat-tailed Horned Lizard receives protection via the BLM’s FTHL RMS. The Flat-tailed Horned Lizard Interagency Coordinating Committee (ICC)’s FTHL RMS (2003) designated five Management Areas (MAs) to help focus conservation and management of FTHL key populations. The BLM has designated the Yuha Basin Management Area, the area in which the Gen-tie transmission line would be located, as a management unit.

As shown in Table 5.12-3, the habitat disturbances that have occurred since the adoption of the FTHL Rangewide Management Strategy (RMS) and those that could result from the Proposed Actions and the reasonably foreseeable projects are estimated to impact a total of 460.28 acres of the 57,304-acre Yuha Basin MA. These habitat disturbances constitute approximately 0.8 percent of the 1 percent of habitat disturbance allowable within the Yuha Basin MA. These impacts, still under the 1 percent threshold for impacts acreage, will be mitigated in accordance with the RMS, thereby reducing cumulative impacts to a level less than significant level under CEQA.

TABLE 5.12-3
APPROVED OR PROPOSED ACTIONS IN THE IMPERIAL VALLEY

Project Name (Project Proponent)	Impacts to Private Lands (acres)	Impacts to BLM Land (acres)	Impacts to Yuha FTHL MA (acres)
Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation (CACA-047658)	0	1423	46.41
“S” Line Upgrade 230-kV Transmission Line Project (Imperial Irrigation District)	106	2	2
Imperial Valley Solar (Stirling Energy Systems Two, LLC)	360	6,140	92.9
ISEC Solar South (CSOLAR)	837.5	10.1	3
ISEC Solar West (CSOLAR)	1071.5	13.7	13.7
SDG&E Photovoltaic Solar Field (CACA-051625)	0	100	115

**TABLE 5.12-3
APPROVED OR PROPOSED ACTIONS IN THE IMPERIAL VALLEY**

Project Name (Project Proponent)	Impacts to Private Lands (acres)	Impacts to BLM Land (acres)	Impacts to Yuha FTHL MA (acres)
North Gila to Imperial Valley #2 Transmission Line (Southwest Transmission Partners) (CACA-515750)	N/A	1,903	3
Dixieland Connection to Imperial Irrigation District Transmission System	19.19	44.34	42
Solar Reserve Imperial Valley	0	2,000	5
Other Proposed ¹	N/A	N/A	25.93
Existing disturbance ¹	N/A	N/A	88.34
Proposed Action			23
Total			460.28

Source: BLM El Centro Field Office, 2011.

¹ The projects that are included in the "Existing Disturbance" and "Other Proposed" categories are not included in the list of cumulative projects; however, the cumulative impact of these projects is considered in this analysis.

Based on the USFWS determination not to list the FTHL, the success of BLM’s FTHL RMS, implementation of Mitigation Measure BIO-5 and the compensatory mitigation requirements, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively considerable impact to FTHL.

Burrowing Owl

There were 51 active burrowing owl burrows observed during surveys. The number of active burrowing owl burrows within the cumulative projects is not available for this analysis. Burrowing owls are protected by the California Department of Fish and Game mitigation guidelines for burrowing owl (1995) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. BLM also considers burrowing owls a sensitive species, and generally follows CDFG recommendations for burrowing owl issues occurring under BLM jurisdiction.

Mitigation Measures BIO-3 provides for burrowing owl mitigation consistent with the CDFG mitigation guidelines for burrowing owls, as discussed in Section 4.12. Additionally, compensatory mitigation is also required. The applicant is currently preparing a compensatory mitigation plan that includes on-site mitigation. Consultation with CDFG regarding on-site mitigation is ongoing and agency approval of the project Burrowing Owl Mitigation Plan would be required before the start of construction. If on-site mitigation is not possible, the applicant would mitigate for impacts to foraging habitat either through the National Fish and Wildlife Foundation’s Impact-Directed Environmental Accounts program or independent acquisition of like habitat. Exact mitigation acreages will be determined in consultation with CDFG in accordance with the CDFG Staff Report Guidelines on Burrowing Owl Mitigation (1995).

Cumulative projects may impact burrowing owls through direct impacts to burrowing owls and their burrows or through direct contact. Burrowing owls are relatively widespread throughout the Imperial Valley and although habitat may be fragmented around urban sites is considered one metapopulation. Aggregations occur in association with such features as abandoned rodent burrows or agricultural

culverts. Due to ephemeral burrow selection characteristics of burrowing owls, site-specific preconstruction surveys are required to determine to what extent a cumulative project would have direct impacts on owls in burrows or to foraging habitat associated with burrows. As a result, it is not possible to provide a meaningful quantitative analysis of direct impacts to burrowing owls and their burrows.

It is anticipated that many of the cumulative projects would also have indirect impacts to burrowing owls through conversion of foraging habitat, such as creosote bush-white burr sage scrub vegetation and agricultural fields. Although the habitat value of native desert scrub and agricultural fields is not equal, it is anticipated that BLM policies to protect desert scrub land for FTHL within the Yuha Basin MAs and agricultural practices and County practices encouraging continued agricultural land use will protect a substantial portion of burrowing owl foraging habitat in the Imperial Valley.

With implementation of Mitigation Measure BIO-3 and the compensatory mitigation requirements, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively considerable impact to burrowing owl.

Nesting Raptors

Raptors and active raptor nests are protected under California Fish and Game Code 3503.5, 3503, 3513. Raptors are known to occur throughout the geographic scope for cumulative projects. The number of nesting raptors within the geographic scope are not available for this analysis. Measure BIO-6 is requires construction to avoid the raptor nesting season, and if it cannot be avoided, an approved biologist will conduct a pre-construction clearance survey, which would include a 500-foot no-work buffer zone around any raptor nest until the fledglings leave the nest. This measure is standard for all cumulative projects. In addition, Measure BIO-7 is intended to reduce the impact to raptors and other avian species due to collision with the proposed Gen-tie line. Any cumulative projects that include a transmission line are required to implement a similar measure.

With implementation of Mitigation Measure BIO-6 and BIO-7, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively considerable impact to burrowing owl.

Migratory Birds

Birds listed at 50 CFR 10.3 are protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The geographic scope includes the Pacific Flyway, which is a major north–south migration route for birds that travel between North and South America.

The Proposed Action and cumulative projects could have direct impacts on migratory birds as a result of vehicle strikes, nest crushing, or collisions. Indirect impacts may occur from noise and lighting impacts, making mating calls hard to hear or frightening birds from foraging activities. Measure BIO-7 is intended to reduce the potential impacts to migratory birds, bats and raptors by preparing and implementing an Avian and Bat Protection Plan (ABPP) following the USFWS's guidelines. This ABPP will outline conservation measures for construction and O&M activities that might reduce potential impacts to bird populations and will be developed by the applicant in conjunction with and input from the USFWS.

With implementation of Mitigation Measure BIO-7, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively considerable impact to migratory birds.

Sensitive Vegetation Communities

Sensitive vegetation communities (i.e., natural communities) are designated by the CDFG for various reasons including: restricted range, cumulative losses throughout the region, and a high number of endemic sensitive plant and wildlife species that occur in the vegetation communities. There are 17.25 acres of sensitive vegetation communities that would be impacted by the Proposed Action. This includes Creosote bush–white bursage scrub, mesquite woodland, and desert wash. These communities are considered sensitive whether or not they have been disturbed. The extent of the cumulative project's impacts to sensitive vegetation communities is not available for this analysis.

Measure BIO-1 and BIO-5 address impacts to these sensitive vegetation communities, including compensatory mitigation at a ratio of 6:1. Cumulative projects that impact sensitive vegetation communities are required to implement similar mitigation to reduce the impact. With implementation of Mitigation Measure BIO-1 and BIO-5 (including the compensatory mitigation requirements), the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to sensitive vegetation communities.

Noxious, Invasive and Non-Native Weeds

Soil disturbed due to grading during construction and continued use of the Proposed Action and cumulative projects could result in the introduction or increased density of non-native invasive plant species. Measure BIO-2 is required to minimize the introduction and spread of weed species by requiring a Weed Management Plan to be developed and implemented. The weed management plan will include a discussion of specific weeds identified on site that will be targeted for eradication or control as well as a variety of measures that will be undertaken during construction and O&M activities to prevent the introduction and spread of new weed species as a result of the project. Cumulative projects are required to implement similar mitigation to reduce the impact. With implementation of Mitigation Measure BIO-2, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact from Noxious, Invasive and Non-Native Weeds.

Jurisdictional Waters

Construction activities could result in cumulative impacts on protected waters. The estimated impacts of the Proposed Action to USACE jurisdictional waters on private lands are not expected to exceed 0.06 acre of fill to manmade systems and 0.01 acre of impacts to jurisdictional habitat on BLM managed lands. The estimated impacts of the Proposed Action to CDFG jurisdictional areas on private lands are not expected to exceed 6.14 acres of fill to manmade systems and 0.09 acre of permanent impacts and 0.04 acre of temporary disturbance to CDFG jurisdictional habitat on BLM managed lands. The final determination of impacts of the Proposed Action is subject to the USACE and CDFG during their permit review process.

There are an 23 cumulative projects, 15 of which do not have published environmental documents available so it is not possible to provide a definitive conclusion of the project's environmental effects associated jurisdictional waters. Of the eight cumulative projects with published environmental documents, one has impacts to jurisdictional waters. The Imperial Valley Solar Project has potential impacts to 312 acres of CDFG jurisdictional waters.

Mitigation Measures BIO-8 will require appropriate avoidance, minimization, and compensatory mitigation to reduce the Proposed Action's impact on jurisdictional waters. Compensatory mitigation is typically at a 2:1 ratio or 1:1 ratio depending on the type of impact. Final approval of mitigation of any

project impacting jurisdictional waters comes in the form of an ACOE Section 404 permit and a Section 1600 Streambed Alteration Agreement for impact to CDFG resources.

Any cumulative project that results in an impact to a jurisdictional water would be required to implement a similar measure to reduce the impact in accordance with federal and state law. With implementation of Mitigation Measure BIO-8, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to jurisdictional waters.

B. Operations and Maintenance

As described above, the construction phase of the Proposed Action would directly impact biological resources. While this impact would take place during the construction phase, it would continue to exist throughout the operations and maintenance phase of the project. Additional impacts could occur during the operational phase from a variety of activities including lighting and traffic generated by night time washing of solar panels, which is required due to high day-time temperatures; however, the light and traffic generated during the night time are similar to the agricultural activities associated with harvesting alfalfa after dark. Mitigation measures BIO-1 through BIO-8 are proposed to help ensure that the Proposed Action does not cumulatively affect any of these biological resources during the operations and maintenance phase.

C. Decommissioning

The decommissioning phase of the Proposed Action would effectively reverse the initial impact on biological resources. The private lands would be returned to a condition that supports agricultural production at the end of the operational life of the project. This agricultural land is expected to be used in the same capacity that it is currently used which would provide habitat qualities that currently exist.

5.12.4.2 CEQA SIGNIFICANCE DETERMINATIONS

Implementation of the Proposed Action could have cumulative impacts on special status species, sensitive natural communities, and protected waters. However, Mitigation Measures BIO-1 through BIO-8 are proposed to help ensure that the Proposed Action does not cumulatively affect any of these biological resources. These measures include avoidance, minimization, and mitigation measures that would reduce impacts to a less than cumulatively considerable level.

Implementation of the Proposed Action would not have cumulative impacts on the movement of wildlife, and does not conflict the any local policies, ordinances, or California Desert Conservation Area (CDCA). As such, the Proposed Action would not have a cumulatively considerable impact.

5.12.4.3 NEPA IMPACT ANALYSIS

Sensitive Vegetation Communities

Sensitive vegetation communities (i.e., natural communities) are designated by the CDFG for various reasons including: restricted range, cumulative losses throughout the region, and a high number of endemic sensitive plant and wildlife species that occur in the vegetation communities. Creosote bush–white bursage scrub, mesquite woodland, and desert wash vegetation are the three sensitive natural communities potentially affected by the Proposed Action and cumulative projects in the region. These communities are considered sensitive whether or not they have been disturbed. The Proposed Action's impacts to creosote bush–white bursage scrub and desert wash vegetation are included in the

Vegetation Mapbook which is provided on the attached CD of Technical Appendices as **Appendix J** of this EIR/EA. The extent of the cumulative project's impacts to sensitive vegetation communities is not available for this analysis.

Though very limited in extent, the Proposed Action's impacts are considered potentially adverse and require mitigation to offset the impact. Measure BIO-1 address impacts to these sensitive vegetation communities. As noted in BIO-1, disturbance to these habitats will be mitigated at a 6:1 ratio through the compensatory mitigation requirements of FTHL (see BIO-5). Cumulative projects that impact these sensitive vegetation communities are required to implement similar mitigation to reduce the impact.

With implementation of Mitigation Measure BIO-1 and BIO-5 (including the compensatory mitigation requirements), the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to sensitive vegetation communities.

Noxious, Invasive and Non-Native Weeds

Soil disturbed due to grading during construction and continued use of the Proposed Action and cumulative projects could result in the introduction or increased density of non-native invasive plant species. Measure BIO-2 is required to minimize the introduction and spread of weed species by requiring a Weed Management Plan to be developed and implemented. The weed management plan will include a discussion of specific weeds identified on site that will be targeted for eradication or control as well as a variety of measures that will be undertaken during construction and O&M activities to prevent the introduction and spread of new weed species as a result of the project.

With implementation of Mitigation Measure BIO-2, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact from Noxious, Invasive and Non-Native Weeds.

Flat-Tailed Horned Lizard

The California Desert Conservation Area (CDCA) encompasses 25 million acres of land in southern California that were designated by the Federal Lands and Policy Management Act. The BLM directly administers approximately 10 million acres of the CDCA. The CDCA Plan-designated Yuha Basin Area of Critical Environmental Concern (ACEC) Management Plan was prepared to give additional protection to unique cultural resource and wildlife values found in the region, while also providing for multiple use management.

Flat-tailed Horned Lizard receives protection via the BLM's FTHL RMS. The Flat-tailed Horned Lizard Interagency Coordinating Committee (ICC)'s FTHL RMS (2003) designated five Management Areas (MAs) to help focus conservation and management of FTHL key populations. The BLM has designated the Yuha Basin Management Area, the area in which the Gen-tie Line would be located, as a management unit.

As shown in **Table 5.12-3** above, the habitat disturbances that have occurred since the adoption of the FTHL Rangewide Management Strategy (RMS) and those that could result from the Proposed Actions and the reasonably foreseeable projects are estimated to impact a total of 460.28 acres of the 57,304-acre Yuha Basin MA. These habitat disturbances constitute approximately 0.8 percent of the 1 percent of habitat disturbance allowable within the Yuha Basin MA. These impacts, still under the 1percent threshold for impacts acreage, will be mitigated in accordance with the RMS, thereby reducing cumulative impacts to a level less than significant level under CEQA.

Based on the USFWS determination not to list the FTHL, the success of BLM's FTHL RMS, implementation of Mitigation Measure BIO-5 and the compensatory mitigation requirements, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to FTHL.

Burrowing Owl

Burrowing owl is primarily restricted to the western United States and Mexico. Habitat for the burrowing owl includes dry, open, short-grass areas often associated with burrowing mammals. In Imperial County it can be found in desert scrub, grassland, and agricultural areas, where it digs its own or occupies existing burrows.

Urbanization has greatly reduced the amount of suitable habitat for this species. Other contributions to the decline of this species include the poisoning of squirrels and prairie dogs, and collisions with automobiles. There are major population densities remaining in the Central and Imperial valleys. This species is a year-round resident in Imperial County. Despite recent population declines, the Imperial Valley population is considered the most important viable population in California.

There were 51 active burrowing owl burrows were observed during surveys. The number of active burrowing owl burrows within the cumulative projects is not available for this analysis. Burrowing Owls are protected by the California Department of Fish and Game mitigation guidelines for burrowing owl (1995) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. BLM also considers burrowing owls a sensitive species, and generally follows CDFG recommendations for burrowing owl issues occurring under BLM jurisdiction.

Mitigation Measures BIO-3 provides for burrowing owl mitigation consistent with the CDFG mitigation guidelines for burrowing owls, as discussed in Section 4.12. Additionally, compensatory mitigation is also required. The applicant is currently preparing a compensatory mitigation plan that includes on-site mitigation. Consultation with CDFG regarding on-site mitigation is ongoing and agency approval of the project Burrowing Owl Mitigation Plan would be required before the start of construction. If on-site mitigation is not possible, the applicant would mitigate for impacts to foraging habitat either through the National Fish and Wildlife Foundation's Impact-Directed Environmental Accounts program or independent acquisition of like habitat. Exact mitigation acreages will be determined in consultation with CDFG in accordance with the CDFG Staff Report Guidelines on Burrowing Owl Mitigation (1995).

Cumulative projects may impact burrowing owls through direct impacts to burrowing owls and their burrows or through direct contact. Burrowing owls are relatively widespread throughout the Imperial Valley and although habitat may be fragmented around urban sites is considered one metapopulation. Aggregations occur in association with such features as abandoned rodent burrows or agricultural culverts. Due to ephemeral burrow selection characteristics of burrowing owls, site-specific preconstruction surveys are required to determine to what extent a cumulative project would have direct impacts on owls in burrows or to foraging habitat associated with burrows. As a result, it is not possible to provide a meaningful quantitative analysis of direct impacts to burrowing owls and their burrows.

It is anticipated that many of the cumulative projects would also have indirect impacts to burrowing owls through conversion of foraging habitat, such as creosote bush-white burr sage scrub vegetation

and agricultural fields. Although the habitat value of native desert scrub and agricultural fields is not equal, it is anticipated that BLM policies to protect desert scrub land for FTHL within the Yuha Basin MAs and agricultural practices and County practices encouraging continued agricultural land use will protect a substantial portion of burrowing owl foraging habitat in the Imperial Valley.

With implementation of Mitigation Measure BIO-3 and the compensatory mitigation requirements, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to burrowing owl.

Nesting Raptors

Raptors and active raptor nests are protected under California Fish and Game Code 3503.5, 3503, 3513. Raptors are known to occur throughout the geographic scope for cumulative projects. The number of nesting raptors within geographic scope is not available for this analysis.

Measure BIO-6 is required to prevent direct and indirect impacts to nesting raptors. This measure will require grading and clearing to occur outside the raptor breeding season of February 1 to July 15, and if construction occurs between February 1 and July 15, an approved biologist will conduct a pre-construction clearance survey for nesting raptors within 500 feet of the survey area. If any active raptor nest is located, the nest area will be flagged, and a 500-foot buffer zone delineated, flagged, or otherwise marked. No work activity may occur within this buffer area, until an approved biologist determines that the fledglings are independent of the nest. This measure is standard for all cumulative projects. In addition, Measure BIO-7 is intended to reduce the impact to raptors and other avian species due to collision with the proposed Gen-tie line. Any cumulative projects that include a transmission line are required to implement a similar measure.

With implementation of Mitigation Measure BIO-6 and BIO-7, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to burrowing owl.

Migratory Birds

The Pacific Flyway is a major north–south migration route for birds that travel between North and South America. In Southern California, birds typically use the coast and inland areas. The Pacific Coast route is used by gulls, ducks, and other water birds. The longest and most important route of the Pacific Flyway is that originating in northeastern Alaska. This route, that includes most waterfowl and shorebirds, passes through the interior of Alaska and then branches such that large flights continue southeast into the Central and Mississippi flyways or they may turn in a southwestern direction and pass through the interior valleys of California ending or passing through the Salton Sea. The southward route of long-distance migratory land birds of the Pacific Flyway that typically overwinter south of the United States, extends through the interior of California to the mouth of the Colorado River and on to their winter quarters that may be located in western Mexico. Migration timing varies from species to species and for some, there is little documentation of the timing; for others, the arrival and departure has been well documented species by species. The number of migratory birds within geographic scope is not available for this analysis.

Birds listed at 50 CFR 10.3 are protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by U.S. Fish and Wildlife Service (USFWS). This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are

considered migratory under this act. California Fish and Game Code 3513 is the State equivalent of the MBTA and is enforced by the Department of Fish and Game. Raptors and active raptor nests receive protected under California Fish and Game Code 3503.5, 3503. All cumulative projects are subject to the laws protecting bird species listed above.

The Proposed Action and cumulative projects could have direct impacts on migratory birds as a result of vehicle strikes, nest crushing, or collisions. Indirect impacts may occur from noise and lighting impacts, making mating calls hard to hear or frightening birds from foraging activities. Measure BIO-7 is intended to reduce the potential impacts to migratory birds, bats and raptors by preparing and implementing an Avian and Bat Protection Plan (ABPP) following the USFWS's guidelines. This ABPP will outline conservation measures for construction and O&M activities that might reduce potential impacts to bird populations and will be developed by the applicant in conjunction with and input from the USFWS.

With implementation of Mitigation Measure BIO-7, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to migratory birds.

Jurisdictional Waters

The estimated impacts of the Proposed Action to USACE jurisdictional waters on private lands are not expected to exceed 0.06 acre of fill to manmade systems and 0.01 acre of impacts to jurisdictional habitat on BLM managed lands. The estimated impacts of the Proposed Action to CDFG jurisdictional areas on private lands are not expected to exceed 6.14 acres of fill to manmade systems and 0.09 acre of permanent impacts and 0.04 acre of temporary disturbance to CDFG jurisdictional habitat on BLM managed lands. The final determination of impacts of the Proposed Action is subject to the USACE and CDFG during their permit review process.

There are an 23 cumulative projects, 15 of which do not have published environmental documents available so it is not possible to provide a definitive conclusion of the project's environmental effects associated jurisdictional waters. Of the eight cumulative projects with published environmental documents, one has impacts to jurisdictional waters. The Imperial Valley Solar Project has potential impacts to 312 acres of CDFG jurisdictional waters.

Mitigation for impacts to jurisdictional areas is achieved through avoidance, minimization of resources impacts and compensation for loss of habitat values. Through avoidance of jurisdictional areas with high functional values, a project can reduce the potential detrimental effects of the project on wildlife and flood attenuation. Mitigation for compensation of impacts is typically at a 2:1 ratio or 1:1 ratio depending on the type of impact. Final approval of mitigation of any project impacting jurisdictional waters comes in the form of an ACOE Section 404 permit and a Section 1600 Streambed Alteration Agreement for impact to CDFG resources.

Mitigation Measures BIO-8 will require appropriate avoidance, minimization, and compensatory mitigation to reduce the Proposed Action's impact on jurisdictional waters. Any cumulative project that results in an impact to jurisdictional water would be required to implement a similar measure to reduce the impact in accordance with federal and state law. With implementation of Mitigation Measure BIO-8, the Proposed Action, when combined with the cumulative projects, would not result in a cumulatively adverse impact to jurisdictional waters.

5.13 PALEONTOLOGICAL RESOURCES

5.13.1 GEOGRAPHIC SCOPE

The cumulative impacts of the Proposed Action or an alternative on paleontological resources is defined as the incremental physical impact of the Proposed Action or an alternative when added to other closely related past, present, and reasonably foreseeable probable future projects. The geographic scope for the analysis of cumulative impacts related to paleontological resources is the southwestern section of the high water mark of ancient Lake Cahuilla within the Yuha Basin. More specifically, the geographic scope is defined as the area within one mile of the 40-foot contour of ancient Lake Cahuilla between the Yuha Wash and the international border with Mexico. This area is composed of soft, unconsolidated aeolian sands and gravels and is crossed by braided washes. The environmental setting of the area northwest of the geographic scope changes in topography and consists of the Yuha Butte and appears to be an area of less active washes. The areas east and northeast consist of agricultural fields. Lakebed deposits of ancient Lake Cahuilla have yielded fossil remains and collectively may provide information about pre-historic conditions associated with the numerous expansions and contractions of the lake. In addition to fossil remains of aquatic and amphibious species that would have inhabited the lakebed itself and the shoreline, the lake would have attracted terrestrial and avian species for water, foraging, reproduction, and migration.

Instead of limiting the analysis to the 40-foot contour, the geographic scope was expanded to one mile around the 40-foot contour to be more conservative and err on the side of caution in assessing the cumulative impacts of past, present and future projects on paleontological resources in the vicinity of the Proposed Action.

5.13.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to paleontological resources would occur during the construction period. Construction of the Proposed Action or an alternative has the potential to uncover unknown paleontological resources. Operations (long-term) and decommissioning (short-term) activities are not anticipated to have the potential to uncover unknown paleontological resources because any such disturbance would occur during excavation activities associated with the construction phase of the project

5.13.3 EXISTING CUMULATIVE CONDITIONS

The project site is located in the Imperial Valley portion of the Salton Trough physiographic province of Southern California. The site and surrounding Imperial Valley is directly underlain by geologic units comprised of quaternary lake deposits of the ancient Lake Cahuilla. Lakebed deposits of ancient Lake Cahuilla have yielded fossil remains from numerous localities in Imperial Valley. These include extensive freshwater shell beds, fish, seeds, pollen, diatoms, foraminifera, sponges, and wood.

Cumulative impacts to paleontological resources involve the loss of non-renewable scientifically important fossils and associated data, and the incremental loss to science and society of these resources over time. There are known paleontological resources located in the project area. Field surveys revealed the presence of invertebrate fossils on the project site. Portions of the project site, especially the segment along the Gen-tie Line, are underlain by geologic rock units assigned Class 3 (Quaternary alluvium (Qa)) and Class 4 (Lake Cahuilla deposits (Qc), Quaternary older alluvium (Qoa), and Brawley Formation (Tb)) under the BLM Potential Fossil Yield Classification. These classes indicate a moderate or

unknown (Class 3), or high (Class 4) potential for presence of paleontological resources within the geologic rock units.

Previously undisturbed Lake Cahuilla deposits (Qc) underlie the majority of the Gen-tie Line project alignment, while other portions of the alignment are underlain by surface or subsurface deposits of Quaternary alluvium, Quaternary older alluvium, and Brawley Formation. Drilling operations on projects in the vicinity of the project site have encountered the Lake Cahuilla deposits (Qc) at depths of at least 25 feet below ground surface. Geotechnical reports have indicated that the deposits are approximately 20 feet below the ground surface. These deposits are estimated to be 8 to 10 feet thick. The older alluvium (Qoa), and Brawley Formation (Tb) lie below the Lake Cahuilla deposits (Qc).

5.13.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.13-1** and **Table 5.13-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.13-1** and **Table 5.13-2**, their potential effects were considered in the cumulative impacts analyses in this EA/EIR for the geographic area described above. These projects are in the various stages of permitting or construction.

**TABLE 5.13-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
A	<p>"S" Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>No. This project does not affect paleontological resources.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. There are no paleontological resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. Imperial Valley Solar is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of land managed by the BLM and approximately 360 acres of privately owned land. The paleontological formations on this site that have moderate to high sensitivity could be adversely affected during construction as a result of disturbance by grading or construction activities. However, it was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>

**TABLE 5.13-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on BLM land. The paleontological formations on this site that have moderate to high sensitivity could be adversely affected during construction as a result of disturbance by grading or construction activities. However, it was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. Ocotillo Sol is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>

**TABLE 5.13-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>No. This project does not affect paleontological resources.</p>	<p>This project is a geotechnical investigation on one acre of BLM land. There are no paleontological resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. A portion of the North Gila to Imperial Valley #2 Transmission Line may be within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>

**TABLE 5.13-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. The Dixieland Connection to Imperial Irrigation District Transmission System is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on land managed by the BLM and approximately 19.19 acres are on privately owned land. Freshwater invertebrate and terrestrial invertebrate fossils were collected within one-mile of this site within the Quaternary lake deposits associated with Lake Cahuilla. These paleontological formations on this site have high sensitivity and could be adversely affected during construction as a result of disturbance by grading or construction activities. However, it was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>

**TABLE 5.13-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>No. The Solar Reserve Imperial Valley does not appear to be within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project is a 2,000-acre solar power project on lands managed by the BLM. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>

**TABLE 5.13-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
1	<p>Linda Vista</p> <p>Approximately eight miles northeast of project site.</p>	<p>No. Linda Vista is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
2	<p>County Center II Expansion/County and Imperial County Office of Education</p> <p>Approximately six-and-a-half miles northeast of project site.</p>	<p>Yes. The County Center II Expansion/County and Imperial County Office of Education project appears to be within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>There are no paleontological resources that would be affected. It was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>

**TABLE 5.13-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
3	<p>Imperial Solar Energy Center West</p> <p>Approximately nine miles northwest of project site.</p>	<p>Yes. Imperial Solar Energy Center West is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>The paleontological resources on this site have the potential to result in disturbance from grading or construction activities; unauthorized, unmonitored excavations; unauthorized collection of fossil materials; dislodging of fossils from their preserved environment; and/or, physical damage of fossil specimens. However, it was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>
4	<p>Imperial Solar Energy Center South</p> <p>Adjacent to southern boundary of project site.</p>	<p>Yes. Imperial Solar Energy Center South is within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>The paleontological resources on this site have the potential to result in disturbance from grading or construction activities; unauthorized, unmonitored excavations; unauthorized collection of fossil materials; dislodging of fossils from their preserved environment; and/or, physical damage of fossil specimens. However, it was determined that with the implementation of avoidance, minimization, and mitigation measures, the project would have a less than significant impact on paleontological resources.</p>

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LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
5	<p>Mount Signal Solar Farm I</p> <p>Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.</p>	<p>No. Mount Signal Solar Farm I is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
6	<p>Campo Verde</p> <p>Approximately two miles northwest of the northern-most portion of the project site.</p>	<p>No. Campo Verde does not appear to be within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>

**TABLE 5.13-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
7	<p>Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. The Mayflower Solar Farm Project is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
8	<p>Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. Arkansas Solar is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made</p>

**TABLE 5.13-2
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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
			by the lead agency of this project after a thorough review of the project site.
9	<p style="text-align: center;">Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. Sonora Solar is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
10	<p style="text-align: center;">Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>No. Alhambra Solar is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar</p>

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#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
			projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.

**TABLE 5.13-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
11	<p>Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	<p>No. Acorn Greenworks does not appear to be within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
12	<p>Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	<p>No. Calexico I-A is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>

TABLE 5.13-2
 LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
 FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
13	<p>Calexico I-B</p> <p>Immediately adjacent to southern portion of project site.</p>	<p>No. Calexico I-B is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.</p>
14	<p>Calexico II-A</p> <p>Approximately three miles southeast of eastern portion of project site.</p>	<p>No. Calexico II-A is not within one mile of the 40-foot contour of ancient Lake Cahuilla.</p>	<p>This project site is the first phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than</p>

TABLE 5.13-2
 LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
 FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO PALEONTOLOGICAL RESOURCES

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Paleontological Resources
			significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	No. Calexico II-B is not within one mile of the 40-foot contour of ancient Lake Cahuilla.	This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land. There are currently no published environmental documents available for this project. Therefore it is not possible to provide a conclusion of the project's environmental effects. However, considering that the project site is located in an area that has been known to contain paleontological resources, it can reasonably be expected the project may have some unknown paleontological resources. It can also be reasonably anticipated that the lead agency will follow their precedent set on similar projects and require the implementation of avoidance, minimization, and mitigation measures that would reduce any impact on paleontological resources to a less than significant level. The determination will be made by the lead agency of this project after a thorough review of the project site.

5.13.3 CUMULATIVE PALEONTOLOGICAL RESOURCES IMPACTS

Cumulative impacts on paleontological resources take into account the Proposed Action or an alternative's impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on paleontological resources, an assessment is made of the impacts on paleontological resources within the cumulative impact analysis area. Cumulative projects in the geographic scope are directly underlain by geologic units comprised of quaternary lake deposits of the ancient Lake Cahuilla. Lakebed deposits of ancient Lake Cahuilla have yielded fossil remains from numerous localities in Imperial Valley. These include extensive freshwater shell beds, fish, seeds, pollen, diatoms, foraminifera, sponges, and wood. There are known paleontological resources located in the project area. This cumulative analysis is focused on the Proposed Action or an alternative's potential contributions to uncover unknown paleontological resources in the area.

5.13.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Unknown, unrecorded paleontological resources may be found at nearly any present and future development site. However, as they are discovered, sites are recorded and information retrieved. If the nature of the resource requires it, the resource is protected. When discovered, paleontological resources are treated in accordance with applicable federal and State laws and regulations as well as the mitigation measures and permit requirements applicable to a project.

The cumulative projects are located in the Imperial Valley portion of the Salton Trough physiographic province of Southern California. These cumulative projects are directly underlain by geologic units comprised of quaternary lake deposits of the ancient Lake Cahuilla. Lakebed deposits of ancient Lake Cahuilla have yielded fossil remains from numerous localities in Imperial Valley. These include extensive freshwater shell beds, fish, seeds, pollen, diatoms, foraminifera, sponges, and wood. The Lake Cahuilla deposits (Qc) are anticipated to be 20 to 25 feet below ground surface, and 8 to 10 feet thick. Older deposits, such as the older alluvium (Qoa), and Brawley Formation (Tb) lie below the Lake Cahuilla deposits (Qc), and also have a high yield potential for fossils. Given that most paleontological resources are located underground, it cannot be determined with certainty what paleontological resources would be impacted by cumulative projects identified in **Table 5.13-1 and 5.13-2**. However, given the number and size of projects listed in **Table 5.13-1 and 5.13-2**, it is reasonable to assume that resources exist and could be uncovered at one or more of these sites.

Cumulative impacts to paleontological resources involve the loss of non-renewable scientifically important fossils and associated data, and the incremental loss to science and society of these resources over time. Potential impacts to paleontological resources can be mitigated through development and implementation of a BLM-approved paleontological monitoring and discovery treatment plan. The implementation of paleontological mitigation measures during ground disturbance would result in the salvage and permanent preservation of scientifically significant paleontological resources that would otherwise have been destroyed if found. This greatly reduces the cumulative effects of a project on paleontological resources, if found, and results in the beneficial cumulative effect of making fossils available for scientific research and education by placing them in museum collections.

B. Operations and Maintenance

As previously mentioned, the potential for impacts to paleontological resources would be anticipated to occur during excavation activities associated with the construction phase of the project. The operations and maintenance activities would have excavation activities in association with repair of facilities; however, these activities would occur in areas that were previously disturbed during the construction phase and any paleontological resources, if present, would likely have already been discovered and preserved in accordance with the mitigation measures. Nevertheless, if unknown paleontological resources were discovered during operations and maintenance activities, the implementation of mitigation measures would result in the salvage and permanent preservation of scientifically significant paleontological resources that would otherwise have been destroyed if found. This greatly reduces the cumulative effects of a project on paleontological resources, if found, and results in the beneficial cumulative effect of making fossils available for scientific research and education by placing them in museum collections.

C. Decommissioning

As previously mentioned, the potential for impacts to paleontological resources would be anticipated to occur during excavation activities associated with the construction phase of the project. The decommissioning activities would have excavation activities in association with removal of facilities; however, these activities would occur in areas that were previously disturbed during the construction phase and any paleontological resources, if present, would likely have already been discovered and preserved in accordance with the mitigation measures. Nevertheless, if unknown paleontological resources were discovered during decommissioning activities, the implementation of mitigation measures would result in the salvage and permanent preservation of scientifically significant paleontological resources that would otherwise have been destroyed if found. This greatly reduces the cumulative effects of a project on paleontological resources, if found, and results in the beneficial cumulative effect of making fossils available for scientific research and education by placing them in museum collections.

5.13.4.2 CEQA SIGNIFICANCE DETERMINATIONS

Cumulative development in the Imperial Valley portion of the Salton Trough physiographic province of Southern California has the potential to directly or indirectly destroy or otherwise impact paleontological resources. A substantial impact would be deemed to have occurred if a project, or the projects cumulatively would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. There is a potential for paleontological resources on the project site, and others in the geographic scope, to be impacted during construction. However, the potential impact to paleontological resources would be mitigated with implementation of mitigation measures that would result in the salvage and permanent preservation of scientifically significant paleontological resources that would otherwise have been destroyed if found. This greatly reduces the cumulative effects of a project on paleontological resources, and results in making fossils available for scientific research and education by placing them in museum collections. Implementation of the Proposed Action would not have a cumulatively considerable impact to paleontological resources.

5.13.4.3 NEPA IMPACT ANALYSIS

Cumulative development in the Imperial Valley portion of the Salton Trough physiographic province of Southern California has the potential to directly or indirectly destroy or otherwise impact

paleontological resources. A substantial impact would be deemed to have occurred if an individual project or the projects cumulatively would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. There is a potential for paleontological resources on the project site, and others in the geographic scope, to be impacted during construction. However, the potential impact to paleontological resources would be mitigated with implementation of mitigation measures that would: require a paleontological field survey, consistent with BLM Guidelines, be performed before any ground disturbing activities commence; require development of a Monitoring Plan; preparation of a written final report consistent with BLM Guidelines; require preparation of a specimen inventory with a signed receipt of confirmation of museum deposition; ensure that fossil specimens and data will remain property of the Federal government, and will be placed in approved repositories; and require workers to be trained on how to identify paleontological resources and follow procedures to avoid and minimize impacts to paleontological resources. This greatly reduces the cumulative effects of a project on paleontological resources, and results in making fossils available for scientific research and education by placing them in museum collections.

State law prohibits intentional destruction of paleontological resources and requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands. It cannot be stated with certainty that projects identified with potential cumulative impacts to paleontological resources would be required to minimize or mitigate for any such impacts because until site-specific paleontological surveys are performed, or potentially even until construction begins, it is impossible to know what paleontological resources may be associated with a given site. Although there is currently not sufficient information to evaluate the extent of cumulative projects' impacts to paleontological resources, the Proposed Action's incremental contribution to any cumulative paleontological resources impact would be minimal due to implementation of mitigation measures. With implementation of mitigation measures, the Proposed Action would not result in incremental contribution to a cumulative paleontological resources impact under NEPA.

5.14 ENVIRONMENTAL JUSTICE

Cumulative impacts on environmental justice take into account the proposed action's cumulative impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. A cumulative impacts analysis in regard to environmental justice consists of an assessment within the appropriate geographic scope of cumulative impacts.

5.14.1 GEOGRAPHIC SCOPE

The cumulative impacts on environmental justice are incremental physical impacts of the Proposed Action when added to other closely related past, present, and reasonably foreseeable projects. The geographic scope of cumulative impacts related to environmental justice is Imperial County because the impacts of the Proposed Action and other projects under cumulative conditions would generally occur in Imperial County. The geographic scope for the construction labor force would be the Counties of Imperial, San Diego, Riverside, and San Bernardino, since the construction workers are generally anticipated to commute up to two hours, which would include these counties.

5.14.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to environmental justice would occur during the construction and decommissioning periods in association with the addition of construction equipment to the landscape. Long-term impacts

to environmental justice would occur as a result of any changes such as traffic patterns or volumes that would result from the presence of the project over its operational life (approximately 30+ years).

5.14.3 EXISTING CUMULATIVE CONDITIONS

The project site is located in a rural portion of Imperial County with no major population base in the immediate vicinity. The closest populated areas to the project site include: the City of El Centro, eight miles northeast; the City of Calexico eight miles to the southeast; the community of Seeley seven miles north; and the community of Heber seven miles to the east. The project site is within Census Tract 119, which has a predominately Hispanic population (96.5 percent), 19 percent of which lives in poverty. When the compared to the broader region, which includes Imperial, Orange, and San Diego Counties, both the minority population and low-income population have higher concentrations in the employment region for this project as defined in Section 5.14.1. Other ethnic minority groups (e.g., Asian, Black/African American, Native Hawaiian, Other Pacific Islander) have comparable or lower concentrations in Imperial County and Census Tract 119 than in the broader region.

5.14.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.14-1** and **Table 5.14-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County's jurisdiction and within BLM's jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.14-1** and **Table 5.14-2**, their potential effects were considered in the cumulative impacts analyses in this EIS/EIR for the geographic area described above. These projects are in various stages of permitting or construction.

**TABLE 5.14-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>Yes. The project is in Imperial County.</p>	<p>No adverse project-level or cumulative effects associated with environmental justice. Beneficial effects include improved dependability of electrical service and additional services for future needs.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. The project is in Imperial County.</p>	<p>No adverse effects associated with environmental justice. Beneficial effects would include increased employment (77 employees) and funding for services.</p>
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The project is in Imperial County.</p>	<p>No project-level or cumulative adverse impacts to environmental justice identified. [Note: for the Southwest Powerlink 500-kV Line, two adverse environmental justice impacts would occur specific to the Barona Reservation; these impacts would occur outside of Imperial County and would not contribute to cumulative effects associated with the Proposed Action. Beneficial effects would include increased employment, tourism, and revenue.]</p>

**TABLE 5.14-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gen-tie Line.</p>	<p>Yes. The project is in Imperial County.</p>	<p>Information available regarding this project was insufficient to determine the project’s potential impacts at the time this document was prepared.</p>
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>Yes. The project is in Imperial County.</p>	<p>No project-level or cumulative impacts to environmental justice identified.</p>

**TABLE 5.14-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. The project is in Imperial County.</p>	<p>Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.</p>
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. The project is in Imperial County.</p>	<p>No project-level or cumulative impacts to environmental justice identified.</p>

**TABLE 5.14-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>Yes. The project is in Imperial County.</p>	<p>Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.</p>

**TABLE 5.14-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
1	Linda Vista Approximately eight miles northeast of project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	Yes. The project is in Imperial County.	No project-level or cumulative impacts to environmental justice identified in the County Center II environmental document.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	Yes. The project is in Imperial County.	No adverse effects. Project would result in beneficial social and environmental effects, including increased employment (7 full time employees), promoting stable electricity prices, reducing reliance on imported fuels, protecting public health, and local employment opportunities for minority and low-income populations.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	Yes. The project is in Imperial County.	No adverse effects. Project would result in beneficial social and environmental effects, including increased employment (5.75 additional full time employees), promoting stable electricity prices, reducing reliance on imported fuels, protecting public health, and local employment opportunities for minority and low-income populations.

**TABLE 5.14-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
5	Mount Signal Solar Farm I Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
6	Campo Verde Approximately two miles northwest of the northern-most portion of the project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
7	Mayflower Solar Farm Project Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.

**TABLE 5.14-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
8	Arkansas Solar Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
9	Sonora Solar Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
10	Alhambra Solar Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
11	Acorn Greenworks Less than one mile west of northwestern boundary of the project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.

**TABLE 5.14-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO ENVIRONMENTAL JUSTICE**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Environmental Justice
12	Calexico I-A Immediately adjacent to southern and eastern portions of the project site	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
13	Calexico I-B Immediately adjacent to southern portion of project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. The project is in Imperial County.	Information available regarding this project was insufficient to determine the project's potential impacts at the time this document was prepared.

5.14.4 CUMULATIVE ENVIRONMENTAL JUSTICE IMPACTS

5.14.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

Human Health Effects: Construction of the Proposed Action, and other projects within the cumulative analysis area, could result in a cumulative effect on human health in association with exposure to air pollutants, increased dust, toxic emissions, Valley Fever-related dust exposure, on-site hazardous materials, flooding, geology and soils, emergency access, traffic, and noise. However, as described in Chapter 4 of this document, Mitigation Measures for this project have been developed as needed for the Proposed Action to reduce the environmental effects associated with these human health hazards. Further, as described in Sections 5.4, 5.6, 5.8, and 5.9, construction activities would not result in adverse cumulative health and safety effects, including adverse effects associated with air quality, geology and soils, hazards and hazardous materials. Therefore, the project would not result in, nor significantly contribute to, adverse cumulative impacts associated with environmental and physical conditions that would affect minority or low-income populations disproportionately.

Environmental Effects on Humans: Construction of the Proposed Action, and other projects within the cumulative analysis area, could result in a cumulative environmental effect on humans in association with visual resources, water resources, cultural resources, agricultural resources, biological resources, paleontological resources, recreation, land use, transportation, and climate change. As described in Chapter 4 of this document, Mitigation Measures for this project have been developed as needed for the Proposed Action to reduce the environmental effects associated with these issues. As described in Sections 5.1, 5.3, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13, and 5.14, construction activities would not result in an adverse cumulative effect, nor significantly contribute to an adverse cumulative effect, on environmental and physical conditions, including visual resources, light and glare, transportation and circulation, cultural resources, noise, agricultural resources, hydrology and water quality, biological resources, paleontological resources, and recreation. Therefore, the project would not result in, nor significantly contribute to, adverse cumulative impacts associated with environmental and physical conditions that would affect minority or low-income populations disproportionately.

Socioeconomic Effects: Construction of the Proposed Action, and other projects within the cumulative analysis area, could result in a cumulative socioeconomic effect in association with the conversion of agricultural production, which is the primary source of employment in the area. The agricultural activities associated with the project site are estimated to provide direct employment of approximately 10 persons on a full-time basis. The construction workforce for the Proposed Action would average approximately 250 workers, with up to 360 workers during peak periods over 22 to 28 months. The construction workforce would consist of laborers, craftspeople, supervisory personnel, and support personnel. Some of the construction workforce would be recruited locally and available through the existing labor pool. Others would be specialized technical workers from outside of the local area. During construction activities for the Proposed Action, the project site would yield a greater number of workers than under existing conditions.

While agricultural employment would decrease under cumulative conditions, there would be an increase in short-term employment associated with construction of the various cumulative projects. The various cumulative projects would affect agricultural lands with food crops, which provide employment of approximately 15 full-time persons per 1,000 acres and seasonal employment of 500

persons per acre, lands with field crops, which provide employment of approximately 5 full-time persons per 1,000 acres and no significant seasonal employment, as well as non-agricultural lands, including BLM lands, with lower or no employment. While the projects that may be built under cumulative conditions would each provide varying levels of employment, the short-term employment would be comparable to or in excess of the full-time employment currently occurring on the sites. However, there would likely be a decline in peak seasonal employment. While construction workers may come from a broad area, particularly specialists, the potential for a short-term increase in employment is not anticipated to result in any significant in-migration, or population growth, in Imperial County due to the high unemployment rate in the County, which was 29.7 percent in 2010 compared with 12.4 percent statewide (EDD, 2011). However, the Proposed Action would result in an increase in employment during the construction phase and would not contribute to cumulative effects associated with a decrease in employment during construction of various projects under cumulative conditions. The project would not result in, nor significantly contribute to, adverse cumulative impacts associated with socioeconomic conditions that would affect minority or low-income populations disproportionately.

B. Operations and Maintenance

Human Health Effects: The operations and maintenance phase of the Proposed Action, and other projects within the cumulative analysis area, could result in a cumulative effect on human health in association with exposure to air pollutants, increased dust, toxic emissions, Valley Fever-related dust exposure, on-site hazardous materials, flooding, geology and soils, emergency access, traffic, and noise. However, as described in Chapter 4 of this document, Mitigation Measures for this project have been developed as needed for the Proposed Action to reduce the environmental effects associated with these human health hazards. Further, as described in Sections 5.4, 5.6, 5.8, and 5.9, operations and maintenance would not result in adverse cumulative health and safety effects, including adverse effects associated with air quality, geology and soils, hazards and hazardous materials. Therefore, the project would not result in, nor significantly contribute to, adverse cumulative impacts associated with environmental and physical conditions that would disproportionately affect minority or low-income populations..

Environmental Effects: The operations and maintenance phase of the Proposed Action, and other projects within the cumulative analysis area, could result in a cumulative environmental effect on humans in association with visual resources, water resources, cultural resources, agricultural resources, biological resources, paleontological resources, recreation, land use, transportation, and climate change. As described in Chapter 4 of this document, Mitigation Measures have been developed as needed for the Proposed Action to reduce the environmental effects associated with these issues. As described in Sections 5.1, 5.3, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13, and 5.14, operations and maintenance would not result in an adverse cumulative effect, nor significantly contribute to an adverse cumulative effect, on environmental and physical conditions, including visual resources, light and glare, transportation and circulation, cultural resources, noise, agricultural resources, hydrology and water quality, biological resources, paleontological resources, and recreation. Therefore, the project would not result in, nor significantly contribute to, adverse cumulative impacts associated with environmental and physical conditions that would disproportionately affect minority or low-income populations..

Socioeconomic Effects: Implementation of the cumulative projects would result in decreased agricultural employment and increased employment associated with the operations and maintenance component of each project. The various cumulative projects would affect agricultural employment on lands with food and row crops, which provide employment of approximately 15 full-time persons per

1,000 acres and seasonal employment of 500 persons per acre, agricultural employment on lands with field and non-food crops, which provide employment of approximately 5 full-time persons per 1,000 acres and no significant seasonal employment, as well as non-agricultural lands, including BLM lands, with lower or no employment. As summarized in Tables 5.14-1 and 5.14-2, some of the cumulative projects would result in beneficial effects and a net increase in employment. However, there are a number of cumulative projects that do not have adequate information available to identify the specific environmental justice effects of the individual project. These cumulative projects that have limited information available could result in adverse socioeconomic effects associated with decreased agricultural employment. Energy projects that are similar to the Proposed Action (e.g., solar facilities proposed on land used for field crops) would result in minimal net changes in employment under cumulative conditions, since the employment associated with the solar facilities is generally comparable to the employment levels associated with field crops. However, cumulative projects that are proposed on agricultural lands currently used for field crop farming could result in a net decrease in employment since field crops generally employ 15 full-time employees per 1,000 acres and approximately 500 seasonal employees during harvest; annual employment associated with energy facilities would provide 5 to 10 employees per project.

The agricultural activities associated with the project site are estimated to provide direct employment of 10 persons on a full-time basis. The operations and maintenance activities are expected to require 5 to 7 permanent, full-time employees. The staffing requirements are expected to include a plant manager, maintenance manager, 2 to 4 operations and maintenance technicians, and a clerical position. These positions will offer salary and benefits competitive with those requiring comparable skills. Additionally, it is anticipated that the Proposed Action will require security services, which could result in the creation of approximately three full-time equivalent employees. Therefore, total full-time employment, or the full-time employment equivalent, associated with the Proposed Action is anticipated to range from 8 to 10 persons. These jobs on average will likely be higher paying and thus generate more discretionary income to circulate the economies of communities in the geographic scope of this environmental justice analysis.

Additional contractor-provided services will be required from time to time, which will result in the creation of additional local jobs. This phase of the Proposed Action will create demand for other services such as facility maintenance, panel washing, property maintenance (e.g. weed abatement) and environmental monitoring/compliance. It is anticipated that these jobs would be filled by electricians, laborers, equipment operators, and environmental specialists. Additional personnel would work at the project site intermittently to conduct preventative maintenance and perform repairs.

Operations and maintenance activities are not anticipated to result in any significant adverse decrease in the quantity or quality of employment within the cumulative analysis area, therefore no cumulative adverse socioeconomic impacts are anticipated associated with operations and maintenance activities. As such, there would be no adverse cumulative impacts associated with these issues that would affect minority or low-income populations. As such, the Proposed Action would not have a significant contribution to an adverse cumulative socioeconomic effect on a low-income or minority population, but rather, would contribute to a beneficial effect of providing stable, year-round, higher-paying employment opportunities in an area with a high concentration of low-income and minority populations.

C. Decommissioning

Human Health Effects: The decommissioning phase of the Proposed Action would return the project site to agricultural uses similar to its present condition. As described in Sections 5.4, 5.6, 5.8, and 5.9, the decommissioning phase of the project would not result in adverse cumulative health and safety effects, including adverse effects associated with air quality, geology and soils, hazards and hazardous materials. Therefore, the decommissioning would not result in, nor significantly contribute to, adverse cumulative As such, there would be no adverse cumulative human health impacts that would affect minority or low-income populations.

Environmental Effects: As described in Sections 5.4, 5.6, 5.8, and 5.9, decommissioning would not result in adverse cumulative health and safety effects, including adverse effects associated with air quality, geology and soils, hazards and hazardous materials. Therefore, the project would not result in, nor significantly contribute to, adverse cumulative impacts associated with environmental and physical conditions that would disproportionately affect minority or low-income populations. As such, there would be no adverse cumulative environmental impacts that would affect minority or low-income populations.

Socioeconomic Effects: The decommissioning phase would return the project site to a state similar to the current agricultural land present on the project site. The agricultural activities associated with the project site after decommissioning would provide agricultural employment at the same future levels that would occur if the project was not implemented. This is because the decommissioning phase would return the project site to an agricultural condition that is comparable to the present condition of the project site. Decommissioning is not anticipated to result in any high or adverse decrease in the quantity or quality of employment within the cumulative analysis area, therefore no cumulative adverse socioeconomic impacts are anticipated associated with decommissioning activities. As such, there would be no adverse cumulative impacts associated with these issues that would affect minority or low-income populations.

5.15 RECREATION

Cumulative impacts on recreation take into account the proposed action's impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. When analyzing cumulative impacts on recreation, an assessment is made of the impacts on recreation within the cumulative impact analysis area. This cumulative analysis is focused on the Proposed Action's potential contributions to impacts on recreation.

5.15.1 GEOGRAPHIC SCOPE

The cumulative impacts of the Proposed Action on recreation is defined as the incremental physical impact of the Proposed Action when added to other closely related past, present, and reasonably foreseeable probable future projects. The geographic scope of the cumulative effects analysis for recreation includes the local and regional recreation facilities in Imperial County. This geographic scope encompasses an area larger than the project site and provides a reasonable context wherein cumulative actions on the project site could affect recreation beyond the project site.

5.15.2 TIMEFRAME

The timeframe refers the duration over which an impact would occur: short-term or long-term. Short-term impacts to recreation would occur during the construction and decommissioning periods in

association with the addition of construction equipment to the landscape. Long-term impacts to recreation would occur as a result of any changes in traffic patterns or volumes which would occur as a result of the presence of the project over its operational life (approximately 30+ years).

5.15.3 EXISTING CUMULATIVE CONDITIONS

The cumulative conditions include very limited recreation on the private lands. Most of the recreation on private lands includes hunting or walking and is considered a private resource that is not available for the general public. Cumulative conditions on public lands in the cumulative analysis area are much more extensive.

The transmission line corridor would be within an area currently designated by the BLM as Utility Corridor “N.” The entire transmission line corridor is within the Yuha Desert. The CDCA Plan designates this area as Multiple-Use L (Limited Use), which is suitable for recreation “...which generally involves low to moderate use densities.” The Limited Use designation also limits all motorized travel to designated routes. Based on the Western Colorado Desert Routes of Travel Designations, there are only limited use routes designated within the Utility Corridor “N.”

In addition, California State Parks administers several recreational areas located in the general vicinity of the project site. These are the Anza-Borrego Desert State Park, the Ocotillo Wells State Vehicular Recreation Area, and the Heber Dunes State Recreation Area. These recreational areas are within between 10 and 30 miles away from the project site.

The majority of the land in Imperial County is designated as Open Space/Recreation according to the County’s General Plan Land Use Map. The open space and recreation areas under BLM management in Imperial County are designated as “open” or “limited use.” In open areas, all forms of cross-county travel are permitted within the posted boundaries; however, in limited use areas, vehicle travel is limited to approved/signed routes of travel and no cross-country vehicle travel is allowed.

5.15.3.1 Past, Present and Reasonably Foreseeable Projects

A list of the existing and reasonably foreseeable cumulative projects is provided in **Table 5.15-1** and **Table 5.15-2**. Cumulative projects are mapped in **Figure 5.0-1** and **Figure 5.0-2**. These projects include proposed or approved projects within the County’s jurisdiction and within BLM’s jurisdiction. These projects have either undergone independent environmental review pursuant to NEPA and/or CEQA or will do so prior to approval. Even if environmental review has not been completed for the projects described in **Table 5.15-1** and **Table 5.15-2**, their potential effects were considered in the cumulative impacts analyses in this EIS/EIR for the geographic area described above. These projects are in the various stages of permitting or construction.

**TABLE 5.15-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
A	<p>“S” Line Upgrade 230-kV Transmission Line Project</p> <p>Approximately four miles north of the project site.</p>	<p>No. This project does not affect recreation.</p>	<p>This project is an upgrade to an 18-mile transmission line corridor on 108 acres of land. The project includes installing 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. This project would not increase the demand for parks or other recreations facilities, nor does it include recreational facilities. It was determined that this project would not have an adverse effect on recreation.</p>
B	<p>Imperial Valley Solar</p> <p>Approximately 10 miles northwest of project site.</p>	<p>Yes. The Imperial Valley Solar project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project is a 6,500 acre solar project on approximately 6,140 acres of BLM land and approximately 360 acres of privately owned land.</p> <p>Because the project would result in the conversion of over 6,000 acres of land, a disruption of recreational activities established in Federal, State, and local recreational areas would result. Identified direct, indirect, short-and long-term impacts include impacts to: off highway vehicle (OHV) Open Routes; and the Anza Trail Corridor Historical context. Impacts associated with the conversion of recreation land uses would result in unavoidable adverse impacts after the implementation of mitigation measures.</p>

**TABLE 5.15-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
C	<p>Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation</p> <p>Approximately four miles northwest of the project site parallel to the Southwest Powerlink 500-kV Line.</p>	<p>Yes. The Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project is a 500-kV transmission line that extends from the Imperial Valley Substation to the northwest for approximately five miles entirely on BLM land. This project would result in temporary impacts associated with construction resulting in a reduction of access or visitation to recreation and wilderness areas. Operational impacts would result in unavoidable adverse impacts to wilderness. Presence of the transmission line within State wilderness areas is inconsistent with the definition of wilderness and would require re-designation of affected wilderness lands, thereby resulting in significant, unmitigable impacts. Additionally, the proposed project would traverse six open space preserves, the Trans-County Trail, and the Pacific Crest Trail (PCT) significantly diminishing the character and value of these recreational resources and permanently precluding recreational activities should project structures be sited on trails.</p>
D	<p>Ocotillo Sol</p> <p>Solar field is approximately 2.5 miles northwest of the northwest corner of the project site and approximately 500 feet west of the proposed Gentie Line.</p>	<p>Yes. The Ocotillo Sol project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project is a photovoltaic solar field producing 15 to 18 megawatts of renewable energy on between 100 and 115 acres of BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that much of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>

**TABLE 5.15-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
E	<p>SDG&E Geotechnical Investigation</p> <p>Directly adjacent to the southwest portion of the Imperial Valley Substation near the Gen-tie Line point of connection to the Imperial Valley Substation.</p>	<p>No. This project does not affect recreation.</p>	<p>This project is a geotechnical investigation on one acre of BLM land. It was determined that this project would not result in adverse impacts to recreation and no mitigation was necessary.</p>
F	<p>North Gila to Imperial Valley #2 Transmission Line</p> <p>Alignment will be as close as two miles from the northern portion of the project site. Proposed Gen-tie Line will undercross.</p>	<p>Yes. The North Gila to Imperial Valley #2 Transmission Line project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project is a double-circuit 500-kV line extending from the Imperial Valley Substation to the east for 75 miles. The total right-of-way will be approximately 13,881.02 acres, of which 1,903 acres are BLM Land. There is not currently a published environmental document that provides impact conclusions. However, given that much of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>

**TABLE 5.15-1
LIST OF CUMULATIVE PROJECTS WITHIN THE JURISDICTION OF BLM IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name and Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
G	<p>Dixieland Connection to Imperial Irrigation District Transmission System</p> <p>The Dixieland Connection would extend north from Imperial Valley Substation. The Gen-tie Line corridor of the Proposed Action would terminate at the Imperial Valley Substation.</p>	<p>Yes. The Dixieland Connection to Imperial Irrigation District Transmission System project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project is a 63.5-acre transmission line project. Approximately 44.34 acres are on BLM land and approximately 19.19 acres are on privately owned land. It was determined that this project would cause temporary disruption of recreational activities established in federal recreational areas. Identified impacts include, hiking, camping, off highway vehicle (OHV) use, and horseback riding. Impacts associated with temporary impacts were determined to not be adverse.</p>
H	<p>Solar Reserve Imperial Valley</p> <p>Preferred 230-kV transmission line alignment is near the proposed Gen-tie Line at the point of connection with the Imperial Valley Substation. Project site is approximately 30 miles east of the Imperial Valley Substation.</p>	<p>Yes. The Solar Reserve Imperial Valley project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project is a 2,000-acre solar power project on lands managed by the BLM. There is not currently a published environmental document that provides impact conclusions. However, given that much of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>

**TABLE 5.15-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
1	Linda Vista Approximately eight miles northeast of project site.	Yes. The Linda Vista project could affect local and regional recreation facilities in Imperial County.	This project site is an 80-acre mixed-use project consisting of 164 single-family homes and a 1.79-acre commercial lot, and a 14-acre school. There is not currently a published environmental document that provides impact conclusions. This project will generate an increased demand for recreation by adding additional people; however, the lead agency will require either the development of parks or payment of in-lieu fees to accommodate the increased demand for recreation. This project is not anticipated to have an adverse effect on recreation.
2	County Center II Expansion/County and Imperial County Office of Education Approximately six-and-a-half miles northeast of project site.	No. This project does not affect recreation.	It was determined that this project would not result in adverse impacts to recreation and no mitigation was necessary.
3	Imperial Solar Energy Center West Approximately nine miles northwest of project site.	No. This project does not affect recreation.	It was determined that this project would not result in adverse impacts to recreation and no mitigation was necessary.
4	Imperial Solar Energy Center South Adjacent to southern boundary of project site.	No. This project does not affect recreation.	It was determined that this project would not result in adverse impacts to recreation and no mitigation was necessary.

**TABLE 5.15-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
5	<p>Mount Signal Solar Farm I</p> <p>Approximately one mile southeast of the easternmost portion of the project site and adjacent to the southern and southeastern boundary of the project site.</p>	<p>Yes. The Mount Signal Solar Farm I project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar array field on 1,431 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>
6	<p>Campo Verde</p> <p>Approximately two miles northwest of the northern-most portion of the project site.</p>	<p>Yes. The Campo Verde project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar array field on 2,267 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>

**TABLE 5.15-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
7	<p>Mayflower Solar Farm Project</p> <p>Approximately 27 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Mayflower Solar Farm Project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. However, given that most of the projects is located in the vicinity require ROWs on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>
8	<p>Arkansas Solar</p> <p>Approximately 32 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Arkansas Solar project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 481 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. However, given that most of the projects is located in the vicinity require ROWs on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>

**TABLE 5.15-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
9	<p style="text-align: center;">Sonora Solar</p> <p>Approximately 33 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Sonora Solar project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 488 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. However, given that most of the projects is located in the vicinity require ROWs on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>
10	<p style="text-align: center;">Alhambra Solar</p> <p>Approximately 28 miles north and slightly east of the project site on the eastern side of the Salton Sea.</p>	<p>Yes. The Alhambra Solar project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 482 acres. A CUP Application was provided on June 24, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. However, given that most of the projects located in the vicinity require ROWs on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>

**TABLE 5.15-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
11	<p>Acorn Greenworks</p> <p>Less than one mile west of northwestern boundary of the project site.</p>	<p>Yes. The Acorn Greenworks project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is a solar photovoltaic energy generation project on approximately 693 acres. A CUP Application was provided on June 30, 2011. The details of the site characteristics are not known at this time and there is not currently a published environmental document that provides impact conclusions. However, given that most of the projects located in the region require ROWs on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>
12	<p>Calexico I-A</p> <p>Immediately adjacent to southern and eastern portions of the project site</p>	<p>Yes. The Calexico I-A project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is the first phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.</p>
13	<p>Calexico I-B</p> <p>Immediately adjacent to southern portion of project site.</p>	<p>Yes. The Calexico I-B project could affect local and regional recreation facilities in Imperial County.</p>	<p>This project site is the second phase of a solar array field on 1,332 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project</p>

**TABLE 5.15-2
LIST OF CUMULATIVE PROJECTS WITHIN IMPERIAL COUNTY IN THE VICINITY OF THE PROPOSED ACTION
FOR THE ANALYSIS OF CUMULATIVE IMPACTS TO RECREATION**

#	Project Name/Distance from Project Site	Included in Cumulative Analysis?	Level of Impact to Recreation
			could impact recreation. There is insufficient information available at this time to determine the level of impact.
14	Calexico II-A Approximately three miles southeast of eastern portion of project site.	Yes. The Calexico II-A project could affect local and regional recreation facilities in Imperial County.	This project site is the first phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.
15	Calexico II-B Approximately one mile east of eastern portion of project site.	Yes. The Calexico II-B project could affect local and regional recreation facilities in Imperial County.	This project site is the second phase of a solar array field on 1,465 acres of privately owned, undeveloped agricultural land with a ROW on BLM land. There is not currently a published environmental document that provides impact conclusions. However, given that some of the project is located on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that the project could impact recreation. There is insufficient information available at this time to determine the level of impact.

5.15.4 CUMULATIVE RECREATION IMPACTS

There are 23 cumulative projects, 18 of which are within the geographic scope (excluding the Proposed Action). Of these 18 cumulative projects within the geographic scope, one project has been determined to have adverse unavoidable environmental effects associated with recreation. Two of these cumulative projects will temporarily affect recreation, and it was determined to not be adverse. Fifteen of these cumulative projects do not have published environmental documents available so it is not possible to provide a definitive conclusion of the project's environmental effects associated with recreation. However, given that most of these cumulative projects are located, in part, on public land, and given that most public land in the region is designated as recreational use, it can reasonably be expected that these 15 cumulative projects could impact recreation. There is insufficient information available at this time to determine the level of impact. Five cumulative projects were excluded from the geographic scope because it was determined that they do not affect recreation.

5.15.4.1 DIRECT AND INDIRECT IMPACTS

A. Construction

The Proposed Action and the cumulative projects would have temporary construction related impacts on recreation. There is one cumulative project that would have permanent adverse impacts on recreation beginning with the construction phase and extending throughout the operational life of the project. The new access roads needed for construction of the Proposed Action and the cumulative projects on public lands portion of these projects would be limited to use in association with construction of solar facilities, predominately transmission lines, and would not be used to access recreation. Construction activities may temporarily disrupt recreational access roads on public lands during construction activities. The potential for disruption would occur at points where the new access roads cross recreational access roads. Limited access roads require vehicles to stay on designated roads, limit types of vehicles allowed on certain roads, and limit access during certain seasons of the year. The disruption to these recreational access roads would be temporary, and would not entirely preclude use of the roads during construction. As such, the construction phase of the Proposed Action, when combined with the cumulative projects would not result in a cumulatively considerable impact on recreational activities.

B. Operations and Maintenance

The temporary construction related impacts would not be present during the operations and maintenance phase of the Proposed Action or 17 of the cumulative projects. There is one cumulative project that would have permanent adverse impacts on recreation throughout the operational life of the project. All existing recreational access roads would operate as they did prior to construction. The presence of the transmission lines associated with cumulative projects would not result in impacts to use of these roads or disrupt access to recreational activities. As such, the operations and maintenance phase of the Proposed Action, when combined with the cumulative projects would not result in a cumulatively considerable impact on recreational activities.

C. Decommissioning

At the end of the operational life of the Proposed Action and the cumulative projects, all equipment and components will be decommissioned and deconstructed. Temporary bladed roads similar to those needed for construction may be required during decommissioning. However, following dismantling and

removal of facilities and structures, all temporary and permanent roads associated with the Proposed Action and the cumulative projects would be restored and the landscape reclaimed as near to the original conditions as practicable in accordance with the a Reclamation Plan. Decommissioning of the Proposed Action, when combined with the cumulative projects would not result in cumulative impacts to the access, use, or enjoyment of recreational activities.

5.15.4.2 CEQA SIGNIFICANCE DETERMINATIONS

There are 18 cumulative projects within the geographic scope, one project has been determined to have adverse unavoidable environmental effects associated with recreation, while the other 17 have either been determined to not have an adverse effect or there is not have published environmental documents available to provide a definitive conclusion environmental effects associated with recreation. Combined with these 18 cumulative projects, the Proposed Action would not have a cumulative adverse affect on the recreational uses in the region. The recreational lands would remain available for recreational activities that are permitted within their specified use designations. Furthermore, the Proposed Action does not involve the construction of recreation facilities. The Proposed Action would not contain a residential component that would increase the use of an existing neighborhood park or a regional park or other recreational facilities such that substantial physical deterioration would occur. Implementation of the Proposed Action would not have a cumulatively considerable impact on recreational resources. All impacts are temporary, and will not obstruct recreation.

5.15.4.3 NEPA IMPACT ANALYSIS

The location of project components would be consistent with intended land use designations set forth by BLM's CDCA Plan. The transmission line structures will be located in areas within Yuha Desert designated specifically for utility structures (Utility Corridor "N") and will be grouped together in order to prevent them from being scattered throughout BLM lands. Activities for OHV uses are currently allowed on lands adjacent to Utility Corridor "N" designated areas and those areas would not be affected by the Proposed Action. Similarly, the entire transmission corridor site and access roads will also be within areas designated by the CDCA as Multiple-Use areas which allow low to moderate density uses and restrict motorized travel to designated routes. The Proposed Action would adhere to assigned land use designations and consequently would not contribute to cumulative recreation impacts.