

5.0 CUMULATIVE IMPACTS

Both NEPA and CEQA require the consideration of cumulative impacts for the Proposed Action, Alternative 1-Alternative Transmission Line Corridor, Alternative 2-Reduced Solar Energy Facility Site, and Alternative 3-No Action/No Project Alternative.

Council on Environmental Quality NEPA Guidelines

Preparation of a cumulative impacts analysis is required under NEPA. A “cumulative impact” (also termed a “cumulative effect”) is an impact on the environment which results from the incremental impact of a Proposed Action when considered with other past, present, and reasonably foreseeable future actions regardless of which agency (Federal or non-Federal) or person undertakes such other actions (40 CFR Section 1508.7).

NEPA states that cumulative effects can result from “...individually minor but collectively significant actions taking place over a period of time” (40 CFR Section 1508.7). Under NEPA, both context and intensity are considered to determine whether a cumulative impact is significant. When considering the intensity of an effect, it is necessary to consider “...whether the action is related to other actions with individually minor but cumulatively significant impacts. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” 40 CFR Section 1508.27(b)(7).

CEQA Guidelines

CEQA Guidelines (Section 15355) states a similar definition of cumulative impact.

“Cumulative impact refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects; and
- (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

CEQA Guidelines Section 15130(b)(1) provides two alternative methods to analyze cumulative impacts:

List Method – A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.

General Plan Projection Method – A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

Methodology

For the EIR/EA an expanded approach to the list method suggested in CEQA Guidelines Section 15130(b)(1)(A) is followed. A comprehensive list of all past, present, and reasonably foreseeable future projects that are considered in the cumulative impacts analysis is provided in Table 5.0-1.

The cumulative impacts analysis defines each cumulative effects study area by each resource area and includes a narrative assessment of cumulative impacts, combined with a table summarizing projects considered and cumulative impacts to the resource. The following describes the overall approach and context for the cumulative impact analysis. It also describes the study areas and relevant projects considered in the analyses for the different resource areas.

This EIR/EA evaluated cumulative impacts of the Proposed Action and Alternatives for each resource area, using the following steps:

- (1) Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the Proposed Action's reasonably foreseeable direct and indirect effects.
- (2) Evaluate the cumulative effects of the Proposed Action in combination with past and present (existing) and reasonably foreseeable future projects in the study area.
- (3) Evaluate the Proposed Action's incremental contribution to the cumulative effects on the resource. When the Proposed Action's incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the Proposed Action's "fair share" contribution to the cumulative effect are discussed.

Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effect varies by resource. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. For this reason, the geographic scope for this analysis must be identified for each resource area.

The analysis of cumulative effects considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project site and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a Proposed Action, but not beyond the scope of the direct and indirect effects of that Proposed Action.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. The lease term for the solar fields is 30 years. It is likely that other similar projects would be developed between the year 2030 and the end of the lease term. However, due to uncertain development patterns that far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan.

TABLE 5.0-1
List of Projects Located at or Within the Vicinity of the Proposed Project

Project Name	Description of Project	Size/Location	Status	
Renewable Energy Projects Within the Jurisdiction of BLM				
1	“S” Line Upgrade 230-kV Transmission Line Project	<p>The “S” Line route originates from the IID/San Diego Gas & Electric Imperial Valley Substation located on BLM lands and terminate at the El Centro Switching Station on Dogwood Road near Villa Road. The project is located in Imperial County. The IID proposed to upgrade about 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 phases. 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.</p>	<p>18 miles of various composed segments.</p> <p>I-8, Hwy 86, 10 miles southwest of the City of El Centro, near Liebert and Wixom Roads, to the north, and terminating at the El Centro Switching Station on Dogwood Road near Villa Road.</p>	<p>End of review.</p> <p>December 17, 2009; MND filed with mitigation measures.</p> <p>ROW amended/ renewed March 2010.</p>
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	<p>On June 30, 2008, Stirling Energy Systems Solar Two, LLC (SES Solar Two, LLC) submitted an Application for Certification (AFC) to construct and operate the Stirling Energy Systems Solar Two project (SES Solar Two), a solar dish Stirling systems project in Imperial County, California. February 2010, the company formally requested that the project change its name to Imperial Valley Solar. The company name was also changed to Imperial Valley Solar LLC.</p> <p>The 6,500 acre project site is located on approximately 6,140 acres of federal land managed by the Bureau of Land Management (BLM) and approximately 360 acres of privately owned land. The site is approximately 100 miles</p>	<p>Imperial Valley, 100 miles east of San Diego, 14 miles west of El Centro, and 4 miles east of Ocotillo Wells.</p>	<p>FEIS was prepared in July 2010.</p> <p>CEC approved application for certification in September 2010. The Notice of Availability of the CEC’s Final Decision was made available on October 12, 2010.</p> <p>BLM ROW authorized October 12, 2010.</p>

Project Name	Description of Project	Size/Location	Status
	<p>east of San Diego, 14 miles west of El Centro, and approximately 4 miles east of Ocotillo, California. The proposed Imperial Valley Solar/SES Solar Two project would generate 750 megawatts of renewable energy. The plant would involve 30,000 SunCatchers using solar-dish technology designed to automatically track the sun and collect and focus solar energy onto a power conversion unit that generates electricity. The project includes a 10.3 mile 230-kilovolt transmission line, substation, water pipeline, and access road.</p>		
<p>3</p>	<p>Sunrise Powerlink Transmission Project (CACA-047658)</p> <p>This would consist of a transmission line from Imperial County to coastal San Diego County. For the first 36 miles of the Selected Alternative, the 500 kV transmission line will be built on BLM lands adjacent to the existing Southwest Powerlink 500 kV line. The Selected Alternative crosses approximately 49 miles of BLM land, approximately 19 miles of Forest Service land, approximately two miles of Department of Defense land, and approximately 0.4 miles of state land. The remainder of the line would cross lands in various ownerships, including private and local agencies.</p> <p>SDG&E has stated that it developed the Sunrise Powerlink Transmission Project for three major objectives: (1) to bring renewable energy resources to San Diego County from Imperial County by providing access to remote areas with the potential for significant development of renewable energy sources; (2) to improve electric reliability within the San Diego area by providing additional transmission during peak loading and for the region's growing economy; (3) and to reduce congestion and power supply costs of delivering electricity to ratepayers.</p>	<p>Imperial Valley to Penasquitos. Located in the Yuha Basin Area of Critical Habitat in the southwestern portion of Imperial County. 8 to 9 miles southwest of the town of El Centro. Map included.</p>	<p>POWER Engineers final Environmental Impact Statement (EIS) complete. ROW authorized February 2009.</p>

	Project Name	Description of Project	Size/Location	Status
4	Imperial Solar Energy Center – West (CACA-51644)	<p>Imperial Solar Energy Center - West consists of two primary components: 1) the construction and operation of the 250 megawatt Imperial Solar Energy Center West solar energy facility; and, 2) the construction and operation of the electrical transmission line and associated access/ maintenance road that would connect from the solar facility to the existing Imperial Valley substation. The electricity generation process associated with the Proposed Action would utilize solar technology to convert sunlight directly into electricity. As part of the project, the solar facility would interconnect to the utility grid at the 230 kV side of the Imperial Valley Substation via an approximately five-mile long transmission line. The proposed right-of-way (ROW) for the electrical transmission line corridor would be 120-feet wide.</p> <p>The development of the solar energy center is on 1,130 acres of vacant land previously utilized for agricultural purposes. Project would include a facility consisting of ground mounted photovoltaic solar power generating system, supporting structures, operations and maintenance building, substation, water treatment facility, plant control system, meteorological station, and roads and fencing.</p>	Follows the proposed Dixieland alignment. Map in reference document.	Draft plan for development complete January 25, 2010. Currently working on CEQA/NEPA analysis.
5	Proposed Action-Imperial Solar Energy Center – South (CACA-51645)	The Imperial Solar Energy Center - South consists of three primary components: 1) the construction and operation of the 200 megawatt Imperial Solar Energy Center South solar energy facility; 2) the construction and operation of the electrical transmission lines that would connect from the solar power facility to the existing Imperial Valley substation; 3) the widening of an existing access road for ingress and egress to the Solar facility across Federal and private lands located along the	The site of the proposed solar energy facility is located on 946.6 gross acres of privately-owned, undeveloped and agricultural lands, in the unincorporated Mt. Signal area of the County of Imperial, approximately eight miles southwest of the City of El Centro and south of the	Draft plan for development complete January 25, 2010. Currently working on CEQA/NEPA Analysis.

Project Name	Description of Project	Size/Location	Status
	west side of the Westside Main Canal. The electricity generation process associated with the Proposed Action would utilize solar technology to convert sunlight directly into electricity. As part of the project, the facility would interconnect to the utility grid at the 230 kV side of the Imperial Valley Substation via an approximately five-mile long transmission line. The proposed ROW for the electrical transmission line corridor would be 120-foot wide. The project proponent is also requesting construction and operational access to the solar energy facility via use of an existing dirt road located along the west side of the Westside Main Canal, located within BLM and private lands.	community of Seeley. The proposed transmission lines and access road would be located within the Yuha Desert, and within BLM's Utility Corridor "N" of the California Desert Conservation Area plan. Imperial County is located in Southern California, bordering Mexico, west of Arizona, and east of San Diego County.	
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	SDG&E proposed photovoltaic solar field. Producing 12 to 14 megawatts of renewable energy.	Located on approximately 100 acres of federal land directly adjacent to SDG&E's Imperial Valley substation. Map included.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	Southwest Transmission Partners double-circuit 500-kV line proposed from the North Gila Substation in Yuma County, Arizona to the Imperial Valley Substation in Imperial County, proposed due east of the IV substation. Project would provide high-voltage transmission capacity in the southwestern U.S. to facilitate the development and interconnection of renewable energy. The total ROW will be approximately 1,903 acres of BLM land. Project will be approximately 75 miles long.	Between North Gila Substation in Yuma County, Arizona and the Imperial Valley Substation in Imperial County between North Gila Substation in Yuma County, Arizona and the Imperial Valley Substation in Imperial Valley. Project will follow the same route as existing Southwest Powerlink 500-kV line.
8	Centinela Solar Power, LLC (CACA-052092)	Proposed 230-kV line (follows the 230kv lines from the international border going north alignment) would generate 225-275 megawatts of electricity	Follows the 230-kv lines from the international border going north alignment. Draft plan for development dated November 2010.

Project Name	Description of Project	Size/Location	Status
	on 2,054 acres of previously disturbed private farmland in the Imperial Valley. Approximately 5 miles of new 230-kV transmission line. The line will connect solar farm on private land with the IV Substation.	Approximately 10 to 12 miles southwest of the town of El Centro, Imperial County. Map in reference document	Currently working on CEQA/NEPA Analysis.
9	<p>SDG&E East County (SDG&D ECO) Substation/ Tule Wind/Energia Sierra Juarez Gen-The Projects</p> <p>The proposed ECO Substation Project will cross approximately 1.5 miles of land managed by BLM. The ECO Substation Project includes construction of a 500/230/138-kV substation in Eastern San Diego County; construction of the Southwest Powerlink (SWPL) loop-in, a short loop-in of the existing SWPL transmission line to the proposed ECO Substation; construction of a 138 kV transmission line, approximately 13.3 miles in length, running between the proposed ECO Substation and the rebuilt Boulevard Substation; and rebuilding of the existing Boulevard Substation.</p> <p>The proposed Tule Wind Project, consisting of up to 134 wind turbines in the 1.5 to 3.0-megawatt (MW) range generating up to 200 MW of electricity.</p> <p>As proposed by Energia Sierra Juarez U.S. Transmission, LLC, the ESJ Gen-Tie Project would have the capacity to import up to 1,250 MW of renewable energy generated in northern Baja California, Mexico, to the existing SWPL Transmission Line in southeastern San Diego County, California. The selected route would interconnect with the proposed ECO Substation and would be constructed on three to five 150-foot lattice towers or 170-foot steel monopoles. Only renewable energy would be transmitted via the gen-tie line.</p>	<p>The proposed ECO Substation, is situated approximately 0.5 mile north of the United States (U.S.)–Mexico border and 0.5 mile west of the Imperial County border in San Diego County, California.</p> <p>The proposed Tule Wind Project is located in the McCain Valley in southeastern San Diego County, California.</p> <p>The ESJ Gen-Tie Project would extend south from the point of interconnection for about 0.5 mile to the U.S.-Mexico international border.</p>	<p>The CPUC and the BLM developed and signed a Memorandum of Understanding (completed on December 14, 2009) that directed the preparation of a joint EIR/EIS.</p> <p>The Draft EIR/EIS was released for public review on December 24, 2010, for a 54-day public review period originally ending February 16, 2011. However, the public review comment period of the Draft EIR/EIS has been extended to March 4, 2011.</p>
10	<p>Dixieland Connection to IID Transmission System</p> <p>Proposed 230 kV transmission line from the Dixieland Substation to the Imperial Valley Substation. Proposed route for the electrical transmission line is parallel to the proposed Imperial</p>	Approximately 10 to 12 miles southwest of the City of El Centro, Imperial County.	Application filed and currently working on the NEPA analysis.

	Project Name	Description of Project	Size/Location	Status
		Solar Energy Center West 230 kV transmission line. The proposed access/maintenance road for the transmission line is proposed to be shared for both transmission lines.		Draft plan of development was submitted on September 14, 2010.
11	Mount Signal Solar Farm I-82LV 8ME, LLC (CACA-052325)	Proposed 230-kV line (follows the 230kv lines from the international border going north alignment) CACA-052325. The project would create 200 megawatts of electricity on 1,375 acres of private farmland in the Imperial Valley. Proposed transmission line route would parallel existing 230 kV lines and share transmission line with C Solar Imperial Valley Energy South project.	Located in 1,375 acres of privately owned land located 2.5 to 7.5 miles west of Calexico in southern Imperial County. Right-of-way is located within BLM lands.	Application filed and currently working on CEQA/NEPA Analysis. Draft plan for development dated October 12, 2010.
12	Superstition Solar 1	The Surperstition Solar 1 project is a photovoltaic solar energy facility capable of producing 500 megawatts of electricity on approximately 5,516 acres	Westmorland	Application filed and currently working on a Draft EIR/EIS.
13	Bethel Solar X, Inc.	The Bethel Solar X, Inc project is a solar-hybrid energy project that will produce approximately 49.40 megawatts of electricity on approximately 571 acres of land.	Calexico	In Process
14	Energy Source Solar I, LLC	The Energy Solar Source I project is a solar energy project that will produce 80megawatts of electricity on approximately480 acres of land.	Niland	Approved by Imperial County
15	Energy Source Solar II, LLC	The Energy Solar Source II project is a solar energy project that will produce 80megawatts of electricity on 480 acres of land.	Niland	Approved by Imperial County
16	Salton Sea Solar Farm I	The Salton Sea Solar Farm I project is a solar energy project that will produce approximately 49.9 megawatts of electricity on approximately 320 acres of land.	Calipatria	County of Imperial just received.
17	Salton Sea Solar Farm II	The Salton Sea Solar Farm II project is a solar energy project that will produce approximately 100 megawatts of electricity on approximately 623 acres of land.	Calipatria	County of Imperial just received.

	Project Name	Description of Project	Size/Location	Status
18	Calipat Solar Farm I	The Calipat Solar Farm I project is a solar energy project that will produce approximately 50 megawatts of electricity on approximately 280 acres of land.	Calipatria	County of Imperial just received.
19	Calipat Solar Farm II	The Calipat Solar Farm II project is a solar energy project that will produce approximately 50 megawatts of electricity on approximately 280 acres of land.	Calipatria	County of Imperial just received.
20	Midway Solar Farm I	The Midway Solar Farm I project is a solar photovoltaic project that will produce approximately 50 megawatts of electricity on approximately 326 acres of land.	Calipatria	County of Imperial just received.
21	Midway Solar Farm II	The Midway Solar Farm II project is a solar photovoltaic energy project that will produce approximately 155 megawatts of electricity on approximately 803 acres of land.	Calipatria	County of Imperial just received.
22	IV Solar Company	The IV Solar Company project is a solar photovoltaic energy project that will produce approximately 23 megawatts of electricity on approximately 123 acres of land.	Niland	Approved by Imperial County
23	Chocolate Mountain	The Chocolate Mountain is a solarphotovoltaic energy project that will produce approximately 49.9 megawatts of electricity on approximately 320 acres of land.	Niland	Approved by Imperial County
24	Ocotillo Express	The Ocotillo Express project is wind energy project that will produce approximately 750megawatts of electricity on approximately 15,000 acres of land.	Ocotillo	Application filed and currently working on a Draft EIR/EIS
25	Hudson Ranch II	The Hudson Ranch II project is a geothermal energy project that will produce approximately 49.9 megawatts of electricity on approximately 326.26 acres of land.	Niland	MND in Process
26	Black Rock Unit #1 2 3	Black Rock Unit # 1 2 3 project is a geothermal energy project that will produce approximately 159 megawatts of electricity on approximately 160 acres of land.	Niland	EIR in Process.

Project Name		Description of Project	Size/Location	Status
27	Ram/Power/Overlay	Ram Power Overlay is a geothermal energy project that will produce approximately 50 megawatts of electricity on approximately 27,875 acres of land.	Brawley	EIR in Process.
28	Orni 19	Orni 19 is a geothermal energy project that will produce approximately 49.9 megawatts of electricity on approximately 32 acres of land.	Brawley	EIR in Process.
29	Orni 21 (Wister)	Orni 21 is a geothermal energy project proposed to 49.9 mega watts of geothermal power.	Brawley	TPM (minor subdivision); Variance (height of transmission poles connecting to plant); and CUP 08-0023(to drill geothermal) filed with County of Imperial
Renewable Energy Projects on State and Private Lands (Source: Imperial Valley Solar Project FEIS)				
30	LADWP and OptiSolar Power Plant	This project is anticipated to generate 68 megawatts of solar energy.	Imperial County, SR-111	Under environmental review.
31	Orni 18, LLC Geothermal Power Plant	This would generate 49.9 megawatts of geothermal energy.	Brawley, Imperial County	
Existing Projects in Imperial Valley (Source: Imperial Valley Solar Project FEIS)				
32	U.S. Naval Air Facility El Centro	El Centro Naval Air Facility U.S. Naval Reservation Target 103 and Parachute Drop Zone. Desert range is used for air-to-ground bombing, rocket firing, strafing, dummy drops and mobile land target training.	West Mesa	Existing.
33	Recreation Activities	The area is primarily used for the conservation of Flat Tailed Horned Lizard. OHV activity is limited to designated routes of travel only within this area. There are occasional groups that visit this area for trail rides.	The area is primarily used for the conservation of Flat Tailed Horned Lizard. OHV activity is limited to designated routes of travel only within this area. There are occasional groups that visit this area for trail rides.	The area is primarily used for the conservation of Flat Tailed Horned Lizard. OHV activity is limited to designated routes of travel only within this area. There are occasional groups that visit this area for trail rides.

Project Name	Description of Project	Size/Location	Status
34	Recreation Activities The area is primarily used for the conservation of Flat Tailed Horned Lizard, and archaeological resources. OHV activity is limited to designated routes of travel only within this area. The Juan Bautista De Anza National Historic Trail runs through this area. This region is also rich with paleontological and geological resources. Visitors come to this area to find fossils and explore the area's geology and enjoy the desert landscape. Some schools and universities have visited this region for educational field trips and research.	Yuha Desert ACEC	Ongoing.
35	U.S. Gypsum Mining Existing gypsum plant; proposal to expand active gypsum quarry undergoing environmental review. Gypsum quarry is located 26 miles northwest of the plant located at Plaster City.	Plaster City	Existing; Quarry is undergoing expansion FEIR released Jan 2008.
36	California State Prison, Centinela Existing prison opened in 1993 which covers 2,000 acres.	2302 Brown Road, Imperial, CA	Existing.
37	Recreation Activities Cross-country OHV use is permitted within the boundaries of this area. Approximately 20 to 30 Permitted and Organized events occur on the Plaster City Open Area and Superstition Mountain Open Area. Many of these events are competitive OHV races involving as many as 100 riders and several hundred spectators. The area is a popular OHV riding area with high visitation during the cool season and on holiday weekends.	Superstition Mountain and Plaster City Open Area	Ongoing
38	IV Substation (TermoElectrica US, LLC, aka Sempra) International Border and Department of Energy (DOE) was the NEPA lead for preparation of a joint EA. This involves a construction of a 230-kv transmission line from the IV substation to the international U.S./Mexico border. Requires Presidential Permit for border crossing.	From the IV Substation to the international U.S./Mexico border.	Existing. Construction of the two natural-gas fired power plants in Mexico started in 2001 and are complete. The Imperial-Mexicali FEIS was prepared in December 2004.

Project Name	Description of Project	Size/Location	Status
39	<p>IV Substation (Baja California Power, Inc., aka, Intergen)</p>	<p>International Border and DOE were the NEPA lead for preparation of a joint EA. Involves construction of a 230-kv transmission line from the IV Substation to the international U.S./Mexico border. Requires Presidential Permit for border crossing.</p>	<p>From the IV Substation to the international U.S./Mexico border.</p> <p>Existing. Construction of the two natural-gas fired power plants in Mexico started in 2001 and are complete.</p> <p>The Imperial-Mexicali FEIS was prepared in December 2004.</p>
40	<p>IV Substation (SDG&E)</p>	<p>Involves construction of the La Rosita 230-kv transmission line from the IV Substation to the international U.S./Mexico border near Mt. Signal.</p> <p>230-kv transmission line (IV-La Rosita line) that connects the IV Substation with Mexico’s La Rosita Substation.</p>	<p>La Rosita Substation near the Mexicali border.</p> <p>Existing.</p> <p>Constructed in 1983.</p>
Future Foreseeable Projects in Imperial Valley (Source: Imperial Valley Solar Project FEIS)			
41	<p>Las Aldeas Specific Plan</p>	<p>The Las Aldeas Specific Plan project is a mixed-use project of 2,156 single-family residential units, 84 multifamily residential units, 467 4-plex residential units, 27.95 acres of commercial zoning, 10.79 acres of light manufacturing zoning, 21.78 acres of park, 48.18 acres of retention basin, and 23.09 acres for two school sites.</p>	<p>North of Adams Avenue, east of Austin Road and west of La Brucheri Road</p> <p>City of El Centro working on staff report and condition of approval.</p>
42	<p>Linda Vista</p>	<p>The Linda Vista project is a mixed-use project consisting of 182 single-family homes and a 6-acre commercial lot.</p>	<p>West side of Clark Road and I-8 and McCabe Road</p> <p>Still in permitting process</p>
43	<p>Desert Village #6</p>	<p>The Desert Village Project #6 consists of 95 single-family homes, 260 apartments, and 7.3 acres of commercial.</p>	<p>West of Clark Road between I-8 and Home Road</p> <p>Approved-granted extension of 2 years for filing final map of subdivision (Aug. 2008)</p>
44	<p>Commons</p>	<p>The Commons is a regional shopping center of 780,000 square feet.</p>	<p>East side of Dogwood Avenue between I-8 and Danenberg Drive</p> <p>Approved. Issued a building permit.</p>

Project Name		Description of Project	Size/Location	Status
45	Imperial Valley Mall	The Imperial Valley Mall consists of a regional shopping center of 1,460,000 square feet and 306 single-family houses.	Southeast corner of Dogwood Road and Danenberg Road	Completed
46	Miller Burson	The Miller Burson project consists of a 570 single-family residential project.	South of Ross Road and east of Austin Road	Responses to Draft EIR under preparation.
47	Courtyard Villas	The Courtyard Villas is a project consisting of 54 single-family homes.	Northwest of I-8 and Austin Road	EIR in Process.
48	Willow Bend (East) & Willow Bend (West)	The Willow Bend (East) and Willow Bend (West) is a combined project of 216 single-family homes.	Northeast corner of Clark Road and McCabe Road	On hold
49	Lotus Ranch	The Lotus Ranch project is a residential project of 616 single-family homes and a 600 student elementary school.	Southwest corner of I-8 and La Brucher Road.	On hold per applicant request (June 2008).
50	Mosaic	The Mosaic project is a residential project of 1,156 single-family units and 2.7 acres of commercial.	Located in the County of Imperial. South of SR-86 and bisected by Dogwood Ranch	EIR in Process.
51	Hallwood/Calexico Place 111 & Casino	The Calalexico Place 111 and Casino project is a mixed-use project of residential, commercial, and casino.	Southwest corner of SR-111 and Jasper Road	Approved.
52	Calexico Mega Park	The Calalexico Mega Park project is a mixed-use project of a commercial and regional shopping center.	Southeast corner of SR-111 and Jasper Road	
53	County Center II Expansion	The County Center II Expansion project is a mixed-use project 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.	Southwest corner of McCabe Road and Clark Road (8th Street in the City of El Centro)	EIR in Process.
54	Desert Springs Resort	The Desert Springs Resort project is a member's only resort community for motorsports, water sports, and recreational vehicle (RV) enthusiasts with a maximum occupancy of 210 days per year. The resort includes an estimated total of up to 411 water sports lots, 792 recreational vehicle	Northwest of the Boley Road and Westmorland Road	EIR in Process.

Project Name		Description of Project	Size/Location	Status
		lots, 22 estate lots, 150 vacation villas, and 100 garage villas for a total of up to 1,475 units. The project proposes the following: four lakes for water sport recreational uses; a navigable waterway; clubhouse with a restaurant, pool, tennis courts, and boat docks; a spa; satellite recreation facilities; marinas on the water sports lakes; an executive golf course; and passive open space.		
55	Coyote Wells (Wind Zero)	The Coyote Wells (Wind Zero) project is a mixed-use, three-phase development on approximately 944 acres. The land uses include recreation, education and training, tourism, residential, storage, and hotel/resort. Wind Zero proposes to build a 400-acre training facility for law enforcement, government, college and public near Ocotillo (south of Interstate 8 and north of SR 98) on land that it purchased in 2007. Wind Zero proposes to use the additional 600-acre site to build a 6.1-mile road course and racetrack country club.	Ocotillo/Nomirage Area	Approved
56	Granite Carroll Sand and Gravel Mine	The Granite Carroll Sand and Gravel Mine is a mining operation project.	4 miles northwest of Ocotillo	Approved.
Foreseeable Projects in Imperial Valley (Source: Imperial Valley Solar Project FEIS)				
57	Atlas Storage Facility	RV storage facility related to new water well on 5.3 acre parcel currently vacant land.	Ocotillo townsite/ Imperial Highway	Atlas Storage Centers.
58	Mixed-Use Development	65 single-family lots on over 36 acres.	Southeast corner of 8th Street (Clark Road) about 630 feet south of Horne Road	MND proposal being reviewed by applicant.
59	Mixed-Use Development	15 parcel subdivision on APN 054-280-024 and 054-280-048	1002 East Evan Hewes Highway	Approved by City of El Centro March 2008.
60	Pedestrian Fence 225 and Pedestrian Fence 70	Construct a tactical infrastructure project that plans to construct approximately 225 miles of	Along the U.S./Mexico Border	Under construction.

	Project Name	Description of Project	Size/Location	Status
		primary pedestrian fencing along the southwest border of the United States.		
61	Mixed Use–Recreation	Cross-country OHV use is permitted within the boundaries of Plaster City Open Area and Superstition Mountain Open Area, Limited Use area is allowed in Yuha which offers washes and trails. Organized and permitted OHV events occur at both Plaster City Open Area and Superstition Mountain Open Area.	Plaster City Open Area; Yuha; Superstition Mountain Open Area	The recreational use of the open areas, especially OHV use, is expected to continue and potentially grow in the foreseeable future.
62	Seeley Wastewater Treatment Plant Upgrade	The IVS project applicant would finance an upgrade to the existing facility to allow it to meet the Title 22 water quality standards.	New River Boulevard, Seeley, California Seeley County Water District	Engineering plans required, completion of project expected March 2010.
63	Cahuilla Gold Project	Consolidated Goldfields Company proposes to operate a geotechnical drilling operation (200 holes) on both tribal and private lands, west of Townsite of Salton Sea Beach.	West of Townsite of Salton Sea Beach	CUP 10-0038 Nov 2010, Initial Study impacts to biology birds during breeding season and Peninsular Bighorn Sheep (mitigated). Cultural impacts mitigated with delineation where fossils exist, cease drilling if fossils are found, avoidance of identified archeological sites, and cease of construction if human remains are found. Hydro- placement within a 100-year flood hazard (mitigated with construction buffer and SWPPP).

	Project Name	Description of Project	Size/Location	Status
				ECC scheduled / PC Scheduled.

Source: BRG Consulting, Inc. 2011

Project Effects in Combination with Past, Present and Foreseeable Future Projects

In the Impacts Analysis Chapter 4, each discipline evaluates the impacts of the Proposed Action plus the current baseline/existing condition; in this manner, past and existing cumulative effects are aggregated. However, past and present (existing) projects may continue to have effects on certain resources. In such cases, those projects and future projects within the cumulative effects boundaries are listed and evaluated for cumulative impacts. This is consistent with CEQ Guidance, which states that the magnitude and significance of the environmental consequences of the proposed action should be determined in the context of the cumulative effects of other past, present and future actions. [Considering Cumulative Effects Under the NEPA (CEQ, 1997)].

Past, present, and reasonably foreseeable projects that could contribute to the cumulative effects scenario for the Proposed Action depend on the extent of resource effects, but could include projects in the immediate area as well as other projects in Imperial County, or the greater California desert. Generally, they do not extend beyond the geographic scope of the Proposed Action's direct and indirect effects.

5.1 Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA). This expanded approach includes tables providing location, project description, and other pertinent information for past, present, and reasonably foreseeable projects considered in the cumulative impacts analyses and tables summarizing cumulative effects project-by-project for each resource topic considered. The long-term, year 2030, traffic analysis is based on estimated traffic volumes in the County at that time horizon. Table 5.0-1 provides a list of cumulative past, present, and foreseeable future projects within the area that would potentially be impacted by the Proposed Action, are considered in this EIR/EA cumulative impact chapter and have been identified within the BLM and County of Imperial jurisdiction. These projects include projects past projects not included in the baseline/existing condition because of their continuing effects, present projects, and other reasonably foreseeable future projects. The list includes projects known at the time of release of the Notice of Preparation of the Draft EIR/EA, as well as additional projects that have been proposed since the NOP date.

This page intentionally left blank.

5.1.1 Visual Resources

5.1.1.1 *Geographic Scope and Timeframe*

Table 5.1.1-1 lists the projects considered for the visual resources cumulative impact analysis. The Geographic Scope of cumulative impacts is circumscribed to within five miles and less of the Proposed Action and Alternatives. This scope is based on the flat topography of the project site and the surrounding area.

The solar energy facility site is visible only from immediately adjacent roads and KOPs 8 and 5, which are within the private lands/solar facility component of the project site. The three existing transmission lines within the BLM transmission corridor are visible from KOPs 1, 2, 3, and 4. The farthest of these sites is approximately 2.13 miles west of the proposed transmission facilities component of the Proposed Action.

The flat topography coupled with the Earth's curvature will limit visibility of the Proposed Action and its components to five miles or less.

Potential visual resources impacts would be short-term during construction activities and long-term during the operation of the Proposed Action until the end of the lease term/ROW grant, at which time the proposed project would be restored to its pre-project condition.

5.1.1.2 *Existing Conditions*

Imperial County contains a wealth of scenic visual resources, which include desert areas, sand hills, mountains, and the Salton Sea.

The Proposed Action has 3 primary components:

- 1) The Imperial Solar Energy South solar energy facility, which will be located on approximately 946.6 gross acres of private land that is currently being used for agricultural purposes. This land is in the unincorporated Mt. Signal Area of the County of Imperial. The existing condition of the land is that it is quite flat, and contains no unique topographical features or major scenic features such as trees, rock outcroppings, or historic buildings. Immediately to the west of the proposed project site for the solar energy facility are BLM lands, which are described below.
- 2) The proposed electrical transmission line is located on BLM lands, within Corridor N. The BLM land is primarily vacant and undisturbed desert land. However, it is traversed by existing utilities including a 230 KV transmission line and associated facilities. This is consistent with the BLM land's designation as Utility Corridor "N." Within the corridor are the following existing projects that impact the visual resources: The Imperial Valley Substation, Imperial Valley-Rosita Line, Intergen Line, and the Sempra Line. All three are existing 230 kV transmission lines that connect to the Imperial Valley Substation. The towers for these lines are up to 140 feet tall. The Southwest Power Link is a 500 kV transmission line that also connects to the Substation.

TABLE 5.1.1-1
List of Projects Considered for Visual Resources Cumulative Impact Analysis

Project Name		Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
Past and Present Projects				
Imperial Valley Substation		Yes	--	The Imperial Valley Substation is located within a designated utility corridor, Utility Corridor "N" of the BLM's California Desert Conservation Area Plan. The Imperial Valley Substation is surrounded by BLM lands to the south and west and agricultural lands to the north and east.
Southwest Power Link		Yes	--	The Southwest Power Link is an existing 500-kV transmission line that enters the Imperial Valley Substation from the east at the substation's southeast corner. This transmission line is located within a designated utility corridor, Utility Corridor "N" of the BLM's California Desert Conservation Area Plan.
Potential Projects				
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	The "S" Line upgrade would install approximately (+/-) 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. No significant impact to visual resources would occur because the project would upgrade (i.e., replace) equipment within the existing "S" line transmission corridor.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	Permanent visual changes to the desert landscape. Visual impacts of project grading and construction would include a highly industrial scene of assembly and installation of Suncatcher units. In addition, this project will add new sources of glare. This project's gentie line would be located within an existing transmission corridor, adjacent to the Southwest Power link transmission line, therefore the existing visual character would not be altered.

Project Name		Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	The installation of new 500 kV transmission towers would affect travelers on local roads, recreationists, and local residents. However, this project would be located within an existing transmission corridor, adjacent to the Southwest Power link transmission line. Therefore the existing visual character would not be significantly altered.
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	No significant impact to visual resources due to the following: <ol style="list-style-type: none"> 1. The project site is not located in a designated scenic vista, nor has the County of Imperial General Plan designated the project site as an important visual resource. 2. Construction of this project would alter the existing visual character of the area and its surroundings as a result of converting vacant agricultural land to a solar energy facility; however, the project site would not be visible from any designated scenic resources or scenic highways. 3. The proposed transmission line corridor will be located within a designated utility corridor; therefore, the project will not degrade the existing visual character or quality of the site. 4. The project would not create a new source of substantial light or glare.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	No significant impact to visual resources due to the following: <ol style="list-style-type: none"> 1. The project site is not located in a designated scenic vista, nor has the County of Imperial General Plan designated the project site as an important visual resource. 2. The proposed transmission line corridor will be located within a designated utility corridor; therefore, the project will not degrade the existing visual character or quality of the site.

Project Name	Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
			3. The project would not create a new source of substantial light or glare.
6	Yes	--	<p>The SDG&E proposed photovoltaic solar field is located on approximately 100 acres of federal land directly adjacent to SDG&E's Imperial Valley substation.</p> <p>Impacts are currently unknown because BLM is reviewing the project's POD.</p>
7	No	Potential impacts to visual resources are unknown at the time of this evaluation.	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.
8	Yes	--	The Centinela project proposes approximately 5 miles of new 230-kV lines, which would follow the existing 230-kV lines from the international border going north alignment. As such, no significant impact to visual resources would occur because the project would follow existing 230-kV lines.
9	No	The project site is not located within the 5 mile geographic scope analyzed for visual resource impacts.	
10	Yes	--	The Dixieland project would involve the placement of new transmission line poles and installation of transmission lines in an area primarily consisting of open desert and fallow agricultural land. While scenic views are currently available from I-8, these views are affected by intrusions of existing transmission towers

Project Name	Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
			<p>and by desert lands disturbed by now-fallow agricultural plots and by off-highway vehicle use. As such, much of the natural character and scenic quality of the area has been reduced and the project area does not represent an area of natural scenic beauty.</p> <p>No significant impact to scenic resources, as the nearest State Scenic Highway is located approximately 14 miles west of the project site.</p> <p>No significant impacts from lighting or glare would occur because lighting would be shielded and directed downward. In addition, construction activities would only occur during daylight hours.</p>
11	Mount Signal Solar Farm I-82LV 8ME, LLC (CACA-052325)	Yes	<p>--</p> <p>The proposed transmission line route would parallel existing 230 kV lines and share C Solar Imperial Valley Energy South project's transmission line. No significant impact to visual resources would occur because the project would follow the existing 230-kV lines.</p>
12-37	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	<p>These project sites are not located within the 5 mile geographic scope analyzed for visual resource impacts.</p>

Project Name		Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
38	IV Substation (TermoElectrica US, LLC, aka Sempra)	Yes	--	The Sempra Line is an existing 230-kV transmission line which runs north and connects to the Imperial Valley Substation. The Sempra Line is located adjacent to the Intergen and Imperial Valley-Rosita Lines. This transmission line is located within a designated utility corridor, Utility Corridor "N" of the BLM's California Desert Conservation Area Plan. Because this is an existing transmission line, no additional visual resources impacts would occur.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	The Intergen Line is an existing 230-kV transmission line which runs north from the International Border and connects to the Imperial Valley Substation. The Intergen Line is located in between the Intergen and Sempra Lines. This transmission line is located within a designated utility corridor, Utility Corridor "N" of the BLM's California Desert Conservation Area Plan. Because this is an existing transmission line, no additional visual resources impacts would occur.
40	IV Substation (SDG&E)	Yes	--	The Imperial Valley-Rosita Line is an existing 230-kV transmission line which runs north from the International Border and connects to the Imperial Valley Substation. The Imperial Valley-Rosita Line is located adjacent to the Intergen and Sempra Lines. This transmission line is located within a designated utility corridor, Utility Corridor "N" of the BLM's California Desert Conservation Area Plan. Because this is an existing transmission line, no additional visual resources impacts would occur.
41-53	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These project sites are not located within the 5 mile geographic scope analyzed	

Project Name	Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
		for visual resource impacts.	
54	Desert Springs Resort	Yes	<p>--</p> <p>No significant impact to visual resources because the project site is not located near any scenic vistas or scenic highways. Implementation of the proposed project would not damage or degrade any existing scenic resources. Although the proposed project would change the existing visual character of the site, the site is not located in an area where sensitive viewsheds and visual resources have been identified.</p> <p>The project would result in a minor increase in the cumulative light or glare of the area; however, standard County regulations require the shielding of lights to reduce potential light and glare, and new light from the project would not effect any significant visual resources in the area.</p>
55-61	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	<p>These project sites are not located within the 5 mile geographic scope analyzed for visual resource impacts.</p>
62	Seeley Wastewater Treatment Plant Upgrade	Yes	<p>--</p> <p>The construction would occur at an already existing water treatment facility and would not result in taller structures than currently occur on site. Additionally, minimal changes to the existing landscape would be expected from the upgrades. As such, no significant visual resources impact would occur.</p>

Project Name		Included in Visual Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Visual Resources CI Analysis?	Impacts to Visual Resources
63	Cahuilla Gold Project	No	The project site is not located within the 5 mile geographic scope analyzed for visual resource impacts.	

Source: BRG Consulting, Inc., 2011

- 3) The proposed access road, which would be widened by five feet of an existing dirt road. The road runs along the west side of the Westside Main Canal.

5.1.1.3 *Effects of the Proposed Action*

A. Short-term Visual Impacts

The short-term visual impacts to the proposed solar energy facility site would be in the form of general construction activities. These would include some slight grading of the solar facility site. They would also include the use of construction machinery, lighting, and a temporary increase in activity at the site. The visual impacts of these activities are expected to be minor because of the remote location of the site and because the site is not readily visible from more frequently traveled roads.

The short-term visual impacts to the proposed transmission line corridor would also be in the form of construction activity to bring the transmission poles to the corridor, install them, and string transmission lines between the poles.

The short-term visual impacts on the proposed access road would be in the form of construction activity to widen the road and increased traffic use of the road by construction crews traveling to and from the solar energy facility site.

B. Long-term Visual Impacts

Solar Energy Facility

The long-term visual impacts at the proposed solar energy facility site would be in the form of changing the visual character of the site from agricultural land to a solar energy facility. The major generation equipment that will be installed on the project site includes solar modules; a panel racking and foundation design; inverter and transformer station; an electrical collection system; and, a switchyard. The facility would also have Auxiliary Equipment, which would include safety and security equipment and operations and maintenance facilities. The entire solar facility site would be enclosed by a security fence, significantly limiting views onto the site, and screening most of the proposed equipment at the site. Taller structures, such as the Operations and Maintenance building and transmission towers would be visible. See EIR/EA Section 4.1 for a detailed discussion of the Proposed Action potential visual impacts.

Transmission Line Corridor

The solar energy facility would interconnect to the utility grid at the 230 kV side of the existing Imperial Valley Substation, located on lands managed by the BLM, via the installation of transmission lines and towers. The transmission lines and towers would extend from the north side of the existing Imperial Valley Substation south approximately five miles and then east to the Imperial Solar Energy south site. The transmission line support structures would consist of steel lattice towers from the project site to just south of the Imperial Valley Substation where steel A-frame structures would be used for each transmission line to allow the crossing of the Southwest Power Link (Figure 2-16). The steel lattice towers would be spaced approximately 900 to 1,150 feet apart and would be roughly in line with the existing line's towers in an east-

west direction. Three types of towers would be used, suspension (Figures 2-19 and 2-20), deflection (Figures 2-21 and 2-22), and dead end towers (Figure 2-23).

Suspension, deflection, and dead-end towers are about 140 feet high, while both deflection and suspension monopoles are about 100 feet high.

As discussed in Section 3.1 of this EIR/EA, the proposed transmission line located on BLM lands is visible from four KOPs located along SR-98 (Figure 3.1-1). Figure 4.1-2 depicts the visual simulation of the proposed transmission lines and towers. As depicted on Figure 4.1-2, the proposed transmission line corridor would be similar to the three existing transmission facilities located within this corridor. The Proposed Action is located immediately east of the existing Sempra 230kv, Intergen 230kv, and IV-Rosita overhead and tower structures for a majority of the alignment. The facilities would veer directly east from the existing lines in order to connect to the solar facility site.

Project siting was used to minimize cumulative visual impacts by using of an area already utilized for the same purpose and staying within the designated corridor.

Overall, the proposed transmission line would be visually similar to the existing corridor and the project site is designated for such use; therefore, implementation of the Proposed Action would not substantially degrade the existing visual character or quality of the site and its surroundings in the long term.

Access Road

The Proposed Action would widen the existing road by approximately five feet. However, the road would remain a dirt road. The Proposed Action's overall visual impact and quality would not change in the long term.

5.1.1.4 Cumulative Impact Analysis

A. CEQA Impact Analysis

As discussed in EIR/EA Section 4.1, visual resources impacts under CEQA have been identified as less than significant. Development of the Proposed Action in conjunction with the cumulative projects identified in Table 5-2, considered as part of the cumulative analysis of visual resources, will gradually change the visual character of this portion of the Imperial Valley. Cumulative projects affecting visual resources are either: 1) located within an existing utility corridor (Utility Corridor "N"), replacing existing utilities, located adjacent to existing utility lines and supporting utilities, and/or located within an area that is not identified as natural scenic beauty or a designated scenic resource. Projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Cumulative projects [Imperial Solar Energy Center West, Dixieland Connection to IID Transmission System, and Desert Springs Resort] would not have a cumulative effect on a scenic vista because they are located in an area that is identified as a designated scenic resource and would not affect a scenic vista (see Table

5.1.1-1). All cumulative projects in Table 5.1.1-1 would not impact scenic resources within a state scenic highway as no designated state scenic highway is located within five miles of these cumulative projects. Existing cumulative projects Imperial Valley Substation, Imperial Valley Rosita Line, Intergen Line, Sempra Line, Southwest Power Link would not substantially degrade the character of the site or its surroundings because they are located within designated Utility Corridor “N” where similar facilities already exist; therefore, the visual character would not be qualitatively altered. Potential cumulative project “S” Line Upgrade would not substantially degrade the character of the site or its surroundings because they are located within designated Utility Corridor “S” where similar facilities already exist; therefore, the visual character would not be qualitatively altered. Similarly, all other transmission-line type projects in Table 5-2 follow designated utility corridors and/or parallel existing transmission line routes and thereby do not qualitatively alter the visual resource. Finally, all projects listed in Table 5-2 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed, or the project will otherwise comply with the County lighting ordinance.

Furthermore, cumulative visual resource impacts were analyzed in the Solar Programmatic Environmental Impact Statement (see EIR PEIS page 6-98). BLM and DOE analyzed the cumulative impacts of solar development across a six-state study area and found that the introduction of solar facilities in remote rural areas would alter the landscape and produce dramatic changes in the visual character of many, but not all affected areas. Thus, their programmatic analysis concluded that solar development across the six-state study area would be a major contributor to cumulative visual impacts from foreseeable development (see EIR PEIS page 6-98). The Proposed Action would not produce “dramatic changes in the visual character” because new transmission facilities would be built next to existing transmission lines and the energy production facilities would be sited on disturbed agricultural lands, not the remote rural areas analyzed in the Draft Solar PEIS.

The Proposed Action’s contribution to the cumulative impacts is not considerable. That is because the impacts at the proposed solar energy facility project site will be located in a remote area that does not constitute a scenic vista and is not readily viewable from any frequently travelled roads or scenic highways. Also, the facility will largely be shielded by a fence. The visual character of the proposed site of the solar energy facility will change from rural, agricultural vistas to one with developed characteristics; however, these changes are not characterized as degradation because the solar field site is not designated as a scenic resource.

As for the transmission lines, those will parallel existing transmission lines and towers within designated Utility Corridor “N”, and therefore will not qualitatively change or degrade the scenic quality of the area in a substantial way. Therefore, this is not a cumulatively significant impact under CEQA.

Table 5.1.1-2 provides a comparison of the Proposed Action and Alternatives related to cumulative visual resources impacts under CEQA.

B. NEPA Impact Analysis

Development of the Proposed Action in conjunction with the cumulative projects identified in Table 5.1.1-1, considered as part of the cumulative analysis of visual resources, will gradually change the visual character of this portion of the Imperial Valley. Cumulative projects affecting visual resources are either: 1) located within an existing utility corridor (Utility Corridor “N”), replacing existing utilities, located adjacent to existing utility lines and supporting utilities, and/or located within an area that is not identified as natural scenic beauty or a designated scenic resource. Projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial’s General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Cumulative projects Imperial Solar Energy Center West, Dixieland Connection to IID Transmission System, and Desert Springs Resort would not have a cumulative effect on a scenic vista because they are located in an area that is identified as a designated scenic resource and would not affect a scenic vista (see Table 5.1.1-1). All cumulative projects in Table 5.1.1-1 would not impact scenic resources within a state scenic highway as no designated state scenic highway is located within five miles of these cumulative projects. Existing cumulative projects Imperial Valley Substation, Imperial Valley Rosita Line, Intergen Line, Sempra Line, Southwest Power Link would not substantially degrade the character of the site or its surroundings because they are located within designated Utility Corridor “N” where similar facilities already exist; therefore, the visual character would not be qualitatively altered. Potential cumulative project “S” Line Upgrade would not substantially degrade the character of the site or its surroundings because it is located within designated Utility Corridor “S” where similar facilities already exist; therefore, the visual character would not be qualitatively altered. Similarly, all other transmission-line type projects in Table 5.1.1-1 follow designated utility corridors and/or parallel existing transmission line routes and thereby do not qualitatively alter the visual resource. Finally, all projects listed in Table 5.1.1-1 would not produce a minimal amount of light and glare and all projects will be required to comply with the County lighting ordinance. However, although the amount of light and glare generated by the Proposed Action and the cumulative projects would be minimal, this minimal increase is considered a cumulative impact under NEPA.

Furthermore, cumulative visual resource impacts were analyzed in the Solar Programmatic Environmental Impact Statement (see EIR PEIS page 6-98). BLM and DOE analyzed the cumulative impacts of solar development across a six-state study area and found that the introduction of solar facilities in remote rural areas would alter the landscape and produce dramatic changes in the visual character of many, but not all affected areas. Thus, their programmatic analysis concluded that solar development across the six-state study area would be a major contributor to cumulative visual impacts from foreseeable development (see EIR PEIS page 6-98). The Proposed Action would not produce “dramatic changes in the visual character” because new transmission facilities would be built next to existing transmission lines and the energy production facilities would be sited on disturbed agricultural lands, not the remote rural areas analyzed in the Draft Solar PEIS.

The Proposed Action’s contribution to the cumulative impacts is not considerable under NEPA. That is because the impacts at the proposed solar energy facility project site will be located in a remote area that does not constitute a scenic vista and is not readily viewable from any frequently travelled roads or scenic highways. Also, the facility will largely be shielded by a fence. The visual character of the proposed site of

the solar energy facility will change from rural, agricultural vistas to one with developed characteristics; however, these changes are not characterized as degradation because the solar energy facility site is not designated as a scenic resource.

As for the transmission lines, those will parallel existing transmission lines and towers within designated Utility Corridor “N”, and therefore will not qualitatively change or degrade the scenic quality of the area in a substantial way. Therefore, this is not a cumulatively considerable impact under NEPA. Table 5.1.1-2 provides a comparison of the Proposed Action and Alternatives related to cumulative visual resources impacts under NEPA.

**TABLE 5.1.1-2
Comparison of Alternatives for Cumulative Visual Resources Impacts**

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to visual resources, will not result in a cumulative visual resources impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative visual resources impact under CEQA. The alternative transmission line would be located within the same general utility corridor as the Proposed Action.	As with the Proposed Action, this alternative would not result in a significant, cumulative visual resources impact under CEQA. The alternative transmission line would be located within the same general utility corridor as the Proposed Action.	As with the Proposed Action, this alternative would not result in a significant, cumulative visual resources impact under CEQA.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to visual resources, will not result in a cumulative visual resources impact under NEPA. However, the Proposed Action when combined with the cumulative projects would result in a cumulative impact with regards to light and glare under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative visual resources impact under NEPA. The alternative transmission line would be located within the same general utility corridor as the Proposed Action. However, similar to the Proposed Action, this alternative when combined with the cumulative projects would result in a cumulative impact with regards to light and glare under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative visual resources impact under NEPA. The alternative transmission line would be located within the same general utility corridor as the Proposed Action. However, similar to the Proposed Action, this alternative when combined with the cumulative projects would result in a cumulative impact with regards to light and glare under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative visual resources impact under NEPA.

Source: BRG Consulting, Inc., 2011

This page intentionally left blank.

5.1.2 Land Use

5.1.2.1 *Geographic Scope and Timeframe*

The geographic scope for the analysis of cumulative impacts related to land use is defined by government jurisdiction: the geographic scope of land use impacts considered cumulatively for land under the County of Imperial’s jurisdiction includes all land governed by its General Plan with regard to inconsistencies with the General Plan’s policies addressing agriculture. Otherwise, the geographic scope with regard to land under County jurisdiction includes the project site plus a one-mile buffer—this geographic scope includes reasonably anticipated potential direct and indirect effects. For land under BLM authority, the geographic scope is bounded by the outermost limits of the overlapping CDCA-designated Utility Corridor “N” and Yuha Basin Area of Critical Environmental Concern (ACEC) and Yuha Desert FTHL Management Area. The County of Imperial General Plan governs the proposed project’s land use and the impacts on the County’s land use plans and policies need to be evaluated cumulatively. Similarly, proposed project activities are governed by the BLM’s land use policies and that the Proposed Action may impact, directly or indirectly, the implementation of those plans and policies. Consequently, projects within the so-defined boundary must be considered to evaluate cumulative impacts to these BLM policies. The cumulative development scenario includes projects that extend through year (2030), which is the horizon year for the currently adopted Imperial County General Plan. Table 5.1.2-1 lists the projects considered for the land use cumulative impacts analysis.

5.1.2.2 *Existing Conditions*

The solar energy facility portion of the Proposed Action is located on undeveloped and agricultural lands, in the unincorporated Mt. Signal area of the County of Imperial. The proposed transmission line corridor would be located within BLM lands. The proposed access road traverses both BLM lands and private land, and is located on the west side of the Westside Main Canal. Land use plans and policies that are applicable to the project site include the County of Imperial General Plan, the County of Imperial Land Use Ordinance, Airport Land Use Compatibility Plan, Federal Land Management Policy Act, 1976, California Desert Conservation Area Plan, Yuha Basin Area of Critical Environmental Concern (ACEC) Management Plan, and Flat-tailed Horned Lizard Rangeland Management Strategy.

5.1.2.3 *Effects of the Proposed Action*

As discussed in EIR/EA Section 4.2, the Proposed Action would conflict with the County General Plan’s Agricultural goals and objectives, and the implementation of Mitigation Measure AR1, as identified in Section 4.9 of this EIR/EA, is required pursuant to County policy in order to reduce the impact to a level less than significant under CEQA. The proposed solar energy facility is an allowed use within the existing zoning of the site, subject to a conditional use permit. As part of the Proposed Action, a CUP application has been filed, which would allow the uses of the Proposed Action to occur within the A-2-R and A-3 zones. Although the project applicant has applied to the County for a variance to accommodate the height of the transmission towers (20 ft above the allowable 120 ft), transmission towers are allowed within the existing zoning of the site. As such, the Proposed Action is consistent with all other County land use plans for the project area.

TABLE 5.1.2-1
List of Projects Considered for Land Use Cumulative Impact Analysis

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	The "S" Line is an existing transmission line. The upgrade of the line would replace the existing poles to withstand wind and provide better reliability to IID's infrastructure. As such, no additional land use impacts would occur.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	<ol style="list-style-type: none"> 1. The Imperial Valley Solar project would impact planned uses as designated in the CDCA Plan (1980 as amended) and designated Open Routes. 2. The conversion of 6,500 acres of land would constrain the existing recreational uses on site and would result in adverse effects on recreational users of these lands.
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	<p>Construction Impacts: Within the Imperial Valley Link, the proposed project would traverse or adjoin agricultural land and open space west of El Centro. Other uses impacted along the proposed route include a national historic trail, border checkpoint, irrigation canals, military facilities, public roadways, railroad ROW, a State prison, and rural residential. Construction of the proposed project would temporarily disturb this rural area as a result of heavy construction equipment. Implementation of mitigation measures would reduce this land use impact to a level less than significant. The proposed route would cross the Fillaree Canal. To minimize potential land use and other conflicts with operation of the canals, SDG&E must coordinate with IID and obtain appropriate authorization from IID to cross the canals prior to construction of the proposed project.</p> <p>Operational Impacts: The proposed project would traverse or adjoin land used agricultural, parks and recreational/open space, public facilities, and residential purposes within the Imperial Valley</p>

Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
			<p>Link. The proposed route would not physically divide these established uses but would traverse between and border them. The transmission facilities would not constitute a physical division of an established community.</p> <p>Pending and future development projects may have been proposed or constructed by landowners on land parcels across which the route would pass. SDG&E would need to coordinate with landowners to revise the route, where feasible, to minimize land use conflicts between the transmission line and existing/planned development.</p>
<p>4 Imperial Solar Energy Center-West (CACA-51644)</p>	<p>Yes</p>	<p>--</p>	<p>No significant land use impacts due to the following:</p> <ol style="list-style-type: none"> 1. Development and operation of the Proposed Action would not divide an established community as no development exists within, or in the surrounding area of the site. 2. No significant conflict with existing land use plans, policies, and regulations (i.e., Federal Land Management Policy Act, County of Imperial General Plan, County of Imperial Land Use Ordinance, and Airport Land Use Compatibility Plan). 3. No significant conflict with any applicable habitat conservation plan or natural community conservation plan (i.e., California Desert Conservation Area Plan and Yuha Basin Area of Critical Environmental Concern Management Plan). Implementation of the Proposed Action will impact biological resources. However, implementation of the mitigation measures set forth in the EIR/EA will address potential direct and indirect impacts to biological resources located within the ACEC.
<p>5 Proposed Action-Imperial Solar Energy Center-South (CACA-51645)</p>	<p>Yes</p>	<p>--</p>	<p>No significant land use impacts due to the following:</p> <ol style="list-style-type: none"> 1. Development and operation of the Proposed Action would not divide an established community as no

Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
			<p>development exists within, or in the surrounding area of the site.</p> <ol style="list-style-type: none"> 2. No significant conflict with existing land use plans, policies, and regulations (i.e., Federal Land Management Policy Act, County of Imperial General Plan, County of Imperial Land Use Ordinance, and Airport Land Use Compatibility Plan). 3. No significant conflict with any applicable habitat conservation plan or natural community conservation plan (i.e., California Desert Conservation Area Plan and Yuha Basin Area of Critical Environmental Concern Management Plan). Implementation of the Proposed Action will impact biological resources. However, implementation of the mitigation measures set forth in the EIR/EA will address potential direct and indirect impacts to biological resources located within the ACEC.
6	Yes	--	Analysis incomplete at this time, therefore the project's consistency with land use plans is difficult to estimate. The impacts to the BLM designated utility corridor "N" have not been fully analyzed.
7	No	STP is preparing a Plan of Development. NEPA analysis has not yet commenced.	
8	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	Located on approximately 2,067 acres of privately-owned agricultural land in the western portion of the Imperial County, near the Imperial Valley Substation. The proposed transmission line corridor will follow the 230-kV lines from the international border going north alignment.

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	Yes	--	<ol style="list-style-type: none"> 1. Construction would temporarily disturb land uses at or near project components. 2. Presence of a project component would divide an established community or disrupt land uses at or near project components. 3. The project would conflict with applicable land use plans, policies, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.
10	Dixieland Connection to IID Transmission System	Yes	--	<p>No significant land use impacts due to the following:</p> <ol style="list-style-type: none"> 1. The proposed project would not be located within or along the boundary of any existing residential or community uses. As such, the project would not divide an existing community. 2. The project would not require a change in land use designations. The CDCA shows the project site to be located within an Energy Production and Utility Corridor. 3. Biological impacts within the FTHL Management Area would be reduced to a level less than significant with the implementation of mitigation measures. 4. No conflicts with an applicable NCCP/HCP.
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325))	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	Located on 1,375 acres of privately owned land located 2.5 to 7.5 miles west of Calexico in southern Imperial County. Right-of-Way is located within BLM lands.
12	Superstition Solar 1	Yes	--	The Superstition Solar 1 project could impact planned uses as designated in the CDCA Plan (1980 as amended) and designated Limited/Open Routes. In addition, the conversion

Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
			of 5,587 acres of land could constrain the existing recreational uses on site and may result in adverse effects on recreational users of these lands.
13	Bethel Solar X, Inc.	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
14	Energy Solar Source I, LLC	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
15	Energy Solar Source II, LLC	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
16	Salton Sea Solar Farm I	No	The development application was received after the NOP was published.	
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published.	
18	Calipat Solar Farm I	No	The development application was received after the NOP was published.	
19	Calipat Solar Farm II	No	The development application was received after the NOP was published.	
20	Midway Solar Farm I	No	The development application was received after the NOP was published.	
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	
22	IV Solar Company	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
23	Chocolate Mountain	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
24	Ocotillo Express	Yes	--	The Ocotillo Express Wind Development Facility could impact planned uses as designated in the CDCA Plan (1980 as amended) and designated Limited/Open Routes. In addition, the conversion of approximately 15,000 acres of land could constrain the existing recreational uses on site and may result in adverse effects on recreational users of these lands.
25	Hudson Ranch II	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
26	Black Rock Unit # 1 2 3	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
27	Ram Power/Overlay	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
28	Orni 19	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
29	Orni 21 (Wister)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
30	LADWP and OptiSolar Power Plant	No	The level of information available regarding this project was insufficient to determine the project's potential	

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
			impacts at the time this evaluation was prepared.	
31	Orni 18, LLC Geothermal Power Plant	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
32	U.S. Naval Air Facility El Centro	Yes	--	Existing, ongoing impacts are consistent with land use plans.
33	Recreation Activities	Yes	--	Ongoing impacts are consistent with land use plans.
34	Recreation Activities	Yes	--	Ongoing impacts are consistent with land use plans.
35	U.S. Gypsum Mining	Yes	--	Existing; Quarry is undergoing expansion. The project would result in an expansion and extension of existing quarrying activities on the site. As such, the project would not be incompatible with existing surrounding land uses.
36	California State Prison, Centinela	Yes	--	Existing facility, ongoing impacts are consistent with land use plans.
37	Recreation Activities	Yes	--	Ongoing impacts are consistent with land use plans.
38	IV Substation (TermoElectrica US, LLC, aka Sempra)	Yes	--	The Sempra line is an existing transmission line. As such, no additional land use impacts would occur.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	The Intergen line is an existing transmission line. As such, no additional land use impacts would occur.
40	IV Substation (SDG&E)	Yes	--	The SDG&E line is an existing transmission line. As such, no additional land use impacts would occur.

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
41	Las Aldeas Specific Plan	Yes	--	The proposed Specific Plan proposes medium-high-density residential development adjacent to an on-site span of railway tracks, which conflicts with the City's policy of developing compatibility between land uses and will potentially cause significant noise and public safety impacts. In addition, the proposed Specific Plan proposes medium-high-density residential development adjacent to the sewage treatment plant, which conflicts with the policy of developing compatibility between land uses and will potentially cause significant air quality and aesthetic impacts. With the mitigation measures identified in the FEIR, land use impacts will be reduced to a level less than significant.
42	Linda Vista	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
43	Desert Village #6	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
44	Commons	Yes	--	No significant land use impacts due to the following: 1. There are a variety of existing land uses within the adjacent properties in the vicinity of the proposed project site. The

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
				<p>project is within a sparsely settled agricultural area, adjacent to commercial development. Therefore, development of the site would not physically divide any established community.</p> <ol style="list-style-type: none"> 2. The proposed project is consistent with the City of El Centro General Plan Policies. 3. Development of the proposed project would not conflict with any habitat conservation plan or natural community conservation plan.
45	Imperial Valley Mall	Yes	--	Existing facility. No additional land use impacts would occur.
46	Miller Burson	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
47	Courtyard Villas	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
48	Willow Bend (East) & Willow Bend (West)	No	The level of information available regarding this project was insufficient to determine to project's	

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
			potential impacts at the time this evaluation was prepared.	
49	Lotus Ranch	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
50	Mosaic	Yes	--	<p>No significant land use impacts due to the following:</p> <ol style="list-style-type: none"> 1. Implementation of the proposed project would not divide an established community. 2. The proposed project is considered to be consistent with the County of Imperial General Plan. 3. The County of Imperial is not within the jurisdiction of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
51	Hallwood/Calexico Place 111 & Casino	Yes	--	<p>The project site is currently vacant and is surrounded by agriculture and industrial uses. The site is at the extreme northerly limit of the City; and therefore, the project could not divide the City. As such the proposed project would not divide an established community.</p> <p>The project has a potential to be inconsistent with the General Plan policies for water conservation and solid waste. However, implementation of mitigation measures would reduce the impact to a level less than significant.</p>

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
52	Calexico Mega Park	Yes	--	The proposed project would not divide an established community and is not located within a habitat conservation area. Furthermore, the proposed project would not conflict with any applicable plans or policies and the project would result in less than significant impacts on land use.
53	County Center II Expansion	Yes	--	No significant land use impacts due to the following: <ol style="list-style-type: none"> 1. The project site is located within an unincorporated area of the County of Imperial and is not located within an established community. 2. No significant conflict associated with the project's consistency with the County of Imperial General Plan. 3. With approval of the Change of Zone, the proposed project would be consistent with the currently General Plan land use designation of the site. 4. The County of Imperial is not within the jurisdiction of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
54	Desert Springs Resort	Yes	--	No significant land use impacts due to the following: <ol style="list-style-type: none"> 1. The project site is located within an unincorporated area of southwestern Imperial County and is predominately surrounded by agriculture and vacant lands. Therefore, the project would not divide an established community, as no development exists within, or in the surrounding area of the site. 2. With approval of the General Plant Amendment, the proposed project would be compatible and consistent with the land use designations of the Specific Plan. 3. With approval of the Change of Zone, the proposed project would be compatible and consistent with the zoning of the project site. 4. The proposed project is designed to preserve the BLM area that surrounds the site and be consistent with the California

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
				Desert Conservation Area Plan, Flat-tailed Horned Lizard Rangelwide Management Strategy, and Western Colorado Desert Routes of Travel Designations.
55	Coyote Wells (Wind Zero)	Yes	--	<p>No significant land use impacts due to the following:</p> <ol style="list-style-type: none"> 1. The proposed project would not physically divide an established community because development would occur in a predominantly vacant portion of the Ocotillo/Nomirage Community Area. 2. With the approval of a General Plan Amendment and Change of Zone, the proposed project would be consistent with existing Imperial County General Plan and Ocotillo/Nomirage Community Area Plan land use designations and Imperial County Land Use Ordinance designations. 3. The County of Imperial does not have an adopted habitat conservation plan or natural community conservation plan that is applicable to the project site. <p>The proposed project would increase the intensity of land use on the project site and would place a mixed-use development in a predominantly vacant portion of the Ocotillo/Nomirage Community Area adjacent to existing residential uses. This impact is considered potentially significant, but mitigation measures have been identified to reduce or avoid this impact.</p>
56	Granite Carroll Sand and Gravel Mine	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
57	Atlas Storage Facility	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
58	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
59	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	The level of information available regarding this project was insufficient to determine the project's potential	

	Project Name	Included in Land Use Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Land Use CI Analysis?	Impacts to Land Use
			impacts at the time this evaluation was prepared.	
61	Mixed Use – Recreation	No	The level of information available regarding this project was insufficient to determine the project’s potential impacts at the time this evaluation was prepared.	
62	Seeley Wastewater Treatment Plant Upgrade	Yes	--	The proposed upgrades would occur entirely within the boundaries of the existing plant. As such, the project would not physically divide an established community, nor conflict with any land use plans or policies. Therefore, no significant land use impacts would occur.
63	Cahuilla Gold Project	No	The level of information available regarding this project was insufficient to determine the project’s potential impacts at the time this evaluation was prepared.	

Source: BRG Consulting, Inc., 2011

The transmission towers are proposed to be located within Utility Corridor “N” and no plan amendment to the Yuha Basin Area of Critical Environmental Concern Management Plan would be required. In addition, the project applicant is applying for a right of way permit from the BLM for the proposed widening and use of the existing access road; as to the part of the access road on private land the project applicant will obtain, secured easements from property owners; however, use of this road for construction and maintenance would not prohibit or diminish the existing vehicular use of the road by others. Therefore, no land use compatibility impact with respect to these issue areas has been identified.

Potential impacts to biological resources and cultural resources are expected to occur with implementation of the Proposed Action, and as a result is inconsistent with the Yuha Basin Area of Critical Environmental Concern Management Plan. However, Mitigation Measures B1, B2, B3, B4, CR1, CR2, and CR3 as identified in Sections 4.7 and 4.12 of this EIR/EA, have been identified to address minimize direct and indirect impacts to biological and cultural resources located within the Yuha Basin Area of Critical Environmental Concern Management Plan.

5.1.2.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

As discussed in EIR/EA Section 4.2 of this EIR/EA, the Proposed Action would conflict with the County’s Agricultural goals and objectives; however, with the implementation of Mitigation Measure AR1 (Agricultural Resources), would reduce this impact to a level less than significant under CEQA. Please refer to Section 5.1.9 below for a detailed analysis of Agricultural Resources.

In addition, certain cumulative projects identified on Table 5.1.2-1 would result in a conflict with applicable land use plans, policies, or regulations. Based on the analysis provided below under Section 5.1.9, the cumulative projects identified in Table 5-21 for which acreages of impacts are available would impact approximately 10,089 acres of farmland; for other projects, quantitative information was not available and therefore was not included within this evaluation. As with the Proposed Action, cumulative projects would be required to provide mitigation for any impacts to agricultural resources. Current agricultural acreage in the County for alfalfa and Bermuda grass alone is approximately 415,365 acres. County-wide important farmland totaled 545,612 acres in 2006.

In the County, the amount of agricultural land in production in any one year varies widely. As discussed in Section 5.1.12, tens of thousands of acres of farmland is either out of production or intentionally fallowed at any given time. The cumulative impact of the projects quantified in Table 5.1.9-1 falls well within the annual variation of out-of-production/fallowed farmland.

The cumulative impact associated with agricultural conversion is approximately 1.8%; of all County-wide important farmland.

For all of these reasons, the contribution of the Proposed Action to any potentially significant loss of farmland, if any, would not be considerable, under CEQA. The incremental impact of the loss of

approximately 820 acres would be mitigated via full restoration of the solar site to comparable agricultural production post-project, purchase of an agricultural easement at a 1:1 ratio, or payment into the County's agricultural mitigation fund, which the County uses at its discretion to mitigate for farmland loss consistent with its General Plan policies. Therefore, the Proposed Action would not have a considerable contribution to a cumulatively significant land use impact under the CEQA.

The portion of the Proposed Action located 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. However, implementation of the Proposed Action would result in impacts to biological resources and cultural resources. Combined with the actions of the projects listed in Table 5.1.2-1, the Proposed Action could incrementally contribute to cumulative impacts to these resources. However, Mitigation Measures B1 (Mitigation of Impacts to Vegetation Communities), B2 (Burrowing Owl), B3 (General O&M Mitigation) and B4 (FTHL Mitigation Measures) (EIR/EA Section 4.12 Biological Resources); and, Mitigation Measures CR1 (Formal Testing and Evaluation Program), CR2 (Temporary Fencing), and CR3 (Notification of Unique Resources Encountered) (EIR/EA Section 4.7 Cultural Resources) have been identified to reduce the Proposed Action's impacts on these resources. Therefore, the Proposed Action's incremental cumulative impact would be minimal and mitigated, under CEQA. Please refer to Sections 5.2.1.7 and 5.2.1.12 for more detailed discussions on the cumulative impacts with regards to biological resources and cultural resources, respectively. As such, these impacts would be reduced to a level less than significant for purposes of CEQA. The Proposed Action is consistent with all other land use plans for the project area and no significant cumulative impacts to land use are identified under CEQA.

B. NEPA Impact Analysis

As discussed in Section 4.2 of this EIR/EA, the Proposed Action would conflict with the County's Agricultural goals and objectives; however, implementation of Mitigation Measure AR1 (Agricultural Resources), would reduce this impact. Please refer to Section 5.1.9 below for a detailed analysis of Agricultural Resources.

In addition, certain cumulative projects identified on Table 5.1.2-1 would result in a conflict with applicable land use plans, policies, or regulations. Based on the analysis provided below under Section 5.1.9, the cumulative projects identified in Table 5-21 for which acreages of impacts are available would impact approximately 10,089 acres of farmland; for other projects, quantitative information was not available and therefore was not included within this evaluation. As with the Proposed Action, cumulative projects would be required to provide mitigation for any impacts to agricultural resources. Current agricultural acreage in the County for alfalfa and Bermuda grass alone is approximately 415,365 acres. County-wide important farmland totaled 545,612 acres in 2006.

In the County, the amount of agricultural land in production in any one year varies widely. As discussed in Section 5.1.12, tens of thousands of acres of farmland is either out of production or intentionally fallowed at any given time. The cumulative impact of the projects quantified in Table 5.1.9-1 falls well within the annual variation of out-of-production/fallowed farmland.

The cumulative impact associated with agricultural conversion is approximately 1.8% of all County-wide important farmland.

For all of these reasons, the contribution of the Proposed Action to any potentially significant loss of farmland, if any, would not be considerable. The incremental impact of the loss of approximately 820 acres would be mitigated via full restoration of the solar site to comparable agricultural production post-project, purchase of an agricultural easement at a 1:1 ratio, or payment into the County's agricultural mitigation fund, which the County uses at its discretion to mitigate for farmland loss consistent with its General Plan policies. Therefore, the Proposed Action would not have a considerable contribution to a cumulative land use impact under NEPA.

As discussed above under the CEQA impact analysis, the portion of the Proposed Action located within BLM lands is located entirely within the CDCA-designated Utility Corridor "N." Implementation of the Proposed Action would result in impacts to biological resources and cultural resources. Combined with the actions of the projects listed in Table 5-4 above, the Proposed Action could incrementally contribute to cumulative impacts to these resources. However, Mitigation Measures B1 (Mitigation of Impacts to Vegetation Communities), B2 (Burrowing Owl), B3 (General O&M Mitigation) and B4 (FTHL Mitigation Measures) (EIR/EA Section 4.12 Biological Resources); and, Mitigation Measures CR1 (Formal Testing and Evaluation Program), CR2 (Temporary Fencing), and CR3 (Notification of Unique Resources Encountered) (EIR/EA Section 4.7 Cultural Resources) have been identified to reduce the Proposed Action's impacts on these resources. Therefore, the Proposed Action's incremental cumulative impact would be minimal and mitigated. Please refer to Sections 5.2.1.7 and 5.2.1.12 for more detailed discussions on the cumulative impacts with regards to biological resources and cultural resources, respectively. The Proposed Action would not otherwise result in cumulative impacts with regards to land use compatibility under NEPA.

Table 5.1.2-2 provides a comparison of the Proposed Action and Alternatives related to cumulative land use impacts.

TABLE 5.1.2-2
Comparison of Alternatives for Cumulative Land Use Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to land use, will not result in a significant cumulative land use impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative land use impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative land use impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative land use impact under CEQA.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with the applicable cumulative projects as it relates to land use, will not result in a cumulative land use impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative land use impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative land use impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative land use impact under NEPA.

Source: BRG Consulting, Inc., 2011

This page intentionally left blank.

5.1.3 Transportation/Circulation

5.1.3.1 *Geographic Scope and Timeframe*

The geographic scope of the cumulative analysis for transportation/circulation includes the roadways and intersections in the vicinity of the project site that may be directly or indirectly impacted by traffic generated by the Proposed Action, which consists of the following: Interstate 8 (I-8), Brockman Road, Drew Road, Forrester Road, McCabe Road, Pulliam Road, and State Route 98 (SR-98). Figure 3.3-1 depicts the existing roadways conditions of the roadways that were analyzed in the Traffic Impact Analysis (Appendix B of this EIR/EA).

The Traffic Impact Analysis identifies past, present, and reasonably foreseeable future projects in the vicinity of the project site that would potentially add traffic to the study area roadways and intersections, thus contributing to a cumulative impact. These projects are expected to be developed by Year 2012. In addition, for the traffic generating cumulative projects, for the forecasted Horizon Year (2030) conditions, a growth factor of 7.37 percent was added, which applied to the sum of the other cumulative traffic volumes. The cumulative projects are listed above in Section 5.1. The 2030 planning horizon was chosen because it is a common planning horizon for general planning, and forecasting growth beyond a 20-year timeframe using the growth factor methodology is speculative.

Implementation of the Proposed Action would generate approximately 680 ADT during construction and 10 to 15 ADT during operations and maintenance of the project. Table 5.1.3-2 summarizes the trip generation for the cumulative projects. Figure 5-1 depicts the cumulative project (new development) traffic volumes. The majority of the project trips would be generated during the short-term construction phase of the project. The operations of the project would generate a minimal level of ADT. As such, potential cumulative impacts of the Proposed Action are anticipated to occur within the short-term timeframe (Year 2012) and not within the long-term timeframe (Year 2030). However, an analysis of the addition of the Proposed Action with other cumulative projects within the short-term (Year 2012) and long-term (Horizon Year 2030) are provided below.

5.1.3.2 *Existing Conditions*

As discussed in Section 3.3 of this EIR/EA, the affected environment for transportation/circulation is based on the existing traffic conditions of the roadways within the vicinity of the project site: Based on analysis provided in the Traffic Impact Analysis (Appendix B of this EIR/EA) during the existing Year 2008 conditions all intersections operate at LOS C or better during both the weekday AM and PM peak hours; all roadway segments currently operate at LOS A; and, all freeway segments operate at LOS B or better. During the Year 2012 conditions, all intersections operate at LOS C or better during both the weekday AM and PM peak hours; all roadway segments operate at LOS B or better; and, all freeway segments operate at LOS B or better.

TABLE 5.1.3-1
List of Projects Considered for Traffic/Circulation Cumulative Impact Analysis

Project Name		Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
1	"S" Line Upgrade 230-kV Transmission Line Project	No	The project would replace existing poles and would not generate substantial traffic during construction or operation.	
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	The Imperial Valley Solar project would result in short-term traffic impacts on area roads during construction and damage to area roads during construction. However, these impacts would be reduced with implementation of mitigation measures as identified in the FEIS.
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow; temporarily disrupt pedestrian and/or bicycle circulation and safety; cause physical damage to roads in the project area; and, generate additional traffic on the regional and local roadways. However, implementation of mitigation measures as identified in the EIR/EIS will reduce impacts to traffic/circulation.
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	The ISEC West project would not cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; substantially increase hazards due to a design feature; result in inadequate emergency access; result in inadequate parking capacity; or, conflict with adopted policies, plans or programs supporting alternative transportation.

Project Name	Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
5	Proposed Action- Imperial Solar Energy Center-South (CACA-51645)	Yes	<p>--</p> <p>The Proposed Action would not cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; substantially increase hazards due to a design feature; result in inadequate emergency access; result in inadequate parking capacity; or, conflict with adopted policies, plans or programs supporting alternative transportation.</p> <p>However, the addition of the ISEC West’s trips to the Year 2012 plus cumulative conditions would result in a cumulatively significant impact to the following intersections:</p> <ul style="list-style-type: none"> • Dunaway Road at Project Access; • Dunaway Road at I-8 WB Ramp; • Dunaway Road at I-8 EB Ramp; and, • Forrester Road at I-8 EB Ramp.
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	Potential impacts to traffic are unknown at the time of this evaluation.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	Potential impacts to traffic are unknown at the time of this evaluation.
8	Centinela Solar Power, LLC (CACA-052092)	No	Potential impacts to traffic are unknown at the time of this evaluation.
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule	No	These projects occur outside of the geographic scope for cumulative projects for

Project Name		Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
	Wind/Energia Sierra Juarez Gen-Tie Projects		this resource issue.	
10	Dixieland Connection to IID Transmission System	Yes	--	
11-23	Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	Potential impacts to traffic are unknown at the time of this evaluation.	
24	Ocotillo Express	No	Potential impacts to traffic are unknown at the time of this evaluation.	
25-31	Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	Potential impacts to traffic are unknown at the time of this evaluation.	
32	U.S. Naval Air Facility El Centro	No	This project is an existing facility that has been included in the evaluation of existing conditions.	
33	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would	

	Project Name	Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
			result in adverse effects to traffic.	
34	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in adverse effects to traffic.	
35	U.S. Gypsum Mining	Yes	--	<p>The project will not create a change in level of service and all study intersections and roadway segments operate at a level of service above the minimum defined by the Imperial County General Plan.</p> <p>All study intersections and roadway segments operate at a level of service in the year 2025 above the minimum defined by the Imperial County General Plan and the State of California Department of Transportation Guidelines and therefore does not require mitigation measures.</p>
36	California State Prison, Centinela	No	This project is an existing facility that has been included in the evaluation of existing conditions.	
37	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in adverse effects	

	Project Name	Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
			to traffic.	
38	IV Substation (TermoElectrica US, LLC, aka Semptra)	No	The project is an existing transmission line and would not result in additional impacts to transportation/ circulation.	
39	IV Substation (Baja California Power, Inc., aka, Intergen)	No	The project is an existing transmission line and would not result in additional impacts to transportation/ circulation.	
40	IV Substation (SDG&E)	No	The project is an existing transmission line and would not result in additional impacts to transportation/ circulation.	
41-56	Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	Yes	--	<p>These projects were included in the Traffic Impact Analysis that identified cumulative projects in the vicinity of the project site that would potentially add traffic to the study area roadways and contribute to a cumulative impact.</p> <p>The addition of the Proposed Action's trips to the Year 2012 plus cumulative conditions would result in a cumulatively significant impact to the following intersections:</p> <ul style="list-style-type: none"> • Forrester Road at I-8 WB Ramp; and, • SR-98 at Clark Road
57	Atlas Storage Facility	No	The level of information available regarding this	

	Project Name	Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
			project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
58	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
59	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
61	Mixed Use – Recreation	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

Project Name		Included in Transportation/Circulation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Transportation/Circulation CI Analysis?	Impacts to Transportation/Circulation
62	Seeley Wastewater Treatment Plant Upgrade	Yes	--	Construction would result in a slight increase in traffic associated with the delivery of equipment and construction workers. As such, it is likely that the roads would remain within the level of service thresholds identified by local jurisdictions. Operation of the project is expected to result in a very minor increase in yearly traffic. This minor traffic is not expected to result in additional impacts to traffic or transportation.
63	Cahuilla Gold Project	No	Potential impacts to traffic are unknown at the time of this evaluation.	

Source: BRG Consulting, Inc., 2011

TABLE 5.1.3-2
Cumulative Project Trip Generation

Project	Average Daily Trips	AM Peak Hour	PM Peak Hour
1. Las Aldeas Specific Plan	41,553	2,860	4,227
2. Linda Vista	7,175	252	676
3. Desert Village #6	8,740	331	818
4. Commons	20,648	430	1,943
5. Imperial Valley Mall	47,300	1,095	4,440
6. Miller Burson	5,455	427	576
7. Courtyard Villas	517	40	56
8. Willow Bend (East) & West Willow Bend	2,067	162	218
9. Lotus Ranch	5,830	529	605
10. Mosaic	11,585	845	1,157
11. Hallwood/Calexico 111 Place & Casino	59,285	3,286	6,071
12. Calexico Mega Park	51,338	2,054	4,903
13. County Center II Expansion	24,069	2,581	2,242
14. Desert Springs Resort	7,275	383	714
15. Mt. Signal	632	310	301
16. Coyote Wells (Wind Zero)	538	134	134
17. Granite Carroll Sand and Gravel Mine	834	-	-
18. Imperial Valley Solar Project (Formerly SES Solar Two)	1,736	772	772
19. Imperial Solar Energy Center West	680	271	280

Source: LOS Engineering, Inc., 2010.

5.1.3.3 *Effects of the Proposed Action*

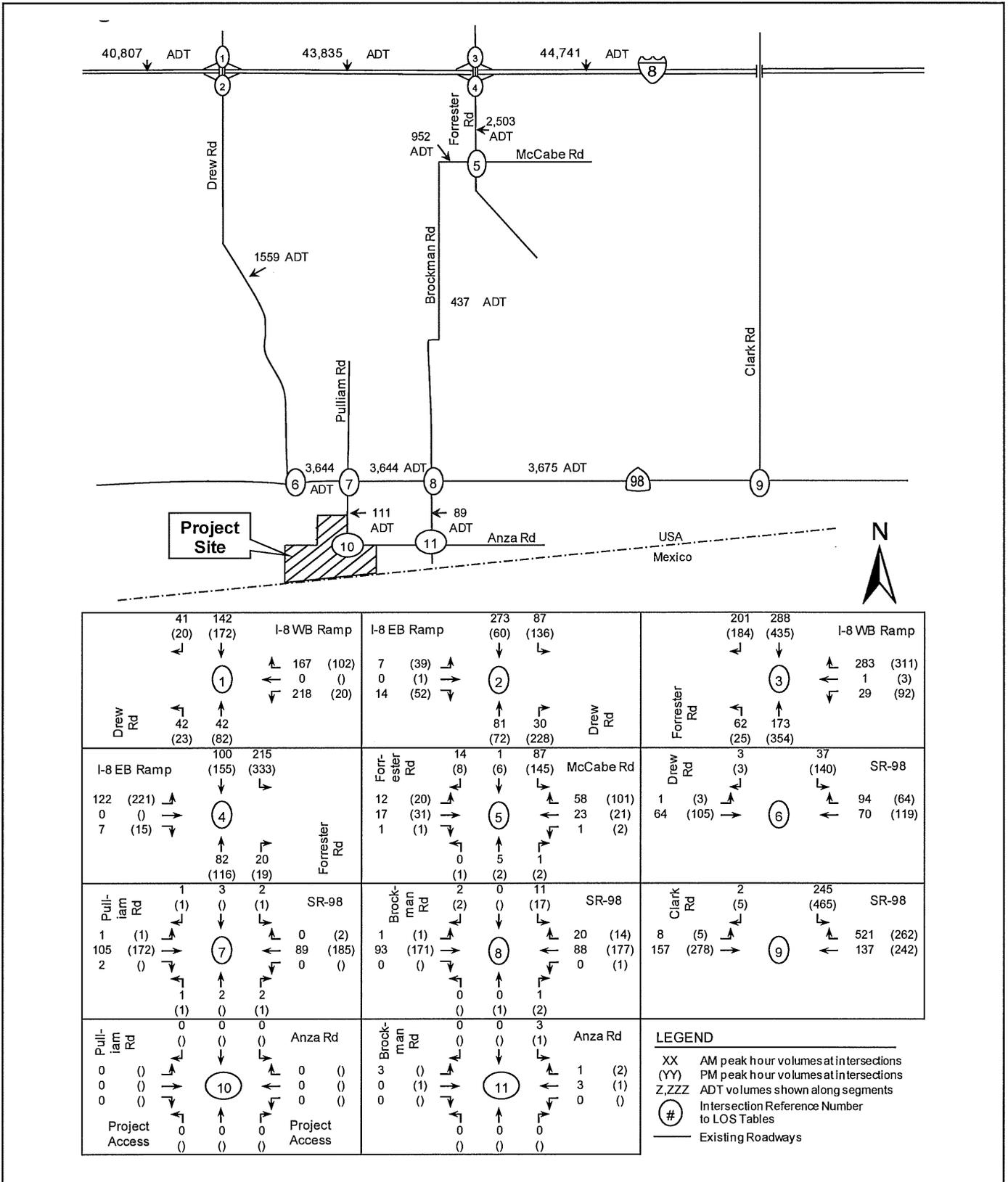
As discussed in Section 4.3 of this EIR/EA, the Proposed Action is anticipated to start construction in September 2011 and be completed by January 2013. The construction phase of the project would generate approximately 680 ADT, whereas, the operations and maintenance of the project is estimated to generate 10 to 15 ADT. As such, the higher and more conservative construction trip generation, although short-term in nature, was used to determine potential project impacts. Therefore, construction related traffic was added to the Year 2012 conditions to analyze short-term construction related impacts. As discussed in Section 4.3 of this EIR/EA, with the addition of the construction traffic onto Year 2012 conditions, no direct impacts under CEQA to intersections or roadway segments were identified.

5.1.3.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

Year 2012 plus Cumulative Conditions

This scenario accounts for the anticipated cumulative traffic added onto year 2012 conditions with Drew Road around I-8 open for travel. Year 2012 plus cumulative volumes are depicted in Figure 5-2.



SOURCE: LOS Engineering, Inc., 2010

3/1/11



Imperial Solar Energy Center South
Year 2012 + Cumulative Volumes

FIGURE
5-2

Intersection, segment, and freeway LOS are provided in Tables 5.1.3-3, 5.1.3-4, and 5.1.3-5, respectively. Under Year 2012 plus cumulative conditions, the study intersections and roadways were calculated to operate at LOS C or better, except for:

- Intersection of Forrester Road to I-8 EB Ramp (LOS F PM); and,
- Intersection of SR-98 at Clark Road (LOS F PM).

Year 2012 Plus Cumulative Plus Project Conditions

This scenario accounts for the anticipated project construction traffic added onto the Year 2012 condition with Drew Road around I-8 open for travel. Year 2012 plus project construction volumes are depicted in Figure 5-3. Intersection, segment, and freeway LOS are provided in Tables 5.1.3-6, 5.1.3-7, and 5.1.3-8, respectively.

Under Year 2012 plus cumulative plus project conditions, the study area intersections and roadways were calculated to operate at LOS C or better, except for:

- Intersection of Forrester Road to I-8 EB Ramp (LOS F, PM); and,
- Intersection of SR-98 at Clark Road (LOS F, PM).

For these two intersections, the LOS existing condition is substantially impacted.

The addition of the Proposed Action's trips to the Year 2012 plus cumulative conditions would result in a cumulatively significant impact to both of the intersections noted above. The cumulative impacts to these intersections are due in substantial part to background traffic growth from proposed surrounding new residential and commercial development. It is reasonable to expect that a majority of the proposed new development will not be built during the 2011-2013 construction period for the Proposed Action due to the economic downturn. Many projects slated for development before the downturn in 2008 in areas, including Imperial, San Bernardino, and Riverside counties have been abandoned. For this reason, it is expected that the intersections identified as potentially cumulatively impacted will continue to operate at acceptable levels of service and would not require mitigation.

However, the project applicant will implement a traffic monitoring and reporting program and coordinate with the County for information about any forward progress on the identified projects confirm that the two aforementioned intersections would operate at an acceptable LOS and beyond annually until is completed. If unacceptable LOS is documented starting in year 2012 until the project construction is complete, then the project applicant would implement its fair share of traffic mitigation measures or pay a Transportation Impact Fee that the County could use to improve traffic conditions. As such, with the implementation of Mitigation Measure CUM1, these impacts would be reduced to a less than significant level under CEQA.

Table 5.1.3-5 provides a summary of the cumulatively impacted intersections with operations before and after proposed mitigation with fair share percentages. The LOS and fair share calculations are provided in Appendix B of this EIR/EA.

TABLE 5.1.3-3
Year 2012 With Cumulative Intersection LOS

Intersection and (Analysis) (1)	Movement	Peak Hour	Year (2012) + Cumulative	
			Delay	LOS
Drew Road at I-8 WB Ramp	Minor Leg	AM PM	12.1 9.5	B A
Drew Road at I-8 WB Ramp	Minor Leg	AM PM	11.4 11.6	B B
Drew Road at I-8 EB Ramp	Minor Leg	AM PM	12.2 20.9	B C
Forrester Road at I-8 WB Ramp	Minor Leg	AM PM	22.9 268.0	C F
Forrester Road at McCabe Road	Minor Leg	AM PM	9.7 10.8	A B
SR-98 at Drew Road	Minor Leg	AM PM	9.8 11.5	A B
SR-98 at Pulliam Road	Minor Leg	AM PM	9.9 10.3	A B
SR-98 at Brockman Road	Minor Leg	AM PM	9.8 11.4	A B
SR-98 at Clark Road	Minor Leg	AM PM	24.3 178.4	C F
Pulliam Road at Anza Road	Minor Leg	AM PM	0.0 0.0	A A
Brockman Road at Anza Road	Minor Leg	AM PM	7.2 8.5	A A

Notes: (1) Intersection Control – (S) Signalized, (U) Unsignalized; (2) Delay – HCM Average Control Delay in seconds; (3) LOS = Level of Service.

Source: LOS Engineering, Inc., 2010.

TABLE 5.1.3-4
Year (2012) Without and With Cumulative Segment LOS

Segment	Classification	Year 2012				Cumulative Daily Volume	Year 2012 + Cumulative				
		Daily Volume	LOS C Capacity	V/C	LOS		Daily Volume	LOS C Capacity	V/C	LOS	Change in V/C
Drew Road I-8 to SR-98	Prime Arterial (2U)	731	7,100	0.10	A	828	1,559	7,100	0.22	A	0.117
Brockman Road McCabe Rd to SR-98 SR-98 to Anza Rd	Major Collector (2U)	287	7,100	0.04	A	150	437	7,100	0.06	A	0.021
	Not Listed (2U)	89	7,100	0.01	A	0	89	7,100	0.01	A	0.000
Forrester Road I-8 to McCabe Rd	Prime Arterial (2U)	1,394	7,100	0.20	A	1,109	2,503	7,100	0.35	B	0.156
McCabe Road Brockman Rd to Forrester Rd	Major Collector (2U)	947	7,100	0.13	A	5	952	7,100	0.13	A	0.001
Pulliam Road SR-98 to Anza Rd	Not Listed (2U)	111	7,100	0.02	A	0	111	7,100	0.02	A	0.000
SR-98 Drew Rd to Pulliam Rd Pulliam Rd to Brockman Rd Brockman Rd to Clark Rd	State Highway (2U)	1,925	7,100	0.27	B	1,719	3,644	7,100	0.51	B	0.242
	State Highway (2U)	1,925	7,100	0.27	B	1,719	3,644	7,100	0.51	B	0.242
	State Highway (2U)	1,925	7,100	0.28	B	1,719	3,675	7,100	0.52	B	0.242

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

Source: LOS Engineering, Inc., 2010.

TABLE 5.1.3-5
Year (2012) Without and With Cumulative Freeway LOS
(Drew Road Interchange Closed)

Freeway Segment	I-8 Dunaway Road to Drew Road				I-8 Drew Road to Forrester Road				I-8 Forrester Road to Imperial Avenue			
	Forecasted Year 2012											
ADT	13,000				15,000				19,100			
Peak Hour	AM		PM		AM		PM		AM		PM	
Direction	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)	0.1076	0.0963	0.0917	0.1517	0.1076	0.0963	0.0917	0.1517	0.1076	0.0963	0.0917	0.1517
D Factor (3)	0.2616	0.7384	0.4419	0.5581	0.2616	0.7384	0.4419	0.5581	0.2616	0.7384	0.4419	0.5581
Truck Factor (4)	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376
Peak Hour Volume	437	1,104	629	1,314	504	1,273	726	1,516	642	1,621	924	1,931
Volume to Capacity	0.093	0.235	0.134	0.280	0.107	0.271	0.154	0.323	0.137	0.345	0.197	0.411
LOS	A	A	A	A	A	A	A	B	A	B	A	B
Cumulative Peak Hour Volume	26	825	840	34	118	416	411	178	61	66	89	214
2012 + Cumulative												
Peak Hour Volume	463	1,929	1,469	1,348	622	1,689	1,137	1,694	703	1,687	1,13	2,145
Volume to Capacity	0.098	0.410	0.313	0.287	0.132	0.359	0.242	0.360	0.150	0.359	0.216	0.456
LOS	A	B	B	A	A	B	A	B	A	B	A	B

Notes: ADT = Average Daily Trips; LOS = Level of Service; (1) Capacity of 2,350 pcphpl from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor from Caltrans (based on 2007 report), which is the percentage of AADT in both directions. (3) Latest D factor 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).

Source: LOS Engineering, Inc., 2010.

TABLE 5.1.3-6
Year (2012) Plus Cumulative Without and
With Project Intersection LOS

Intersection and (Control) ¹	Movement	Peak Hour	Year (2012) + Cumulative		Year (2012) + Cumulative + Project			
			Delay ²	LOS ³	Delay ²	LOS ³	Delta ⁴	Impact ⁵
Drew Road at I-8 WB Ramp	Minor Leg	AM PM	12.1 9.5	B A	12.6 9.7	B A	0.5 0.2	None None
Drew Road at I-8 WB Ramp	Minor Leg	AM PM	11.4 11.6	B B	12.3 11.9	B B	0.9 0.3	None None
Drew Road at I-8 EB Ramp	Minor Leg	AM PM	12.2 20.9	B C	15.5 23.6	C C	3.3 2.7	None None
Forrester Road at I-8 WB Ramp	Minor Leg	AM PM	22.9 268.0	C F	30.8 392.7	D F	7.9 124.7	Cumulative Cumulative
Forrester Road at McCabe Road	Minor Leg	AM PM	9.7 10.8	A B	10.3 16.1	B C	0.6 5.3	None None
SR-98 at Drew Road	Minor Leg	AM PM	9.8 11.5	A B	10.3 12.2	B B	0.5 0.7	None None
SR-98 at Pulliam Road	Minor Leg	AM PM	9.9 10.3	A B	15.2 13.1	C B	5.3 2.8	None None
SR-98 at Brockman Road	Minor Leg	AM PM	9.8 11.4	A B	10.3 15.3	B C	0.5 3.9	None None
SR-98 at Clark Road	Minor Leg	AM PM	24.3 178.4	C F	29.5 281.9	D F	5.2 103.5	Cumulative Cumulative
Pulliam Road at Anza Road	Minor Leg	AM PM	0.0 0.0	A A	10.5 0.0	B A	10.5 0.0	None None
Brockman Road at Anza Road	Minor Leg	AM PM	7.2 8.5	A A	7.2 8.7	A A	0.0 0.2	None None

Notes: (1) Intersection Control – (S) Signalized, (U) Unsignalized; (2) Delay – HCM Average Control Delay in seconds; (3) LOS = Level of Service; (4) Delta is the increase in delay from project; (5) Direct Impact? (yes or no).

Source: LOS Engineering, Inc., 2010.

TABLE 5.1.3-7
Year (2012) Plus Cumulative Without and With Project Segment LOS

Segment	Classification	Year 2012 + Cumulative				Project Daily Volume	Year 2012 + Cumulative + Project				
		Daily Volume	LOS C Capacity	V/C	LOS		Daily Volume	LOS C Capacity	V/C	LOS	Impact?
Drew Road I-8 to SR-98	Prime Arterial (2U)	1,559	7,100	0.22	A	102	1,661	7,100	0.23	A	None
Brockman Road McCabe Rd to SR-98 SR-98 to Anza Rd	Major Collector (2U)	437	7,100	0.06	A	340	777	7,100	0.11	A	None
	Not Listed (2U)	89	7,100	0.01	A	34	123	7,100	0.02	A	None
Forrester Road I-8 to McCabe Rd	Prime Arterial (2U)	2,503	7,100	0.35	B	306	2,809	7,100	0.40	B	None
McCabe Road Brockman Rd to Forrester Rd	Major Collector (2U)	952	7,100	0.13	A	340	1,292	7,100	0.18	A	None
Pulliam Road SR-98 to Anza Rd	Not Listed (2U)	111	7,100	0.02	A	646	757	7,100	0.11	A	None
SR-98 Drew Rd to Pulliam Rd Pulliam Rd to Brockman Rd Brockman Rd to Clark Rd	State Highway (2U)	3,644	7,100	0.51	B	170	3,814	7,100	0.54	B	None
	State Highway (2U)	3,644	7,100	0.51	B	476	4,120	7,100	0.58	C	None
	State Highway (2U)	3,675	7,100	0.52	B	170	3,845	7,100	0.54	B	None

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

Source: LOS Engineering, Inc., 2010.

TABLE 5.1.3-8
Year (2012) Plus Cumulative Without and With Project Freeway LOS

Freeway Segment	I-8 Dunawy Road to Drew Road				I-8 Drew Road to Forrester Road				I-8 Forrester Road to Imperial Avenue			
	Forecasted Year 2012											
ADT	13,000				15,000				19,100			
Peak Hour	AM		PM		AM		PM		AM		PM	
Direction	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)	0.1076	0.0963	0.0917	0.1517	0.1076	0.0963	0.0917	0.1517	0.1076	0.0963	0.0917	0.1517
D Factor (3)	0.2616	0.7384	0.4419	0.5581	0.2616	0.7384	0.4419	0.5581	0.2616	0.7384	0.4419	0.5581
Truck Factor (4)	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376	0.8376
Peak Hour Volume	437	1,104	629	1,314	504	1,273	726	1,516	642	1,621	924	1,931
Volume to Capacity	0.093	0.235	0.134	0.280	0.107	0.271	0.154	0.323	0.137	0.345	0.197	0.411
LOS	A	A	A	A	A	A	A	B	A	B	A	B
Cumulative + Project	39	825	841	47	118	429	424	179	63	159	182	220
2012 + Cumulative + Project												
Peak Hour Volume	476	1,929	1,470	1,361	622	1,702	1,150	1,695	705	1,780	1,106	2,151
Volume to Capacity	0.101	0.410	0.313	0.290	0.132	0.362	0.245	0.361	0.150	0.379	0.235	0.458
LOS	A	B	B	A	A	B	A	B	A	B	A	B
Increase in V/C	0.003	0.000	0.000	0.003	0.000	0.003	0.003	0.000	0.000	0.020	0.020	0.001
Impact?	None	None	None	None	None	None	None	None	None	None	None	None

Notes: ADT = Average Daily Trips; LOS = Level of Service; (1) Capacity of 2,350 pc/hpl from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor from Caltrans (based on 2007 report), which is the percentage of AADT in both directions. (3) Latest D factor 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).

Source: LOS Engineering, Inc., 2010.

TABLE 5.1.3-9
Impact Summary

Cumulative Impact Location	Peak Hour	Without Mitigation			Recommended Mitigation	With Mitigation			Fair Share % Construction Traffic	Fair Share % Operations Traffic
		2010 + Cumulative + Project				2012 + Cumulative + Project				
		Delay	LOS	Impact		Delay	LOS	Impact		
4) Forrester Rd at I-8 EB Rmp	AM	30.8	D	Cumulative	Install Traffic	22.3	C	None	27.5%	0.6%
	PM	392.7	F	Cumulative	Signal	25.6	C	None		
9) SR-98 at Clark Rd	AM	29.5	D	Cumulative	Install Traffic	11.1	C	None	8.0%	0.1%
	PM	281.9	F	Cumulative	Signal	19.3	C	None		

Source: LOS Engineering, Inc., 2010.

Table 5.1.3-10 provides a comparison of the Proposed Action and Alternatives related to cumulative traffic impacts.

TABLE 5.1.3-10
Comparison of Alternatives for Cumulative Traffic Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to traffic, will result in a temporary (short-term) cumulative traffic impact during the construction phase of the proposed project only. Proposed mitigation would reduce the significant cumulative impact to a level less than significant under CEQA.	As with the Proposed Action, this alternative would result in a significant, cumulative traffic impact during the construction phase of the project only. Proposed mitigation would reduce the impact to a level less than significant under CEQA. The cumulative impact would be the same as the Proposed Action.	As with the Proposed Action, this alternative would result in a significant, cumulative traffic impact during the construction phase of the project only. Proposed mitigation would reduce the impact to a level less than significant under CEQA. The cumulative impact would be the same as the Proposed Action.	This alternative would avoid the significant cumulative impact under CEQA to traffic during construction as no solar energy facility would be constructed.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to traffic, will result in a temporary (short-term) cumulative traffic impact under NEPA during the construction phase of the proposed project only. Proposed mitigation would reduce the cumulative impact.	As with the Proposed Action, this alternative would result in a cumulative traffic impact under NEPA during the construction phase of the project only. Proposed mitigation would reduce the impact. The cumulative impact would be the same as the Proposed Action.	As with the Proposed Action, this alternative would result in a cumulative traffic impact under NEPA during the construction phase of the project only. Proposed mitigation would reduce the impact. The cumulative impact would be the same as the Proposed Action.	This alternative would avoid the cumulative impact under NEPA to traffic during construction as no solar energy facility or transmission line corridor would be constructed.

Source: BRG Consulting, Inc., 2011

CUM1 Intersections of Forrester Road at I-8 EB Ramp and SR-98 at Clark Road

A Mitigation Monitoring and Reporting Program shall be established to determine if the two intersections would operate at un-acceptable LOS starting in Year 2012 and beyond annually until the project construction is completed. If un-acceptable LOS is documented in Year 2012, then a fair share contribution or payment of applicable Transportation Impact Fee is recommended as the mitigation measure. It should be noted that the fair share participation is based on the project's construction traffic that is significantly higher than the project's traffic after completion of construction.

If un-acceptable LOS is not documented at the two cumulatively impacted intersections based on the mitigation monitoring and reporting program, then the applicant's fair share contribution (based on construction traffic) should be refunded. If the County desires some form of mitigation, then it is recommended that the fair share contribution (based on permanent operation employees) be conditioned.

Horizon Year (2030) Plus Project Conditions

Three sources were reviewed for Horizon Year 2030 volumes and the highest of the three was used to calculate segment operations under 2030 conditions. The three sources included:

- Existing plus cumulative plus project as previously calculated above.
- Existing forecasted to Year 2030 by applying a growth factor of 73.7 percent. This growth factor was calculated by compounding the previously defined annual growth rate of 2.8 percent for 20 years (from year 2010 to year 2030). The project traffic was added on top of this forecast.
- The *Imperial County Circulation and Scenic Highway Element Update* volumes to which the Horizon Year 2030 volumes were interpolated from the listed 2025 and 2050 volumes. The *Imperial County Circulation and Scenic Highway Element Update* listed volumes, and LOS lookup tables are included in Appendix B of this EIR/EA.

The Horizon Year plus project segment operations are provided in Table 5.1.3-11. Under Horizon Year 2030 plus project conditions, the study area roadway segments were calculated to operate at LOS C or better based on the study segments being built to Year 2030 roadway classifications. Therefore, no significant impact under CEQA is identified for this issue area. In summary, implementation of the Proposed Action would not result in a cumulative transportation/circulation impact for the 2030 Horizon Year.

The cumulative projects would not otherwise cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); result in inadequate emergency access; result in inadequate parking capacity; or, conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

TABLE 5.1.3-11
Horizon Year Segment LOS

Segment	Circulation and Scenic Highways Element Classification	Source 1: Existing+ Cumulative + Project	Source 2: Year 2010 at 2.8%/ys to Year 2030	Source 3: Year 2030 Daily Volume Interpolated	Year 2030 highest of the 3 noted to the left	LOS C Capacity at Year 2030 Classification	V/C	LOS
Drew Road I-8 to SR-98	Prime Arterial	1,661	1,202	Vol. Not Listed	1,661	44,600	0.04	A
Brockman Road McCabe Rd to SR-98 SR-98 to Anza Road	Mjr Collector Not Listed	777 123	472 146	Vol. Not Listed Vol. Not Listed	777 146	27,400 7,100	0.03 0.02	A A
Forrester Road I-8 to McCabe Road	Prime Arterial	2,809	2,293	Vol. Not Listed	2,809	29,600	0.09	A
McCabe Road Brockman Rd to Forrester Rd	Mjr. Collector	1,292	1,558	Vol. Not Listed	1,558	27,400	0.06	A
Pulliam Road SR-98 to Anza Rd	Not Listed	757	182	Vol. Not Listed	757	7,100	0.11	A
SR-98 Drew RD to Pulliam Rd Pulliam Rd to Brockman Rd Brockman Rd to Clark Rd	State Hwy State Hwy State Hwy	3,814 4,120 3,845	3,167 3,167 3,167	6,100 6,100 6,100	6,100 6,100 6,100	27,400 27,400 27,400	0.22 0.22 0.22	A A A

Notes: Classification based on Table 3 of Circulation and Scenic Highways Element. 4U = 4 lane undivided roadway. Daily volume is a 24-hour volume. LOS: Level of Service. V/C: Volume to Capacity ratio. Vol. = Volume.

Source: LOS Engineering, Inc., 2010.

B. NEPA Cumulative Impacts

Year 2012 plus Cumulative Conditions

As discussed above, under Year 2012 plus cumulative conditions, the study intersections and roadways were calculated to operate at LOS C or better except for the following two intersections:

- Intersection of Forrester Road to I-8 EB Ramp (LOS F PM); and,
- Intersection of SR-98 at Clark Road (LOS F PM).

Year 2012 Plus Cumulative Plus Project Conditions

As discussed above, under Year 2012 plus cumulative plus project conditions, the study area intersections and roadways were calculated to operate at LOS C or better except for the following two intersections:

- Intersection of Forrester Road to I-8 EB Ramp (LOS F, PM); and,
- Intersection of SR-98 at Clark Road (LOS F, PM).

The cumulative impacts to these intersections are due in substantial part to background traffic growth from proposed surrounding new residential and commercial development. It is reasonable to expect that a majority of the proposed new development will not be built during the 2011-2013 construction period for the Proposed Action due to the economic downturn. Many projects slated for development before the downturn in 2008 in Imperial, San Bernardino, and Riverside counties have been abandoned.

The project applicant will implement a traffic monitoring and reporting program and coordinate with the County for information about any forward progress on the identified cumulative projects to confirm that the two aforementioned intersections would operate at an acceptable LOS and beyond annually until construction of the Proposed Action is completed. If unacceptable LOS is documented during the construction phase starting in 2012 through construction completion, the project applicant will pay a fair share contribution or payment of applicable Transportation Impact Fee to the County as mitigation for the cumulative impact as identified in Mitigation Measure CUM1 detailed above. It should be noted that the fair share participation is based on the project's construction traffic that is substantially greater than the project's operational traffic. Implementation of Mitigation Measure CUM1 would ensure that the project's contribution to cumulative impacts is reduced. Table 5.1.3-9 provides a summary of the cumulatively impacted intersections with operations before and after proposed mitigation with fair share percentages. The LOS and fair share calculations are provided in Appendix B of this EIR/EA. Table 5.1.3-10 provides a comparison of the Proposed Action and Alternatives related to cumulative traffic impacts.

Horizon Year (2030) Plus Project Conditions

The Horizon Year plus project segment operations are provided in Table 5.1.3-11. As described above, under Horizon Year 2030 plus project conditions, the study area roadway segments would operate at LOS C or better based on the study segments being built to Year 2030 roadway classifications. Therefore, implementation of the Proposed Action would not result in cumulatively considerable impacts to adjacent roadways.

This page intentionally left blank.

5.1.4 Air Quality

5.1.4.1 Geographic Scope and Timeframe

Table 5.1.4-1 lists the projects considered for the air quality cumulative impact analysis. The Salton Sea Air Basin (SSAB) is used as the geographic scope for the analysis of cumulative air quality impacts due to the geographic factors which are the basis for designating the SSAB, the existence of an Air Quality Management Plan (AQMP), State Implementation Plan (SIP), and requirements set forth by the Imperial County Air Pollution Control District (ICAPCD), which apply to all cumulative projects within the SSAB. Operation of the Proposed Action would not result in a long-term air quality impact because of the limited number of staff required during operation and the minimal maintenance work required for the solar energy center. However, potential short-term impacts of the Proposed Action would result due to vehicle and dust emissions associated with construction activities.

5.4.1.2 Existing Conditions

The following is a summary of the information in Section 3.4; see that section for further details. The proposed project site is surrounded by agricultural lands to the north and east and federal lands under the jurisdiction of the BLM immediately to the west. These land uses are not developed or considered sensitive. As explained in the Noise section, the closest residence to the project site is 1,300 feet away. As such, no sensitive receptors are in, or close to, the project area.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollution standards with the exception of PM₁₀. Imperial County is classified as a non-attainment area for PM₁₀ for the National Ambient Air Quality Standards (NAAQS).

5.4.1.3 Effects of the Proposed Action

A. Construction Impacts

As discussed in EIR/EA Section 4.4, a significant air quality impact under CEQA would result if the Grading Emissions phase were to remain unmitigated at the Tier 0 (Baseline). As shown in Table 4.4-2, substantial NO_x impacts are expected due to construction grading operations. NO_x emissions of 103.5 pounds per day would exceed ICAPCD's threshold of 55 pounds per day. This is considered a significant impact under CEQA and would require mitigation using cleaner Tier 2+ equipment¹ to reduce NO_x emissions to below a level of significance. Table 4.4-3 identifies the predicted construction emissions with the Tier 2+ engine technology mitigation. With implementation of the Tier 2+ engine technology, NO_x emissions would not exceed ICAPCD's threshold of 55 pounds per day. Implementation of Mitigation Measures AQ1 and AQ2, which include use of Tier 2+ engine technology and compliance with the requirements contained within ICAPCD's Regulation VIII-Fugitive Dust Control Measures, would reduce this impact to a level less than significant under CEQA.

¹ For the purposes of mitigation, any construction equipment unable to comply with the applicable standards for a specific pollutant will be reanalyzed using the applicable Tier 2 equipment for engine sizes over 50 HP. These emission rates become mandatory for all equipment built starting 2001 or later (depending on engine size).

TABLE 5.1.4-1
List of Projects Considered for Air Quality Cumulative Impact Analysis

	Project Name	Included in Air Quality Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
1	"S" Line Upgrade 230-kV Transmission Line Project	No	The S Line upgrade replaces existing poles and lines and would not result in additional air emissions. Construction could not overlap with the Proposed Action, as at least one of the lines must be operational to maintain power supply in the area. Based on Initial Study, no significant impacts were identified to Air Quality.	N/A
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	The 6,500-acre project site consists of approximately 6,140 acres of Federal land administered by BLM, and 360 acres of private land subject to Imperial County jurisdiction. To address any project related direct, indirect, short-and long term, and cumulative impacts, mitigation measures, project design features, and other measures will be implemented to result in impacts less than significant for both construction and operations phases. Additionally, adherence to ICAPCD regulations would also reduce any aforementioned impacts to levels less than significant.
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	Would extend for 150 miles and traverse numerous government jurisdictions and land use types. Execution of the proposed project would result in significant and unavoidable impacts

	Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
				associated with construction and operations phases. Implementation of identified mitigation measures would reduce impacts, however, not to levels less than significant.
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	The solar energy facility site is located within an unincorporated area of Imperial County and is predominately surrounded by agriculture and government land uses. Construction related activities would result in short-term air quality impacts during construction, however, with the implementation of mitigation measures, significant air quality impacts would be reduced to levels less than significant.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	The solar energy facility site is currently used for agricultural purposes. The proposed transmission line corridor is located in the desert. The proposed access road is located along an existing dirt road that is currently used by the IID and others for access to the Westside Main Canal in the area. Construction related activities would result in short-term air quality impacts during construction, however, with the implementation of mitigation measures, significant air quality impacts would be reduced to levels less than significant.
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	Yes	--	Located on approximately 100 acres of Federal land directly adjacent to SDG&E's IV Substation. Additional project specific information is needed.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A

	Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
8	Centinela Solar Power, LLC (CACA-052092)	No	<ol style="list-style-type: none"> 1. The POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. 	N/A
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	This project is outside of the SSAB.	N/A
10	Dixieland Connection to IID Transmission System	Yes	--	Short-term construction related impacts would result, however implemented mitigation measures would reduce impacts to levels considered less than significant. Resultant operational impacts are anticipated to have less than significant air quality impacts and therefore, require no mitigation measures.
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
12	Superstition Solar 1	Yes	--	Additional project specific information is needed.
13	Bethel Solar X, Inc.	Yes	--	Additional project specific information is needed.

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality	
14	Energy Solar Source I, LLC	Yes	--	Additional project specific information is needed.
15	Energy Solar Source II, LLC	No	The development application was received after the NOP was published.	N/A
16	Salton Sea Solar Farm I	No	The development application was received after the NOP was published.	N/A
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published.	N/A
18	Calipat Solar Farm I	No	The development application was received after the NOP was published.	N/A
19	Calipat Solar Farm II	No	The development application was received after the NOP was published.	N/A
20	Midway Solar Farm I	No	The development application was received after the NOP was published.	N/A
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	
22	IV Solar Company	Yes	--	The IV Solar project includes measures that would reduce the project's stationary source NOx, VOC, SO2, PM10, and PM2.5 emissions through the use of Best Available Control Technology

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			(BACT), minimizing delivery and employee trips, and reducing mobile source emissions by using lower emitting gasoline- and propane-fueled new vehicles. With the inclusion of these measures and compliance with the ICAPCD measures provided later in this section, the IV Solar project would not result in adverse air quality impacts.
23	Chocolate Mountain	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
24	Ocotillo Express	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
25	Hudson Ranch II	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
		evaluation was prepared.	
26 Black Rock Unit # 1 2 3	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
27 Ram Power/Overlay	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
28 Orni 19	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
29 Orni 21 (Wister)	No	The level of information available regarding this project was	N/A

	Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
30	LADWP and OptiSolar Power Plant	No	Applicant withdrawn	N/A
31	Orni 18, LLC Geothermal Power Plant	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
32	U.S. Naval Air Facility El Centro	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
33	Recreation Activities	No	The level of information available regarding this project was insufficient to determine the project's potential	N/A

	Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			impacts at the time this evaluation was prepared.	
34	Recreation Activities	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
35	U.S. Gypsum Mining	Yes	--	The Plant site totals approximately 473 acres with 309 disturbed/developed acres prior to 1998. The Quarry consists of 2,048 acres, approximately 1,668 acres of private land, and 380 acres of unpatented placer mining claims on Federal land currently administered by BLM. Impacts associated with the project are either less than significant without mitigation or reduced to levels less than significant upon the implementation of mitigation measures.
36	California State Prison, Centinela	No	This project is an existing facility that has been included in the evaluation of existing conditions.	N/A
37	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in new	N/A

	Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			adverse effects to air quality land use.	
38	IV Substation (TermoElectrica US, LLC)	Yes	--	It is anticipated that an increase in levels of PM ₁₀ emissions would result during construction, and operations and maintenance phases. Primarily sources of PM ₁₀ emissions result from dust generated through the use of construction equipment and trips undertaken on ungraded roads along the transmission towers during the course of operations and maintenance.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	It is anticipated that an increase in levels of PM ₁₀ emissions would result during construction, and operations and maintenance phases. Primarily sources of PM ₁₀ emissions result from dust generated through the use of construction equipment and trips undertaken on ungraded roads along the transmission towers during the course of operations and maintenance.
40	IV Substation (SDG&E)	Yes	--	It was anticipated that an increase in levels of PM ₁₀ emissions would result during construction, and operations and maintenance phases. Primarily sources of PM ₁₀ emissions result from dust generated through the use of construction equipment and trips undertaken on ungraded roads along the transmission towers during the course of operations and maintenance. However implemented mitigation measures reduce impacts to levels considered less than significant.
41	Las Aldeas Specific Plan	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this	N/A

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
		evaluation was prepared.	
42 Linda Vista	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
43 Desert Village #6	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
44 Commons	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
45 Imperial Valley Mall	No	The level of information available regarding this project was	N/A

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
		insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
46 Miller Burson	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
47 Courtyard Villas	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
48 Willow Bend (East) & Willow Bend (West)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this	N/A

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			evaluation was prepared.
49	Lotus Ranch	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
50	Mosaic	Yes	-- Implementation of mitigation measures would reduce the significant air quality impact associated with the proposed project's estimated aggregate emissions; however, the air quality impact would still remain significant after mitigation. The primary source of impacts associated with project construction include an increase PM ₁₀ levels, while the primary source of emissions associated with project operations include motor vehicles.
51	Hallwood/Calexico Place 111 & Casino	Yes	-- With the exception ROG, the implementation of mitigation measures and compliance with ICAPCD would reduce construction related impact levels to less than significant. ROG levels, however, would remain significant and unmitigatable. Implementation of mitigation measures would reduce the project's operation related air quality impacts to levels less than significant and would ensure the project achieve the net emissions requirement of the ICAPD.
52	Calexico Mega Park	Yes	-- The project would conflict with applicable air quality plan and would therefore result in significant impacts even with incorporated mitigation measures.
53	County Center II Expansion	Yes	-- With the implementation of the required ICAPCD standard and discretionary construction measures, the project's construction

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			related impacts would be less than significant. And although the proposed project will generate mobile and stationary emissions (point and area), implementation of mitigation measures would reduce impacts to levels less than significant.
54	Desert Springs Resort	Yes	--
55	Coyote Wells (Wind Zero)	Yes	--
56	Granite Carroll Sand and Gravel Mine	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
57	Atlas Storage Facility	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.

	Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
58	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
59	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
61	Seeley Wastewater Treatment Plant Upgrade	No	The proposed upgrades would occur entirely within the boundaries of the existing SWWRF.	N/A
62	Mixed Use – Recreation	No	The level of information available regarding this project was insufficient to determine the	N/A

Project Name	Included in Air Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Air Quality CI Analysis?	Impacts to Air Quality
			project's potential impacts at the time this evaluation was prepared.
63	Cahuilla Gold Project	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
			N/A

Source: BRG Consulting, Inc., 2011

In addition, regardless of total construction emissions, the ICAPCD requires standard mitigation and “discretionary” measures for construction emissions, which must be followed regardless of total construction emissions. These mitigation measures are identified in Mitigation Measure AQ2 and will further minimize air quality emissions during construction. Measures to minimize air quality emissions include the replacement of fossil fueled equipment with electrically driven equivalents and keeping vehicles well maintained to prevent leaks and minimize emissions.

Construction activities are a source of fugitive dust emissions that may have a substantial, but temporary impact on local air quality. These emissions are typically associated with land clearing, excavating, and construction of a Proposed Action. Substantial dust emissions also occur when vehicles travel on paved and unpaved surfaces, and when haul trucks lose material.

For the purposes of this analysis, the working weight of earthwork material capable of generating some amount of PM₁₀ would be 260,000 tons. Thus, the average mass grading earthwork movement per day over the total 340 working days would be 764.7 tons/day. With surface wetting a minimum of three times per day during all phases of earthwork operations, a control efficiency of 34% to 68% reduction in fugitive dust can be applied per SCAQMD methodology (See Appendix C for calculations). A 34% reduction in fugitive dust would occur with minimal surface wetting. However, the project site would be fully wetted a minimum of three times per day during earthwork operations; thus, a 60% reduction in fugitive dust would be achieved. Assuming a median 60% control efficiency, due to the aforementioned watering yields, the project would generate a total fugitive dust generated load of 19.6 pounds per day. This level is well below the 150 pounds per day threshold established by the ICAPCD. Therefore, no significant impacts under CEQA are expected from construction grading earthwork particulate matter.

The Proposed Action would not expose sensitive receptors to substantial pollutant concentrations because, with mitigation, pollutant concentrations are not significant under CEQA and there are no sensitive receptors in, or close to, the project area.

Any odor generation would be intermittent and would terminate upon completion of the construction phase of the Proposed Action. In addition, the site is not surrounded by many people and therefore cannot create objectionable odors affecting a substantial number of people. As a result, there will be no significant air quality impacts under CEQA and no mitigation is required.

With implementation of the Tier 2+ engine technology, NO_x emissions would not exceed ICAPCD’s threshold of 55 pounds per day. Implementation of Mitigation Measures AQ1 and AQ2 would reduce this impact to a level less than significant under CEQA.

As discussed in Section 3.4 of this EIR/EA, Imperial Valley is classified as nonattainment for Federal and State PM₁₀ standards. Aggregate construction PM₁₀ emissions are less than 35% of the quantitative PM₁₀ threshold. As such, the Proposed Action would not result in a cumulatively considerable net increase of PM₁₀ or any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Therefore, no significant impact under CEQA is identified for this issue area.

B. Operational Impacts

Operational vehicle emissions were calculated using a vehicle trip rate of 15 vehicle trips per day. Projected air emissions for each criteria pollutant are calculated below 2.0 pounds per day and would not exceed ICAPCD significance thresholds under CEQA. Therefore, the Proposed Action would not result in a significant impact under CEQA associated with operational mobile emissions.

During the operational phase of the Proposed Action, CO₂ produced by non-generation (night time hours) consumption would be 5.82 MW-h x 0.301 MT/MW-h = 1.75 metric tons per day or 3,858 pounds per day. The operational phase of the Proposed Action would not result in a considerable increase of criteria pollutants due to the nature of the project. Because the solar generating facility will burn no fossil fuels, it will eliminate emissions of criteria pollutants that would have otherwise originated from fossil-based electricity production.

The project is consistent with future build out plans for the project site under the County's General Plan as well as with the State's definition of an "*eligible renewable energy resource*" in Section 399.12 of the California Public Utilities Code and the definition of "*in-state renewable electricity generation facility*" in Section 25741 of the California Public Resources Code. Therefore, the project will not exceed future population forecasts for future ozone attainment plans. The Proposed Action's contribution to PM₁₀ is below a level of significance and would not interfere with the State Implementation Plan for PM₁₀. Therefore, the Proposed Action will not obstruct with implementation of applicable air quality plans and, therefore, is a less than significant impact under CEQA with respect to this issue area.

No significant air quality impact under CEQA would occur from the operations phase of the Proposed Action due to the limited number of staff required (a total of four full-time employees) to travel on and offsite. The Proposed Action will require some maintenance work associated with solar panel washing and equipment repair or replacement. Solar panel washing is estimated to occur about twice per year. No heavy equipment will be used during normal project operation. Operation and maintenance vehicles will include utility vehicles, trucks, forklifts, and loaders for route maintenance. Air quality impacts as a result of construction emissions would be short-term caused by air emissions generated during construction activities (i.e., grading, clearing, hauling) and emissions generated in the form of dust associated with soil disturbance (i.e., unpaved road travel). However, implementation of Mitigation Measures AQ1 and AQ2, as identified in Section 4.4 of this EIR/EA, would reduce this impact to a level less than significant under CEQA.

C. Indirect Impacts

The Proposed Action would assist in alleviating dependence on fossil fuels and would provide an overall benefit to air quality by providing a clean, renewable energy source. Table 4.4-10 depicts the estimated criteria pollutant emission rates from fossil-based generation in the California grid mix and the amount of emissions displaced by the project annually (ISE, 2010).

5.1.4.4 Cumulative Impact Analysis

A. CEQA Impact Analysis

This analysis is concerned with criteria air pollutants. Such pollutants have impacts that are usually (though not always) cumulative by nature. Although possible, rarely would an individual project alone result in a violation of federal or state air quality standards. However, a new source of pollution may contribute to violations of air quality standards due to existing background sources or foreseeable future projects. Air districts attain the criteria pollutant standards by adopting attainment plans. Depending on the air district, these plans typically include requirements for air offsets and the use of Best Available Control Technology (BACT) for new sources of emissions, and restrictions of emissions from existing sources of air pollution. ICAPCD currently has two attainment plans: 1) Ozone Air Quality Management Plan and 2) State Implementation Plan for PM₁₀.

Like the Proposed Action, cumulative projects are anticipated to emit air pollutants generated during construction activities associated with engine combustion gases and dust generation associated with vehicle travel on unpaved roads. Although air quality impacts associated with construction emissions would be short-term, additional emissions of criteria pollutants generated from the Proposed Action along with cumulative projects would significantly impact the air quality in the SSAB (CEQA Significance Threshold/NEPA Indicator #2). However, the Proposed Action would implement Mitigation Measures AQ1 and AQ2, as identified in Section 4.4 of this EIR/EA, to reduce the level of impact to below a level of significance as federal and state air quality standards would not be exceeded. Cumulative projects are likewise required to comply with ICAPCD's Rules and Regulations to mitigate air quality impacts associated with construction emissions to below a level of significance.

The operational phase of the Proposed Action would not result in a considerable increase of criteria pollutants because operational vehicle trips are small and would generate criteria pollutants below 2.0 pounds per day, which is below the level of significance under CEQA. In addition, the criteria pollutants generated by the project's electricity demand are less than significant even when combined with vehicle trip-related criteria pollutant emissions. Therefore, the Proposed Action would not result in cumulative air quality impacts associated with operational emissions.

Furthermore, cumulative air quality impacts were analyzed in the Solar Programmatic Environmental Impact Statement (see EIR PEIS page 6-96). BLM and DOE analyzed the cumulative impacts of solar development across a six-state study area and found that air quality would be affected locally and temporarily from fugitive dust emissions during construction of solar facilities; associated particulate matter (PM) concentrations could temporarily exceed ambient air quality standards near construction areas and possibly affect visibility in pristine areas. Application of measures included in extensive dust abatement plans would substantially reduce the PM levels generated during construction. The operation of solar facilities would produce very few emissions.

A qualitative analysis of air quality impacts associated with the cumulative projects is provided in Table 5.1.4-1. Numeric data for the anticipated air quality resource impacts is not available. However, the cumulative projects will be required to comply with the applicable laws and regulations discussed in Sections 3.4.1.1 to 3.4.1.4. The cumulative projects will also incorporate air quality mitigation measures.

With mitigation, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation (Indicator #1). Therefore, the Proposed Action would not contribute to cumulative effects on air quality. Alternative energy projects would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. The cumulative projects are not identified as having the potential to expose sensitive receptors to substantial pollutant concentrations (Indicator #3) or create objectionable odors affecting a substantial number of people (Indicator #4). Furthermore, with respect to alternative energy projects, these projects would provide a positive contribution to the implementation of the applicable air quality plan (Indicator #5). The Proposed Action would not result in cumulatively significant air quality impact under the CEQA Significance Thresholds. Table 5.1.4-2 provides a comparison of the Proposed Action and Alternatives related to cumulative air quality impacts.

NEPA Impact Analysis

Like the Proposed Action, cumulative projects are anticipated to emit air pollutants generated during construction activities associated with engine combustion gases and dust generation from vehicle travel on unpaved roads. Although air quality impacts associated with construction emissions would be short-term, additional emissions of criteria pollutants generated from the Proposed Action along with cumulative projects result in considerable impacts to the air quality in the SSAB. However, the Proposed Action would implement Mitigation Measures AQ1 and AQ2, identified in Section 4.4 of this EIR/EA, to reduce project level emissions to below ICAPCD's thresholds of criteria pollutants; thus not exceeding federal and state air quality standards. Cumulative projects are likewise required to comply with ICAPCD's Rules and Regulations and implement standard measures similar to those identified in Mitigation Measures AQ1 and AQ2 in order to mitigate air quality impacts associated with construction emissions.

The operational phase of the Proposed Action would not result in a considerable increase of criteria pollutants because operational vehicle trips are small and would generate criteria pollutants below 2.0 pounds per day, which is below ICAPD's threshold. In addition, the criteria pollutants generated by the project's electricity demand are minimal in comparison to coal generating electricity, even when combined with vehicle trip-related criteria pollutant emissions. Therefore, the Proposed Action's incremental increase in criteria pollutants for operational activities would be minimal and would not contribute to a cumulatively considerable impact to the air basin.

Furthermore, cumulative air quality impacts were analyzed in the Solar Programmatic Environmental Impact Statement (see EIR PEIS page 6-96). BLM and DOE analyzed the cumulative impacts of solar development across a six-state study area and found that air quality would be affected locally and temporarily from fugitive dust emissions during construction of solar facilities; associated particulate matter (PM) concentrations could temporarily exceed ambient air quality standards near construction areas and possibly affect visibility in pristine areas. Application of measures included in extensive dust abatement plans would substantially reduce the PM levels generated during construction. The operation of solar facilities would produce very few emissions.

TABLE 5.1.4-2
Comparison of Alternatives for Cumulative Air Quality Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
CEQA Impact Analysis			
<p>Cumulative projects will create dust emissions during construction. These cumulative projects are required to comply with ICAPCD’s Rules and Regulations to mitigate air quality impacts associated with construction emissions. Therefore, the cumulative short-term air quality impact would be mitigated through compliance with ICAPCD regulations for construction emissions. No long-term cumulative air quality impact would result under CEQA.</p>	<p>As with the Proposed Action, this alternative would result in a significant, cumulative air quality impact during the construction phase of the project only. Proposed mitigation for dust control would reduce the impact to a level less than significant. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative air quality impact would result under CEQA.</p>	<p>As with the Proposed Action, this alternative would result in a significant, cumulative air quality impact during the construction phase of the project only. Proposed mitigation for dust control would reduce the impact to a level less than significant. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative air quality impact would result under CEQA.</p>	<p>This alternative would avoid the significant cumulative air quality impact during construction as no solar energy facility would be constructed. However, this alternative would not provide a regional air quality benefit as it would not provide an alternative, clean renewable energy source under CEQA.</p>
NEPA Impact Analysis			
<p>Cumulative projects will create dust emissions during construction. These cumulative projects are required to comply with ICAPCD’s Rules and Regulations to mitigate air quality impacts associated with construction emissions. Therefore, the cumulative short-term air quality impact would be mitigated through compliance with ICAPCD regulations for construction emissions. No long-term cumulative air quality impact would result under NEPA.</p>	<p>As with the Proposed Action, this alternative would result in a cumulative air quality impact under NEPA during the construction phase of the project only. Proposed mitigation for dust control would reduce the impact. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative air quality impact would result under NEPA.</p>	<p>As with the Proposed Action, this alternative would result in a cumulative air quality impact under NEPA during the construction phase of the project only. Proposed mitigation for dust control would reduce the impact. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative air quality impact would result under NEPA.</p>	<p>This alternative would avoid the cumulative air quality impact under NEPA during construction as no solar energy facility would be constructed. However, this alternative would not provide a regional air quality benefit as it would not provide an alternative, clean renewable energy source.</p>

Source: BRG Consulting, Inc.

A qualitative analysis of air quality impacts associated with the cumulative projects is provided in 5.1.4-1. Although numeric data for the anticipated air quality resource impacts is not available, the cumulative projects will be required to comply with the applicable laws and regulations discussed in Sections 3.4.1.1 to 3.4.1.4. The cumulative projects will also incorporate air quality mitigation measures. In addition, construction of the Proposed Action will be phased over a two-year period and it is unlikely that all of the cumulative projects identified in Table 5.1.4-1 would be under construction at the same time. The Proposed Action's incremental contribution to criteria pollutants within the air basin is minimal and mitigated below ICAPCD's thresholds of criteria pollutants.

Additionally, alternative energy projects would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Table 5.1.4-2 provides a comparison of the Proposed Action and Alternatives related to cumulative air quality impacts.

5.1.5 Greenhouse Gas Emissions

5.1.5.1 *Geographic Scope and Timeframe*

Table 5.1.5-1 lists the projects considered for the greenhouse gas emissions cumulative impact analysis. The EPA and CARB regulate the GHG emission levels within the United States and more locally within the State of California. GHG emission impacts are considered global effects and the Earth's atmosphere is used as the geographic scope for analysis of greenhouse gas emissions impacts. The cumulative impact of the Proposed Action on global climate change 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.

5.1.5.2 *Existing Conditions*

The solar energy facility site is currently utilized for agricultural production, specifically alfalfa crops. The current activities of the site emit a small amount of GHG emissions associated with the operation of mechanical farm equipment and vehicles.

The transmission line corridor site is currently desert land under the jurisdiction of the BLM. There are currently no man-made sources of GHGs on the transmission line corridor site. As such, there are no existing "point sources" of GHG emissions at the site.

5.1.5.3 *Effects of the Proposed Action*

A. Short-term Construction-Related GHG Impacts

The Proposed Action would contribute a total of 2,281 metric tons of CO_{2e} due to construction activities. This is below both the EPA and SCAQMD thresholds of significance. However, the project would still be required to be consistent with AB 32 and the 2008 Scoping Plan; therefore, the implementation of Mitigation Measures GHG1 and GHG2 as identified in Section 4.5 Greenhouse Gas Emissions of this EIR/EA, would result in a less than significant greenhouse gas emissions impact under CEQA.

B. Long-term Operational GHG Impacts

During the operational phase of the Proposed Action, CO₂ produced by non-generation consumption would be 5.82 MW-h x 0.301 MT/MW-h = 1.75 metric tons per day. Annually the Proposed Action would produce 688.75 metric tons per year of CO₂, which is below both the EPA threshold of 25,000 metric tons and the SCAQMD threshold of 10,000 metric tons of CO_{2e} per year. Therefore, the Proposed Action would not result in a long-term impact on global climate change.

C. Indirect Impacts

The Proposed Action would assist in alleviating dependence on fossil fuels and would provide an overall benefit to air quality by providing a clean, renewable energy source. Table 4.5-6 depicts the estimated criteria pollutant emission rates from fossil-based power generation in the California grid mix and the amount of emissions displaced by the project annually.

TABLE 5.1.5-1
List of Projects Considered for Greenhouse Gas Emissions Cumulative Impact Analysis

Project Name		Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	The use of heavy equipment will result in emission of diesel exhaust. These emissions will contain greenhouse gases, however the total yield will be relatively minor compared to regional/state or global emissions.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes		While this project would emit some GHG emissions, the contributions to the system build out of renewable resources to meet the goals of the Renewable Portfolio Standard in California would result in a net cumulative reduction of energy generation and GHG emissions from new and existing fossil-fired electricity resources. Therefore, this project would contribute to a cumulative overall reduction in GHG emissions.
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	<p>GHG emissions would occur as a result of project-related construction activities and operation, maintenance, and inspection activities. Over the life of the project, high GHG emissions during the years of construction would be followed by much lower GHG emissions during the years of activity necessary to support transmission line operation. Total construction GHG emissions exceed the GHG reductions achieved due to avoided power plant emissions over 12 years of transmission line operation. Because the amount and timing of the avoided power plant emissions is uncertain and dependent on actual development of renewable resources, the project would cause an overall net increase in GHG emissions and a significant impact would occur.</p> <p>Mitigation measures are proposed to reduce construction and operation emissions. However, the GHG impacts would remain significant because carbon credit trading markets are</p>

Project Name	Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
			not fully formed or regulated, and the relationship of credits to real GHG reductions is not enforceable. Construction impacts would remain significant because even with the mitigation measures, dust and exhaust emissions would exceed significance thresholds.
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	-- The ISEC West project would contribute a total of 2,457 metric tons of CO _{2e} due to construction activities. This is less than the NEPA threshold of 25,000 metric tons of CO _{2e} GHG emissions on an annual basis and the CEQA threshold of 10,000 metric tons of CO _{2e} per year. Nevertheless, the ISEC West project would be required to be consistent with the intent of AB 32. With the implementation of the mitigation measures identified in the EIR/EA, a less than significant GHG emissions impact under CEQA would result with the implementation of the ISEC West project. In addition, long-term project impacts on the global climate as a result of project operations GHG emission is less than significant under CEQA.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	-- The Proposed Action would contribute a total of 2,281 metric tons of CO _{2e} due to construction activities. This is less than the NEPA threshold of 25,000 metric tons of CO _{2e} GHG emissions on an annual basis and the CEQA threshold of 10,000 metric tons of CO _{2e} per year. Nevertheless, the Proposed Action would be required to be consistent with the intent of AB 32. With the implementation of the mitigation measures identified in the EIR/EA, a less than significant GHG emissions impact under CEQA would result with the implementation of the Proposed Action. In addition, long-term project impacts on the global climate as a result of project operations GHG emission is less than significant under CEQA.

Project Name		Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, the construction and/or operation of this project are expected to generate GHG emissions. As such, it is assumed that this project would involve activities that would emit GHG such as vehicular use and electricity consumption.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, the construction of this project is expected to generate GHG emissions. As such, it is assumed that this project would involve activities that would emit GHG such as vehicular use.
8	Centinela Solar Power, LLC (CACA-052092)	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, the construction and operation of this project are expected to generate GHG emissions. As such, it is assumed that this project would involve activities that would emit GHG such as vehicular use and electricity consumption.
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	Yes	--	No adverse impacts and beneficial impacts would occur as the project would assist the State in achieving its renewable energy goals.
10	Dixieland Connection to IID Transmission System	Yes	--	The temporary increase of emissions of GHG associated with construction activities will not significantly contribute incrementally to global climate change as it does not result in substantial net increases in GHGs beyond the construction phase of the project.
11-31	*See Table 5-1 for a complete list of Potential Projects Considered for the	Yes	--	GHG emissions for these projects cannot be determined due to the lack of information available. However, due to a potential increase in vehicular trips, the construction and

Project Name	Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
	Cumulative Impact Analysis		operation of these projects are expected to generate GHG emissions. As such, it is assumed that these projects would involve activities that would emit GHG such as vehicular use during construction and maintenance of these projects.
32	U.S. Naval Air Facility El Centro	Yes	--
33	Recreation Activities	Yes	--
34	Recreation Activities	Yes	--
35	U.S. Gypsum Mining	Yes	--
36	California State Prison, Centinela	Yes	--

Project Name		Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
37	Recreation Activities	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, because OHV activity is permitted in this recreation area, it is expected that such activities would generate GHG emissions.
38	IV Substation (TermoElectrica US, LLC)	Yes	--	According to the FEIS, the expected impacts to global climate change would be negligible.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	According to the FEIS, the expected impacts to global climate change would be negligible.
40	IV Substation (SDG&E)	Yes	--	GHG emissions for this existing transmission line cannot be determined due to the lack of information available. However, the operation of this existing project is expected to generate minimal GHG emissions. As such, it is assumed that this transmission line would involve activities that would emit GHG such as vehicular use during maintenance.
41-49	*See Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, it is assumed that this project would involve activities that would emit GHG such as vehicular use (due to a potential increase in vehicular trips) and electricity consumption.
50	Mosaic	Yes	--	The proposed project would contribute a total of 4,947,804 + 80,139.1/day pounds of CO _{2e} . The net contribution of the proposed project to the overall daily vehicular-generated CO _{2e} level would be 0.0031 percent. The proposed project would not generate a substantial increase of CO _{2e} emissions as compared to the net vehicular trip generation for the baseline year. Therefore, a less than significant impact associated with GHG emissions is identified for the proposed project. However, the project is required to be consistent with the requirements of AB 32, and would be required to

Project Name	Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
			demonstrate that it has policies in place that would provide a goal of 25-percent reduction in CO ₂ by 2020.
51	Hallwood/Calexico Place 111 & Casino	Yes	-- In Year 2004, California generated 541,000,000 tons of CO ₂ -equivalent GHG per year. If the Year 2004 rate continued unchanged until Year 2018, the total project would generate 0.023 percent of the statewide total. Accordingly, the project would not result in a significant impact on global climate change. However, the project is required to be consistent with the requirements of AB 32, and would be required to demonstrate that it has policies in place that would provide a goal of 25-percent reduction in CO ₂ by 2020.
52	Calexico Mega Park	Yes	-- The proposed project would result in emissions of the GHG CO ₂ as a byproduct of combustion of gasoline and diesel fuel in construction equipment and construction worker commute trips. Additional unknown quantities of greenhouse gases, such as methane, would be emitted during the life cycle of the project. In addition, the increased demand for electrical energy by the proposed project would result in an increase in CO ₂ emissions from those off-site sources of energy (indirect emissions). CO ₂ emissions from project operations would be 243,449 pounds per year. During the time the environmental document was prepared for the Calexico Mega Park, the impact was assumed to be significant and unavoidable.
53	County Center II Expansion	Yes	-- Based upon projections from URBEMIS2007, the project at build out would be expected to generate 1,808 tons per year of CO ₂ from area sources and 15,094.45 tons per year of CO ₂ for operational sources without mitigation. With the implementation of mitigation measures such as vehicular trip and onsite energy offset strategies, the project would not result in a significant impact on global climate change.

Project Name		Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
54	Desert Springs Resort	Yes	--	The total aggregate construction emissions would be 3,640,656.0 pounds of equivalent CO ₂ . The total operational GHG emissions would be 371,053.8 pounds of equivalent CO ₂ . Thus, the total emissions would be expressed as 3,640,656 + 371,053.8/day pounds of CO _{2e} . This vehicular CO _{2e} level should be put into contrast against statewide vehicular CO ₂ emissions, which have an estimated reference calendar year 2009 level of 551,310 tons per day (ISE, 2008). Under this comparison, the net contribution of the proposed project to the overall daily vehicular-generated CO _{2e} level would be 0.0269 percent. The proposed project would not generate a substantial increase of CO _{2e} emissions as compared to the net vehicular trip generation for the baseline year. Additionally, mitigation measures will be implemented, which address the reduction of GHG emissions at the project site. With implementation of the mitigation measures identified in the EIR, the impact will be less than significant.
55	Coyote Wells (Wind Zero)	Yes	--	The proposed project has the potential to result in a substantial increase in the emission of GHGs from construction activities, generation of vehicle traffic, energy use, and the use gasoline-powered landscaping equipment. During a given phase, construction activities could emit more than 1,344 tons per year of GHGs. The long-term operations of the project would produce 61,977 metric tons of CO _{2e} annually from motor vehicles that travel to and from the site. The project would result in substantial net increases in GHGs and CO _{2e} emissions. Implementation of the mitigation measures, as identified in the EIR, would help reduce GHG emissions from project construction and operations.

Project Name	Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
			Mitigation measures to reduce GHG emissions include the reduction in vehicle miles traveled and implementing energy efficient building design.
56	Granite Carroll Sand and Gravel Mine	Yes	--
57	Atlas Storage Facility	Yes	--
58	Mixed-Use Development	Yes	--
59	Mixed-Use Development	Yes	--

Project Name	Included in Greenhouse Gas Emissions Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Greenhouse Gas Emissions CI Analysis?	Greenhouse Gas Emissions Impact
			activities that would emit GHG such as vehicular use and electricity consumption.
60	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, due to a potential minimal increase in vehicular trips, the construction and operation of this project is expected to generate GHG emissions. As such, it is assumed that this project would involve activities that would emit GHG such as vehicular use.
61	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, because OHV activity is permitted in this recreation area, it is expected that such activities would generate GHG emissions.
62	Yes	--	Potential greenhouse gas emissions from the diesel generator associated with the upgrade to the SWWRF are 2.65 tonnes per year, although it is expected that the emissions from the generator with the SWWRF Project will be lower.
63	Yes	--	GHG emissions for this project cannot be determined due to the lack of information available. However, due to a potential minimal increase in vehicular trips, the construction of this project is expected to generate GHG emissions. As such, it is assumed that this project would involve activities that would emit GHG such as vehicular use and electricity consumption.

Source: BRG Consulting, Inc., 2011

5.1.5.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

By its nature, GHG emissions impacts are cumulative. As discussed in EIR/EA Section 4.5, the Proposed Action will implement Mitigation Measure AQ1 (as identified in EIR/EA Section 4.4 Air Quality) to ensure that the Proposed Action air quality impacts are less than significant. In addition, Mitigation Measures GHG1 and GHG2 (as identified in EIR/EA Section 4.5 Greenhouse Gas Emissions) will be implemented with the Proposed Action, even though they are not required to mitigate an impact but are BMPs recommended to reduce GHG emissions associated with construction activities.

Furthermore, cumulative air quality impacts were analyzed in the Solar Programmatic Draft Environmental Impact Statement (see DPEIS pages 6-97 and 6-98). Utility-scale solar energy development contributes to relatively minor GHG emissions as a result of emissions from heavy equipment, primarily used during the construction phase; vehicular emissions; and natural gas or propane combustion from backup generators. The removal of plants from within the footprint of solar facilities would reduce the amount of carbon uptake by terrestrial vegetation, but only by a small amount (about 1% of the CO₂ emissions avoided by a solar energy facility compared to fossil-fuel generation facilities [see section 5.11.4 of the PEIS]).

As addressed in the PEIS, utility-scale solar energy production over the next 20 years may result in fewer CO₂ emissions from utilities by offsetting emissions from new fossil fuel energy sources. CO₂ emission offsets related to increased solar energy production could range from a few percentage points to more than 20% in some of the study area states if future fossil energy production is offset by solar energy. Table 6.5-22 of the Solar DPEIS, provides a comparison of the CO₂ emissions of different generation technologies during facility operations. In the near-term, solar facilities would tend to offset facilities serving peak loads rather than baseline loads served by large fossil fuel plants. GHG emissions from future fossil fuel plants serving peak loads, typically natural-gas-fired plants, would nevertheless be offset. The addition of thermal energy or electrical storage to solar facilities could allow offsets of baseload fossil fuel plants in the long term.

Because GHG emissions are aggregated across the global atmosphere and cumulatively contribute to climate change, it is not possible to determine the specific impact on global climate change from GHG emissions associated with solar development over the next 20 years. It is possible to predict, however, that increased solar energy generation could cumulatively result in fewer GHG emissions if it offsets electrical generation from new fossil fuel facilities.

As explained in Section 3.5.1.2, above, AB 32, SB 1078, and Executive Order S-21-09 all call for the reduction of statewide GHG emissions or an increased reliance on renewable energy sources such as the Proposed Action. The California Legislature has recently enacted the 33 percent renewable energy portfolio standard that was originally set forth in EO S-21-09 into state law. Thus, the Proposed Action is consistent with regulations or requirements adopted to implement statewide plans for the reduction or mitigation of greenhouse gas emissions.

Therefore, the Proposed Action in combination with other closely related past, present, and reasonably foreseeable probable future projects would not result in cumulatively significant, under CEQA, impacts on global climate change. Table 5.1.5-2 provides a comparison of the Proposed Action and Alternatives related to cumulative greenhouse gas emissions impacts.

In addition, none of the project alternatives would emit enough GHG into the atmosphere to create a considerable incremental contribution to global climate change. As explained in Section 4.5.1.1.A, above, with the implementation of Mitigation Measure AQ1, as provided in Section 4.4 of this EIR/EA, the Proposed Action would contribute a total of 2,281 metric tons of CO_{2e} due to construction activities, which is well below the EPA and SCAQMD thresholds of significance (25,000 MTCO_{2e} and 10,000 MTCO_{2e}, respectively), and with implementation of GHG1 and GHG2, the Proposed Action is consistent with AB 32. Moreover, as explained in Section 4.5.1.1.B, above, the Proposed Action would produce 688.75 metric tons per year of CO₂, which is far below the SCAQMD threshold of 25,000 metric tons or more of CO_{2e} emissions on an annual basis, and it is also below the CAPCOA and CARB threshold of 900 metric tons of CO₂ per year. Therefore, the operation of the Proposed Action would not generate an incrementally considerable amount of greenhouse gas emissions. As demonstrated in Section 4.5.1.1.C, above, the same is true of the other project alternatives.

Thus, operation of the Proposed Action will not have a considerable incremental contribution to global climate change.

B. NEPA Impact Analysis

By its nature, GHG emissions impacts are cumulative. The analysis in Section 4.5.1.1 of this EIR/EA concluded that with the implementation of Mitigation Measure AQ1, the Proposed Action would contribute a total of 2,281 metric tons (MT) of CO_{2e} due to construction activities, which is well below the EPA and SCAQMD thresholds of significance (25,000 MTCO_{2e} and 10,000 MTCO_{2e}, respectively). Additionally, implementation of Mitigation Measures GHG1 and GHG2 would ensure that the Proposed Action is consistent with AB 32. The design features identified in Mitigation Measures GHG1 and GHG2 include BMPs recommended by CAPCOA to reduce GHG emissions associated with construction activities.

Furthermore, cumulative air quality impacts were analyzed in the Solar Programmatic Draft Environmental Impact Statement (see DPEIS pages 6-97 and 6-98). Utility-scale solar energy development contributes to relatively minor GHG emissions as a result of emissions from heavy equipment, primarily used during the construction phase; vehicular emissions; and natural gas or propane combustion from backup generators.

As addressed in the DPEIS, utility-scale solar energy production over the next 20 years may result in fewer CO₂ emissions from utilities by offsetting emissions from new fossil fuel energy sources. CO₂ emission offsets related to increased solar energy production could range from a few percentage points to more than 20% in some of the study area states if future fossil energy production is offset by solar energy. Table 6.5-22 of the Solar DPEIS, provides a comparison of the CO₂ emissions of different generation technologies during facility operations. In the near-term, solar facilities would tend to offset facilities serving peak loads rather than baseline loads served by large fossil fuel plants. GHG emissions from future fossil fuel plants serving

peak loads, typically natural-gas-fired plants, would nevertheless be offset. The addition of thermal energy or electrical storage to solar facilities could allow offsets of baseload fossil fuel plants in the long term.

Because GHG emissions are aggregated across the global atmosphere and cumulatively contribute to climate change, it is not possible to determine the specific impact on global climate change from GHG emissions associated with solar development over the next 20 years. It is possible to predict, however, that increased solar energy generation could cumulatively result in fewer GHG emissions if it offsets electrical generation from new fossil fuel facilities. As explained in Section 3.5.1.2, AB 32, SB 1078, and Executive Order S-21-09 all call for the reduction of statewide GHG emissions or an increased reliance on renewable energy sources such as the Proposed Action. California Legislature has recently enacted the 33 percent renewable energy portfolio standard that was originally set forth in EO S-21-09 into state law. Thus, the Proposed Action is consistent with regulations or requirements adopted to implement statewide plans for the reduction or mitigation of greenhouse gas emissions. Thus, operation of the Proposed Action will not have a considerable incremental contribution to global climate change.

Table 5.1.5-2 provides a comparison of the Proposed Action and Alternatives related to cumulative greenhouse gas emissions impacts

TABLE 5.1.5-2
Comparison of Alternatives for Cumulative
Greenhouse Gas Emissions Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
CEQA Impact Analysis			
<p>Cumulative projects will generate greenhouse gas emissions during construction. These cumulative projects are required to comply with ICAPCD’s Rules and Regulations to mitigate air quality impacts associated with construction emissions. Therefore, the cumulative short-term greenhouse gas emissions impact would be mitigated through compliance with ICAPCD regulations for construction emissions. No long-term cumulative greenhouse gas emissions impact would result under CEQA.</p>	<p>As with the Proposed Action, this alternative would result in a significant, cumulative greenhouse gas emissions impact during the construction phase of the project only. Proposed mitigation for construction vehicle emissions control would reduce the impact to a level less than significant under CEQA. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative greenhouse gas emissions impact would result under CEQA.</p>	<p>As with the Proposed Action, this alternative would result in a significant, cumulative greenhouse gas emissions impact during the construction phase of the project only. Proposed mitigation for construction vehicle emissions control would reduce the impact to a level less than significant under CEQA. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative greenhouse gas emissions impact would result under CEQA.</p>	<p>This alternative would avoid the significant cumulative GHG emissions impact during construction as no solar energy facility would be constructed. However, this alternative would not provide a regional air quality benefit by reducing greenhouse gas emissions associated with the production of electricity, as it would not provide an alternative, clean renewable energy source.</p>

TABLE 5.1.5-2
Comparison of Alternatives for Cumulative
Greenhouse Gas Emissions Impacts (cont'd.)

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
NEPA Impact Analysis			
Cumulative projects will generate greenhouse gas emissions during construction. These cumulative projects are required to comply with ICAPCD's Rules and Regulations to mitigate air quality impacts associated with construction emissions. Therefore, the cumulative short-term greenhouse gas emissions impact would be mitigated through compliance with ICAPCD regulations for construction emissions. No long-term cumulative greenhouse gas emissions impact would result under NEPA.	As with the Proposed Action, this alternative would result in a cumulative greenhouse gas emissions impact during the construction phase of the project only. Proposed mitigation for construction vehicle emissions control would reduce the impact. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative greenhouse gas emissions impact would result under NEPA.	As with the Proposed Action, this alternative would result in a cumulative greenhouse gas emissions impact during the construction phase of the project only. Proposed mitigation for construction vehicle emissions control would reduce the impact. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative greenhouse gas emissions impact would result under NEPA.	This alternative would avoid the cumulative GHG emissions impact during construction as no solar energy facility would be constructed. However, this alternative would not provide a regional air quality benefit by reducing greenhouse gas emissions associated with the production of electricity, as it would not provide an alternative, clean renewable energy source.

Source: BRG Consulting, Inc., 2011

This page intentionally left blank.

5.1.6 Geology/Soils and Mineral Resources

5.1.6.1 *Geographic Scope and Timeframe*

Table 5.1.6-1 lists the projects considered for the geology/soils and mineral resources cumulative impact analysis. The Imperial Valley portion of the Salton Trough physiographic province of Southern California is used as the geographic scope for the analysis of cumulative impacts on geology/soils and mineral resources. The scope is based on the fact that the geographic location of the Proposed Action is in the Salton Trough physiographic province, which is a distinct topographic and geologic structural depression resulting from large-scale regional faulting.

Potential impacts to geology, soils, and mineral resources would exist during the operation of the Proposed Action.

5.1.6.2 *Existing Conditions*

Imperial County is located in the Imperial Valley portion of the Salton Trough physiographic province of Southern California. This area is a seismically active region and may be subject to potential hazards that occur from seismic activities such as ground shaking, surface rupture, liquefaction, and landslides.

5.1.6.3 *Effects of the Proposed Action*

As is common in most of Southern California, the Proposed Action site is located within a seismically active region. Although there are a number of faults in Imperial County, no known active faults or potentially active faults are known to exist on, or in the immediate vicinity of the site. The Proposed Action site is likely to be subject to at least one moderate to major earthquake during the lifetime of the structures. However, the Proposed Action must comply with the most recent California Building Code (CBC) requirements. Compliance with the CBC requirements will reduce the effects of the Proposed Action on the existing conditions.

The site-specific geology impacts that have the potential to occur on the Proposed Action site include liquefaction, differential settlement, and the presence of expansive and corrosive soils. These geology impacts are considered significant. However, with the implementation of Mitigation Measure GS1, as identified and discussed in Section 4.6 of this EIR/EA, these impacts would be reduced to a level less than significant under CEQA. Mitigation Measure GS1 requires that all future grading and construction of the project site comply with the geotechnical recommendations contained in the *Geotechnical Investigation Report, Imperial Solar Energy Center South*, prepared by Landmark Consultants, Inc. (May 2010). All development on the project site shall be in accordance with Title 24, California Code of Regulations. The geotechnical report is provided on the attached CD of Technical Appendices as Appendix D of this EIR/EA.

Surface fault rupture is considered to be unlikely at the project site due to well-delineated fault lines through the Imperial Valley as shown on United States Geological Survey (USGS) and California Geological Survey maps.

TABLE 5.1.6-1

List of Projects Considered for Geology/Soils and Mineral Resources Cumulative Impact Analysis

	Project Name	Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	Project improved the existing S line resilience to effects from soils and geology conditions.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	<p>The 6,500-acre project site consists of approximately 6,140 acres of Federal land administered by BLM and 360 acres of private land subject to Imperial County jurisdiction. With the implementation of mitigation measures GEO-1 and/or GEO-2, impacts to geology/soils and mineral resources would be minimal:</p> <ol style="list-style-type: none"> 1. Ground motion and surface rupture should result in minimal impacts with the implementation of both GEO-1 and GEO-2. 2. Liquefaction – The ground water table within project site is approximately 50-feet below surface and because of its depth, the propensity for liquefaction does not exist. Additionally, measure GEO-1 addresses liquefaction at the project site. 3. Local Subsidence – The project site contains relatively dense soils resulting from alluvial deposits and would not likely result in subsidence due to foundation loading. With proper geotechnical engineering design and in accordance with the above identified mitigation measures, the potential for localized subsidence is minimal. 4. Expansive Soils – Based geotechnical investigations, it was determined that the alluvium, colluvium, and lakebed deposits underlain the project site would not be susceptible to expansive soils. Also underlain the project site is the Palm Springs Formation, sedimentary

Project Name	Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
			<p>formation composed of claystone, may be susceptible to expansive soils. An experienced inspector and the implementation of GEO-1 would minimal project impacts related to expansive soils.</p> <p>5. Mineral Resources – The project site is not located within a Mineral Resource Zone (MRZ) and therefore no economic viable mineral deposits are known to be present within the site boundary.</p>
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	<p>--</p> <p>Would extend for 150 miles and traverse numerous government jurisdictions and land use types. The project would not result in significant and unavoidable impacts to geological/soils and mineral resources. Identified impacts of the proposed project would either result in adverse but less than significant impacts and/or significant impacts mitigated to below a level of significance:</p> <ol style="list-style-type: none"> 1. Would not trigger or accelerate erosion due to construction activities; 2. With mitigation, unique geologic features would not be damaged due to construction activities; 3. With mitigation, the project would not expose people or structures to potential substantial adverse effects as a result of problematic soils; 4. With mitigation, the project would not expose people or structures to potential adverse effects as a result of ground shaking and/or ground failure; 5. With mitigation, the project would not expose people or structures to potential substantial adverse effects as a result of surface fault rupture at crossings or active faults; 6. With mitigation, the project would not expose people or structures to substantial adverse effects as a result

Project Name	Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources	
			<p>of slope instability created during excavation and/or grading; and</p> <p>7. With mitigation, the project would not expose people or structures to substantial adverse effects as a result of landslides, earthflows, debris flows, and/or rockfall.</p>	
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	<p>The solar energy facility site is located within an unincorporated area of Imperial County and is predominately surrounded by agriculture and government land uses. No significant impacts to geology/soils and minerals would result from the proposed project due to federal, state, and local regulations set up to ensure the minimization or prevention of related impacts. The implementation of mitigation measures would also reduce geology and soil related impacts to less than significant, while no impacts to minerals would result from the implementation of the proposed project.</p>
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	<p>The solar energy facility site is currently used for agricultural purposes. The proposed transmission line corridor is located in the desert. The proposed access road is located along an existing dirt road that is currently used by the IID and others for access to the Westside Main Canal in the area. No significant impacts to geology/soils and minerals would result from the proposed project due to federal, state, and local regulations set up to ensure the minimization or prevention of related impacts. The implementation of mitigation measures would also reduce geology and soil related impacts to less than significant, while impacts to minerals would result from the implementation of the proposed project.</p>
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	Yes	--	<p>The SDG&E proposed photovoltaic solar field is located on approximately 100 acres of federal land directly adjacent to SDG&E's Imperial Valley substation.</p>

Project Name	Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
			Impacts are currently unknown because BLM is reviewing the project's POD.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	STP is preparing a Plan of Development. NEPA analysis has not yet commenced. N/A
8	Centinela Solar Power, LLC (CACA-052092)	No	1. The POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. N/A
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	These projects occur outside the scope for cumulative projects for this resource issue. N/A
10	Dixieland Connection to IID Transmission System	Yes	-- Although the project alignment is located relatively close to three active fault zones, federal, state, and local regulatory requirements and industry standards must be met by evaluating risk and mitigating for any potential hazards through design and technique. Adherence to these regulations and standards would result in less than significant impacts to geology/soils. There are no mineral resources in the project vicinity that would be affected by the project. Approximately 63.50 acres of impacts are estimated for the project (30.03 permanent and 33.47 temporary).

Project Name		Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	<ol style="list-style-type: none"> 1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. 	The project would result in 1,375 acres of total impacts on privately owned land.
12-21	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These project sites are not located within the 5 mile geographic scope analyzed for geology/soils and mineral resource impacts.	N/A
22	IV Solar Company	Yes	--	Information not available.
23-30	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These project sites are not located within the 5 mile geographic scope analyzed for geology/soils and mineral resource impacts.	N/A
31	Orni 18, LLC Geothermal Power Plant	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
32	U.S. Naval Air Facility El Centro	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A

Project Name	Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
33-34	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These project sites are not located within the 5 mile geographic scope analyzed for geology/soils and mineral resource impacts.
35	U.S. Gypsum Mining	Yes	Reclaimed Quarry slopes may be subject to failures and erosion if not properly cut, developed, and stabilized. Mitigation measures have been provided to reduce the impact to less than significant. Further, the project itself is comprised of three components (Quarry, Plant, and pipeline) that are somewhat separated geographically, reducing potential cumulative effects.
36	California State Prison, Centinela	No	This project is an existing facility that has been included in the evaluation of existing conditions.
37	Recreation Activities	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
38	IV Substation (TermoElectrica US, LLC)	Yes	-- The construction of the proposed project would occur primarily on silty to sandy sediments within and adjacent to ancient Lake Cahuilla. Ancient Lake deposits combined with younger sediments could have the potential for mineral deposits. Located within a seismically active region,

Project Name	Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources	
			the proposed transmission routes would lie between the Laguna Salada, the Superstition Hills, and the Imperial Faults. The Imperial Fault, in recent history, has produced surface ruptures associated with earthquake activity.	
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	The construction of the proposed project would occur primarily on sand, silt and clay within and adjacent to ancient Lake Cahuilla. Ancient Lake deposits combined with younger sediments could have the potential for mineral deposits. Located within a seismically active region, the proposed transmission routes would lie between the Laguna Salada, the Superstition Hills, and the Imperial Faults. The Imperial Fault, in recent history, has produced surface ruptures associated with earthquake activity.
40	IV Substation (SDG&E)	Yes	--	The construction of the proposed project would occur primarily on sand, silt and clay within and adjacent to ancient Lake Cahuilla. Ancient Lake deposits combined with younger sediments could have the potential for mineral deposits.
41-53	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These project sites are not located within the 5 mile geographic scope analyzed for geology/soils and mineral resources.	N/A
54	Desert Springs Resort	Yes	--	Impacts to Geology/Soils are identified as less than significant upon the implementation of mitigation measure GS-1.
55	Coyote Wells (Wind Zero)	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A

Project Name		Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
56	Granite Carroll Sand and Gravel Mine	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
57	Atlas Storage Facility	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
58	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
59	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A

Project Name		Included in Geology/Soils and Mineral Resources Cumulative Impact (CI) Analysis	Rationale for Not Including Potential Project in the Geology/Soils and Mineral Resources CI Analysis?	Impacts to Geology/Soils and Mineral Resources
61	Mixed-Use Recreation	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
62	Seeley Wastewater Treatment Plant Upgrade	Yes	--	The construction required for the SWWRF upgrades would occur primarily on Holtville silty clay.
63	Cahuilla Gold Project	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A

Source: BRG Consulting, Inc., 2011

The landslide hazard on the project site is unlikely due to the regional planar topography and relatively flat topography of the site.

Construction activity associated with site development may result in water-driven erosion of soils. However, implementation of Mitigation Measure HWQ1 (see Section 4.11 – *Hydrology and Water Quality* - of this EIR/EA) will address the potential soil erosion impact. Mitigation Measure HWQ1 requires implementation of a Storm Water Pollution Prevention Plan (SWPPP) incorporating required Best Management Practices (BMPs) on the construction site.

The Proposed Action will require the use of a septic tank system on the solar energy facility site to treat domestic wastewater from the O&M building. The septic system will be required to comply with standard construction measures to ensure that soils are capable of adequately supporting the use of septic tanks. The transmission line corridor and proposed access road would not require the use of a septic tank or alternative wastewater disposal system, as these components of the Proposed Action would not generate wastewater.

Therefore, the use of a septic tank system is not anticipated to have a substantial effect on soils and geology in the area.

The Proposed Action is currently under agricultural production and is not utilized for mineral resource production. No known mineral resources occur within the project site and the project site does not contain mapped mineral resources (USGS, 1983). As such, the Proposed Action would not adversely affect the availability of any known mineral resources within the project site. Thus, no significant impact under CEQA has been identified for this issue area.

5.1.6.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts to geologic resources would be considered significant under CEQA if the Proposed Action would be impacted by geologic hazard(s) and if the impact could combine with offsite geologic hazards to be cumulatively considerable. None of the projects identified within the geographic scope of potential cumulative impacts will intersect or be additive to the Proposed Action's site-specific geology and soils impacts; therefore, no cumulative effects are identified for geology/soils.

With regards to Mineral Resources, no mineral resources are located on the project site. Therefore, the Proposed Action would not result in a cumulative geology/soils impact for mineral resources. Table 5.1.6-2 provides a comparison of the Proposed Action and Alternatives related to cumulative geology/soils and mineral resources impacts.

TABLE 5.1.6-2
Comparison Of Alternatives For Cumulative
Geology/Soils And Mineral Resources Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to geology/soils, and mineral resources, will not result in a cumulative impact.	As with the Proposed Action, this alternative would not result in a significant, cumulative geology/soils and mineral resources impact.	As with the Proposed Action, this alternative would not result in a significant, cumulative geology/soils and mineral resources impact.	As with the Proposed Action, this alternative would not result in a significant, cumulative geology/soils and mineral resources impact.
<i>NEPA Impact Analysis</i>			
The Proposed Action would not result in a cumulative geology/soils and mineral resources impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative geology/soils and mineral resources impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative geology/soils and mineral resources impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative geology/soils and mineral resources impact under NEPA.

Source: BRG Consulting, Inc., 2011

B. NEPA Impact Analysis

As discussed above under the CEQA Impact Analysis, geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. None of the projects identified in the geographic scope of potential cumulative impacts will intersect or be additive to the Proposed Action’s site-specific geology and soils impacts; therefore, no cumulative impacts under NEPA are identified for geology/soils.

With regards to Mineral Resources, no mineral resources are located on the project site. Therefore, the Proposed Action would not result in a cumulative geology/soils impact for mineral resources. Table 5.1.6-2 provides a comparison of the Proposed Action and Alternatives related to cumulative geology/soils and mineral resources impacts.

5.1.7 Cultural Resources

5.1.7.1 *Geographic Scope and Timeframe*

Table 5.1.7-1 lists the projects considered for the cultural resources cumulative impact analysis. With regards to establishing the proper geographic scope and timeframe, the Council on Environmental Quality (CEQ) guidance states “if the boundaries are defined too broadly, the analysis becomes unwieldy; if they are defined too narrowly significant issues may be missed, and decision-makers will be incompletely informed about the consequences of their actions” (CEQ, “Considering Cumulative Effects Under the National Environmental Policy Act”). In addition, guidance provided by the EPA states that, “For non-ecological resources, other geographic areas, such as historic districts (for cultural resources) or metropolitan areas (for economics), should be used” (EPA 315-R-99-002/May 1999). With this guidance in mind, the geographic scope for the analysis of cumulative impacts related to cultural resources within the Mount Signal area 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’ 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.

The ancient Lake Cahuilla shoreline is viewed as a primary economic attraction for regional hunter/gatherer and foragers during the Late Prehistoric Period. Whether the settlement pattern is based on small temporary camps as suggested by Weide (1976) or relatively permanent villages as argued by Wilke (1978), the cycles of infilling and drying of Lake Cahuilla appear to have been the major reason for shifts in land use patterns in southeastern California. A number of cultural resource studies have documented the importance of the Yuha Basin and the potential of cultural resources along the 40-foot contour within this region (Ritter 1975a, 1975b, 1975c, Desautels 1972, Brooks et al. 1977, Gallegos 1979, Schaefer 1981, Weide and Parker 1974). Investigations by Gallegos (1979) and Schaefer (1981) found that cultural resources sites are clustered along the 40’ contour of Lake Cahuilla and the Pinto Wash area with fewer sites in the non-shoreline and non-wash-oriented tablelands of West Mesa. According to Schaefer (1981), the most culturally sensitive zone was between the 40’ and 50’ contour. Dominant site types below-40-foot zone were small temporary camps and sherd scatters; a higher density of small lithic scatters was found above the 50-foot contour. Temporary camps containing pottery and isolated ceramics were considered scarce above 50 feet AMSL (Schaefer 1981).

In considering historic districts per the CEQ guidance as the scope of the cumulative impacts, several archaeological districts related to Lake Cahuilla have been considered based on the elevation and site type data. Two proposed districts are encompassed within the geographic scope of the cumulative analysis for cultural resources.

TABLE 5.1.7-1
List of Projects Considered for Cultural Resources Cumulative Impact Analysis

Project Name		Included in Cultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Cultural Resources CI Analysis?	Impacts to Cultural Resources
1	"S" Line Upgrade 230-kV Transmission Line Project	No	No cultural resources impacted	N/A
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	20 cultural resources will be impacted for proposed project
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	29 cultural resources will be impacted.
4	Imperial Solar Energy Center-West (CACA-51644)	No	No cultural resources impacted	N/A
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	One cultural resource will be impacted
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	STP is preparing a Plan of Development. NEPA analysis has not yet commenced.	N/A

Project Name		Included in Cultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Cultural Resources CI Analysis?	Impacts to Cultural Resources
8	Centinela Solar Power, LLC (CACA-052092)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
10	Dixieland Connection to IID Transmission System	Yes	--	10 cultural resources will be impacted.
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
12-29	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A

Project Name		Included in Cultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Cultural Resources CI Analysis?	Impacts to Cultural Resources
30	LADWP and OptiSolar Power Plant	No	Applicant Withdrawn	N/A
31	Orni 18, LLC Geothermal Power Plant	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
32	U.S. Naval Air Facility El Centro	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
33	Recreation Activities	No	Assumed designated routes have no cultural resources so no cultural resources will be impacted	N/A
34	Recreation Activities	No	Assumed designated routes have no cultural resources so no cultural resources will be impacted	N/A
35-37	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
38	IV Substation (TermoElectrica US, LLC)	Yes	--	Impacted 4 cultural resources
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	Impacted 4 cultural resources

Project Name		Included in Cultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Cultural Resources CI Analysis?	Impacts to Cultural Resources
40	IV Substation (SDG&E)	Yes	--	Impacted 3 cultural resources
41-63	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A

Source: BRG Consulting, Inc., 2011

The Lake Cahuilla High Water Mark Archaeological District is located within one-half mile of and above the 40' AMSL 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' 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 (URS 2009). 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 BP and 230 BP based on past research regarding the timing of the high water mark (Apple 1997). 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 located 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' 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 (Schaefer 1986:13). 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. Further research is needed to more narrowly define that time 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 (Zepeda-Herman et al 2010). The sites within the district below the 40' contour would also be significantly different than other sites within the Yuha Basin. For example, the sites within the Yuha Basin Discontiguous District are comprised of lithic scatters, cairns, and trails and are associated with the Paleoindian Period (URS 2009). The Yuha Basin Discontiguous District is along the 150' contour and located approximately 6 miles west-northwest of the proposed action.

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' 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." (BLM NEPA Handbook § 6.8.3.2.) 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.

5.1.7.2 Existing Conditions

As discussed in EIR/EA Section 3.7, 19 sites are located within the Proposed Action APE. There are a total of 439 cultural resources sites within 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 (Table 5.1.7-2)

TABLE 5.1.7-2
Summary of Cultural Resources with Geographic Scope

Site Type	Number
Temporary camp*	76
Ceramic and lithic scatters	61
Lithic scatters	86
Ceramic scatters	23
Trails or trail markers	10
Rock features (cairns, hearths) or sleeping circles	16
Historic period sites (canals, trash scatters)	9
Prehistoric isolates	158
TOTAL	439

Note: * Two temporary camps subsume 15 sites recorded separately. Those 15 are not counted in total.

Source: BRG Consulting, Inc., 2011

5.1.7.3 Effects of the Proposed Action

As discussed in EIR/EA Section 4.7, 19 sites are located within the Proposed Action APE. The Proposed Action would result in an adverse effect to one previously recorded site (IMP-3999) located within the APE during construction of the project. The Proposed Action was refined in response to comments from interested Native American Tribes to reduce impacts to known artifacts within the site, the MOA, and implementation of Mitigation Measure CR1 will ensure that project impacts do not rise to the level of significance under CEQA.

To fully understand the cumulative impact to cultural resources, an understanding of the Proposed Action's impacts to cultural resources is required. The Proposed Action was refined to avoid all but one site (IMP-3999). The towers and roads that impact IMP-3999 were relocated within the site to avoid known artifacts based on surveys and meetings between the BLM and interested Tribal Representatives. Transmission towers were selected instead of monopoles for their ability to span larger distances and thus reduce impacts to IMP-3999. The current mapped dimensions of the site are approximately 900 m northwest-southeast by a maximum of 150 m northeast-southwest making it impossible to span the entire site while still maintaining alignment with the existing towers within Utility Corridor N. Towers were placed at the edges of

the site to reduce impacts within the site. Towers were also placed in parallel with 3 existing sets of towers in order to utilize existing roads and create the shortest spur roads and the least new surface disturbance.

Direct impacts will occur at three locations that are partially or completely within the previously mapped limits of site IMP-3999. For purposes of this document, those locations will be referred to as, from northwest to southeast, locations A, B, and C. At each of the three locations, a temporary tower site will be used, within which a smaller permanent tower will be erected. At location A, the temporary tower site will be 140 x 140 ft.; at the other two locations, the temporary tower sites will be 80 x 60 ft. At location A, where the orientation of transmission line shifts from northwest to north-northwest, two pull sites, each 150 x 75 ft. in area, will be adjacent to the temporary tower site. The northern pull site will lie outside of the mapped archaeological site area, but the southern pull site will be within the archaeological site. At location A, the access road to the temporary tower site is about 50 ft from State Route 98. At locations B and C, short access roads will extend to the southwest beyond the temporary tower sites for approximately 100 ft. and 150 ft. to the existing access road. The Proposed Action's temporary surface disturbance represents a less than 4% impact to the site while its permanent disturbance represents a less than 0.3% surface disturbance.

- Pursuant to mitigation measure CR1, a formal testing and evaluation program is required prior to construction. A Data Recovery Plan has been prepared and circulated to consulting parties, including tribal governments, to ensure adequate recovery of information and protection of artifacts prior to construction. The key features of the Data Recovery Plan which is designed to avoid and minimize effects to the historic property are the following:
 - Mapping and Surface Recording
 - Surface Collection
 - Remote Sensing – Magnetometry
 - Shovel Test Excavations
 - Standard Unit Excavations
 - Trenching --A backhoe trench will be excavated at each of the four temporary tower sites
 - Halt construction immediately within 30 m of the location of any discovery
 - Standard Processing and Cataloging
 - Special Studies
 - o Radiocarbon Dating
 - o Thermoluminescence Dating
 - o Obsidian Hydration Analysis
 - o X-ray Fluorescence Analyses
 - o Protein Residue Analysis
 - o Fire-Affected Rock Experiments

There is a potential for indirect effects to sites adjacent to the Proposed Action APE due to increased traffic during construction. It is also possible that grading within the construction area could increase the amount of runoff during heavy rainfall events. There are nine sites that are in the vicinity of the direct impacts of the Proposed Action that may be indirectly affected by the Proposed Action. However, Mitigation Measure

CR2 (Temporary Protective Fencing and Erosion Control) will ensure that project impacts do not rise to the level of significance pursuant to CEQA.

During construction and operational repair periods of the Proposed Action, grading, excavation, and trenching will be required to repair buried utilities or other buried infrastructure. Subsurface excavation activities always have some potential to impact previously unknown archaeological subsurface resources. However, Mitigation Measure CR3 (Work Stoppage and Mitigation of Previously Unknown Archeological Resources) will ensure that project impacts do not rise to the level of significance pursuant to CEQA. Furthermore, Mitigation Measure CR4 (Work Stoppage with Discovery of Previously Unknown Human Remains and Compliance with NAGPRA) will ensure that potential project impacts to previously unknown human remains do not rise to the level of significance pursuant to CEQA.

With the implementation of Mitigation Measures CR1 through CR4, as identified in Section 4.7 of this EIR/EA, cultural resource impacts would be reduced to a level less than significant under CEQA.

5.1.7.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

As discussed in EIR/EA Section 4.7, 19 sites are located within the Proposed Action APE. Of the 19 sites within the Proposed Action APE, the Proposed Action's design was able to avoid all but one site, which would be impacted with implementation of the Proposed Action. There is a potential indirect impact to 9 sites adjacent to the Proposed Project's development footprint from grading and water quality impacts, but these impacts are minimized through implementation of CR-2. Mitigation Measure CR2 requires the applicant to provide temporary fencing around cultural resource site perimeters to ensure that project impacts remain within the proposed impact area and that cultural resources are avoided by project personnel. In addition, CR2 requires that grading within the construction area is performed in a manner that diverts sheet flow and water runoff to prevent surface water from damaging cultural sites. As such, they generate no incremental, indirect, cumulative impact on cultural resources.

There is also a potential for unknown archaeological subsurface resources and previously unknown human remains to be impacted during subsurface excavation. However, with the implementation of Mitigation Measures CR1 (Mitigation of Impacted Site), CR2 (Mitigation of Indirect Impacts to Sites), CR3 (Work Stoppage and Mitigation of Previously Unknown Archeological Resources), and CR4 (Work Stoppage with Discovery of Previously Unknown Human Remains and Compliance with NAGPRA), as identified in Section 4.7 of this EIR/EA, cultural resource impacts would be reduced to a level less than significant under CEQA. Among other reasons, this is based on the implementation of enforceable mitigation measures CR1 through CR4 and the conditions and stipulations in the MOA that will be signed prior to final BLM action on the environmental document.

The Proposed Action would create a direct physical impact to one site (IMP-3999 as discussed below) which is eligible for the National Register of Historic Places under Criteria D or its likelihood to yield information important in prehistory or history. The National Register value associated with the artifacts

would not be lost because the enforceable Mitigation Measure CR1 (Mitigation of Impacted Site) and measures identified in the MOA assure the collection and preservation of that information. The data collection will lead to a greater understanding of the resource and prehistoric society. Artifacts will be curated at a location determined by the BLM.

While avoiding impacts to any cultural resource site is preferred, it is recognized that when avoidance is not possible, minimizing and mitigating impacts to sites is required. IMP-3999 has previously been impacted by development. The Proposed Action's mitigation measure assures the collection of even more cultural information about the portions of the site that have already been impacted than if the Proposed Action were not implemented. As such, there would be a gain in cultural information gathered from the impacted site.

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. As shown in Table 5.1.7-2, there would be the potential for impacts to 71 cultural resource sites from the 9 other projects within the defined geographic scope of the cumulative analysis. This represents 16% of the total number (n=439) of cultural resources within the geographic scope. Under CEQA, the lead agency cannot approve the project if there is a significant impact without feasible mitigation measures to reduce project impacts to a level less than significant, or by adoption of appropriate findings. As with the Proposed Action, the other cumulative projects would likely be required to provide similar mitigation for any direct impacts to 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. Implementation of the mitigation measures will reduce the cumulative impacts of these projects. There would be no net loss of the cumulative value/context of the cultural resources within the geographic scope as the required mitigation would assure that the sites' archeological resource value be exhausted through the data recovery programs.

Table 5.1.7-3 provides a comparison of the Proposed Action and Alternatives related to cumulative cultural resources impacts.

BLM and DOE have analyzed the cumulative impacts of solar development on cultural resources for a six-state study area in the southwest United States, including Imperial County, California. The analysis from the studies performed in BLM and DOE's Draft Solar Programmatic Environmental Impact Statement state:

In the event "that cultural resources are unexpectedly encountered during construction activities, provisions should be in place (e.g., a historic properties treatment plan, mitigation and monitoring plan) to address the appropriate evaluation and treatment of such cultural resource discoveries. Areas rich in cultural resources would be avoided if possible. Cumulative effects on cultural resources from foreseeable development in the six-state region are expected to be small because of the relatively small fraction of total land disturbed. Solar energy development could be a major contributor to these impacts.

TABLE 5.1.7-3
Comparisons of Alternatives for Cumulative Cultural Resources Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
<p>The Proposed Action would directly impact 1 cultural resource site and indirectly impact 9 cultural resources sites. However, with the implementation of Mitigation Measures CR1 through CR4 these impacts would be reduced to a level less than significant under CEQA. Therefore, implementation of the Proposed Action in conjunction with applicable cumulative projects as it relates to cultural resources, will not result in a significant cumulative impact under CEQA.</p>	<p>This alternative would directly impact 3 cultural resources sites and indirectly impact 8 cultural resources sites. Therefore, the cumulative impact associated with this alternative would be slightly greater than the Proposed Action. However, with the implementation of Mitigation Measures CR1 through CR4 these impacts would be reduced to a level less than significant under CEQA. Therefore, implementation of the Proposed Action in conjunction with applicable cumulative projects as it relates to cultural resources, will not result in a significant cumulative impact under CEQA.</p>	<p>This alternative would result in the same impact to cultural resources as the Proposed Action.</p>	<p>This alternative would avoid any impact to cultural resources sites as no development would occur under this alternative. However, additional information about the impacts from existing development to site [IMP-3999] would not be collected pursuant to the Proposed Action's Mitigation Measures.</p>

TABLE 5.1.7-3
Comparisons of Alternatives for Cumulative
Cultural Resources Impacts (cont'd.)

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
NEPA Impact Analysis			
<p>The Proposed Action would adversely affect 1 historic property. Adverse effects to the historic property will be resolved through implementation of the MOA. Implementation of Mitigation Measures CR1 through CR4 would reduce potential indirect impacts to 9 other cultural resources. Therefore, implementation of the Proposed Action in conjunction with applicable cumulative projects as it relates to cultural resources, will not result in a cumulative impact under NEPA.</p>	<p>This alternative would directly affect 3 cultural resources and indirectly affect 8 cultural resources. Therefore, the cumulative impact associated with this alternative would be slightly greater than the Proposed Action. However, with the implementation of Mitigation Measures CR1 through CR4 these impacts would be reduced. Therefore, implementation of the Proposed Action in conjunction with applicable cumulative projects as it relates to cultural resources, will not result in a cumulative impact under NEPA.</p>	<p>This alternative would result in the same impact to cultural resources as the Proposed Action.</p>	<p>This alternative would avoid any effects to cultural resources as no development would occur under this alternative. However, additional information about the effects from existing development to site [IMP-3999] would not be collected pursuant to the Proposed Action's MOA.</p>

Source: BRG Consulting, Inc., 2011

However, for the most part, solar facilities could, and would wherever possible, be sited away from areas rich in cultural resources. Such areas would include individual properties (sites, structures, features, traditional cultural properties) and districts listed in the NRHP, National Historic Landmarks, National Historic Trails, and prehistoric and historic sites possessing significant scientific, heritage, or educational values. (DEIR PEIS pages 6-98 and 6-99).

Consistent with the Draft Solar Programmatic EIS, the Proposed Action has been sited away from areas rich in cultural resources by constructing the solar field on previously disturbed agricultural lands. Additionally, the Proposed Action was designed to avoid and minimize impacts to sites within the proposed Lake Cahuilla High Water Mark Archaeological District and the area 40' in elevation below the high water mark.

Furthermore, as discussed in the project description, the Proposed Action includes approval to share the existing gen-tie towers owned by Sempra should the applicant be able to obtain legal access to use those towers in the future. If such legal access is obtained, then there would be no direct impact to any cultural sites and no incremental impact to any potential cumulative impacts within the proposed historic districts.

Moreover, if legal access to share Sempra gen-tie towers cannot be obtained and the applicant must construct its own towers parallel to Sempra, then the Proposed Action is conditioned to comply with all applicable federal, state, and local laws, rules and regulations regarding the use of its towers, which potentially could reduce the cultural impacts of future projects within the proposed districts should they obtain the legal right to use the Proposed Action's towers. At this time, it is too speculative to know whether legal obstacles to sharing Sempra towers or the Proposed Action's towers can be overcome. Furthermore, it is too speculative to know if other projects would use the towers and what other project impacts would be. As such, the conclusions in this EA/EIR regarding impacts to cultural resources do not rely on them being overcome and are provided for informational purposes.

Irrespective of whether or not other individual or cumulative projects' cumulative impacts are considered significant within the geographic scope of cumulative cultural impacts for the Proposed Action, CEQA requires the focus to be on whether the project's **contribution to cumulative impacts** or its **incremental effect** is considerable, respectively.

For all of the reasons discussed above, the Proposed Action's contribution to potentially significant cumulative impacts to cultural resources is not considerable for purposes of CEQA.

B. NEPA Impact Analysis

The CEQ regulations for the implementation of NEPA define cumulative effects consistent with the Supreme Court's reading of NEPA in *Kleppe v. Sierra Club*, 427 U.S. 390, 413-414 (1976). "Cumulative impact" is defined in CEQ's NEPA regulations as the "impact on the environment that results from the **incremental** impact of the action when added to other past, present, and reasonably foreseeable future actions . . ." 40 CFR 1508.7 (emphasis added).

Agencies are not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined. Agencies retain substantial discretion as to the extent of such inquiry and the appropriate level of explanation. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 376-77 (1989). Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions. (GUIDANCE ON THE CONSIDERATION OF PAST ACTIONS IN CUMULATIVE EFFECTS ANALYSIS, 6/24/2005 CEQ)

Irrespective of whether or not other individual or cumulative projects' cumulative impacts are considered significant within the geographic scope of cumulative cultural impacts for the Proposed Action, NEPA requires the focus to be on whether the project's **contribution to cumulative impacts** or its **incremental effect** is considerable, respectively.

As discussed above under the CEQA Impact Analysis and in EIR/EA Section 4.7, 19 cultural resources are located within the Proposed Action APE. As noted in that analysis, consistent with the Draft Solar Programmatic EIS, the Proposed Action has been sited away from areas rich in cultural resources by constructing the solar field on previously disturbed agricultural lands. Of the 19 cultural resources within the Proposed Action APE, the Proposed Action's design was able to avoid all but one site, which would be adversely effected by implementation of the Proposed Action. There is a potential indirect effect to 9 cultural resources adjacent to the Proposed Project's development footprint from grading and water quality impacts, but these impacts are minimized through implementation of CR-2. Mitigation Measure CR2 requires the applicant to provide temporary fencing around cultural resource site perimeters to ensure that project impacts remain within the proposed impact area and that cultural resources are avoided by project personnel. In addition, CR2 requires that grading within the construction area is performed in a manner that diverts sheet flow and water runoff to prevent surface water from damaging cultural sites. As such, they generate no incremental, indirect, cumulative impact on cultural resources.

There is also a potential for unknown archaeological subsurface resources and previously unknown human remains to be impacted during subsurface excavation. However, with the implementation of Mitigation Measures CR1 (Mitigation of Impacted Site), CR2 (Mitigation of Indirect Impacts to Sites), CR3 (Work Stoppage and Mitigation of Previously Unknown Archeological Resources), and CR4 (Work Stoppage with Discovery of Previously Unknown Human Remains and Compliance with NAGPRA), as identified in Section 4.7 of this EIR/EA, cultural resource impacts would be reduced. Among other reasons, this is based on the implementation of enforceable Mitigation Measures CR1 through CR4 and the conditions and stipulations in the MOA that will be signed prior to final BLM action on the environmental document.

The Proposed Action would have an adverse effect on one archaeological site (IMP-3999 as discussed below), which is eligible for the National Register of Historic Places under Criteria D or its likelihood to yield information important in prehistory or history. The National Register value associated with the resource would not be lost because the enforceable Mitigation Measure CR1 (Mitigation of Impacted Site) and measures identified in the MOA assure the collection and preservation of that information. The data

collection will lead to a greater understanding of the resource and prehistoric society. Artifacts will be curated at a location determined by the BLM.

In order to assess cumulative effects within the geographic scope, a quantification of cumulative cultural resource impacts from the past, present, and foreseeable future projects was prepared. As shown in 5.1.7-2, there would be the potential for impacts to 71 cultural resource sites from the 9 other projects within the defined geographic scope of the cumulative analysis. This represents 16% of the total number (n=439) of cultural resources within the geographic scope. As with the Proposed Action, the other cumulative projects would likely be required to provide similar mitigation for any direct impacts to 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. Implementation of the mitigation measures will reduce the cumulative impacts of these projects. There would be no net loss of the cumulative value/context of the cultural resources within the geographic scope as the required mitigation would assure that the sites' archeological resource value be exhausted through the data recovery programs.

Based on the detailed analysis provided above under the CEQA Impact Analysis, for purposes of NEPA, the Proposed Action's incremental impact to potentially cumulative effects to cultural resources consists of an adverse effect to site IMP-3999, which will be resolved according to the stipulations of the Memorandum of Agreement. Table 5.1.7-3 provides a comparison of the Proposed Action and Alternatives related to cumulative cultural resources impacts.

This page intentionally left blank.

5.1.8 Noise

5.1.8.1 *Geographic Scope and Timeframe*

Table 5.1.8-1 lists the projects considered for the noise cumulative impact analysis. The geographic scope for considering cumulative noise impacts on sensitive receptors is the area immediately surrounding the potentially sensitive receptors in the vicinity of the Proposed Action site. The nearest sensitive human receptor to the project site is a residence 1,300 feet away. The next-closest residence is approximately 5,000 feet away, and there are fewer than ten residences within two miles of the project site. With regards to potential impacts to sensitive biological resources, please refer to Section 5.2.1.12 Biological Resources.

There would be noise increases during the operation of the Proposed Action, and these would cease at the end of the lease term, at which time the solar field site would be restored to its pre-project condition. Accordingly, the timeframe is the operation period of the Proposed Action.

5.1.8.2 *Existing Conditions*

As discussed in EIR/EA Section 3.8, ambient noise levels were measured at two noise-monitoring locations. The measurements collected reflect ambient sound levels representative of the extremely rural agricultural setting of the Proposed Action. The major source of existing noise at the first noise monitoring location was from the infrequent movement of U.S. Border Patrol units. The major source of existing noise at the second noise monitoring location was entirely from background community and far-field noise.

Also, as discussed in EIR/EA Section 3.8 and in Table 3.8-5, existing roadway noise levels were established for five roads and SR-98. Because the project site is currently in agricultural production, groundborne vibration caused by agricultural equipment may occur.

5.1.8.3 *Effects of the Proposed Action*

During the construction phases of the Proposed Action, short-term noise will be generated associated with the operation of various construction equipment. However, construction activities must adhere to the construction time periods of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. Furthermore, construction equipment noise exceedances above the 75 dBA Leq noise threshold would not be significant as there are no sensitive receptors within or immediately adjacent to the project site as the closest residence to the project site is 1,300 feet away. The second closest residence is approximately 5,000 feet away, and there are a fewer than 10 residences within two miles of the project site. Therefore, short-term noise generated during construction activities is not considered a significant impact under CEQA.

Project-related construction traffic noise would exceed the 3.0 dBA CEQA screening threshold on Pulliam Road between State Route 98 and Anza Road. However, no sensitive receptors are located along this roadway segment that would be adversely impacted by construction traffic due to the Proposed Action. Therefore, the Proposed Action's contribution to off-site roadway noise levels is not considered a significant impact under CEQA.

TABLE 5.1.8-1
List of Projects Considered for Noise Cumulative Impact Analysis

Project Name		Included in Noise Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Noise CI Analysis?	Impacts to Noise
1-4	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	The solar energy facility site is currently used for agricultural purposes. The proposed transmission line corridor is located in the desert. The proposed access road is located along an existing dirt road that is currently used by IID and others for access to the Westside Main Canal in the area. The proposed project would not result in significant noise impacts; therefore, no mitigation is required.
6-9	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
10	Dixieland Connection to IID Transmission System	Yes	--	All noise related impacts have been identified as less than significant and therefore, would not require the implementation of any mitigation measures.
11-37	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	
38	IV Substation (TermoElectrica US, LLC)	Yes	--	There is a potential for noise impacts associated with operation of the transmission lines from corona (the electrical breakdown of air into charged particles) caused by the electrical field at the surface of the conductors. Modern transmission lines are

Project Name	Included in Noise Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Noise CI Analysis?	Impacts to Noise
			designed so that they operate below the corona inception voltage during dry weather conditions and therefore would result in relatively low (35 dBA DNL or less) noise output beyond the edge of the ROW. During periods of rain, noise levels would be less than 39 dBA at the edge of the ROW.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	-- There is a potential for noise impacts associated with operation of the transmission lines from corona (the electrical breakdown of air into charged particles) cause by the electrical field at the surface of the conductors. Modern transmission lines are designed so that they operate below the corona inception voltage during dry weather conditions and therefore would result in relatively low (35 dBA DNL or less) noise output beyond the edge of the ROW. During periods of rain, noise levels would be less than 39 dBA at the edge of the ROW.
40	IV Substation (SDG&E)	Yes	-- Noise impacts associated with the project were not identified; additional project specific information is required.
41-63	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.

Source: BRG Consulting, Inc., 2011

Operational noise with implementation of the Proposed Action would be minimal. Noise from the solar energy facility during operations will be limited to light duty vehicle traffic for security patrols, maintenance staff and solar panel wash crews. The operation of high voltage transmission lines and transformers generates a low level of noise. The sound level that light auto traffic, transformer, and transmission lines generate is 55 dB, 40 dB, and 20 dB, respectively. These types of activities generate less sound compared to conversational speech, which generates 60 dB, and they do not exceed any noise level limits (see Section 4.8.1.1). All onsite fixed uses within the Proposed Action would be required to meet the operational noise standards of the County of Imperial Codified Ordinances Division 7 Noise Abatement and Control. The Proposed Action would comply with this ordinance. Therefore, onsite operational noise is not considered a significant impact under CEQA.

The Proposed Action is expected to generate a total of 15 vehicle trips per day during the operational phase. The vehicle trips per day would be minimal due to the minimal amount of workers required for the Proposed Action (four full-time employees) during operations. As such, the Proposed Action is not expected to result in a significant off-site traffic generated noise impact under CEQA.

5.1.8.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

As described in Table 5.1.8-1, there are four cumulative projects located within a one-mile radius of the proposed transmission line. Three of the cumulative projects are existing transmission lines located within Utility Corridor “N.” These transmission lines have the potential for noise impacts associated with operation of the transmission lines from corona (the electrical breakdown of air into charged particles) caused by the electrical field at the surface of the conductors. However, modern transmission lines are designed so that they operate below the corona inception voltage during dry weather conditions and therefore would result in relatively low (35 dBA DNL or less) noise output beyond edge of the ROW. The proposed Dixieland Connection to IID Transmission System project is also located within a one-mile radius of the proposed transmission line. However, all noise related impacts have been identified as less than significant and no mitigation is required.

No cumulative projects are located near enough to the solar energy facility portion of the Proposed Action site to contribute to cumulative adverse noise impacts. Cumulative projects that are not located within the immediate vicinity of the sensitive receptors near the solar energy facility portion of the Proposed Action site would be outside of the geographic scope of the consideration of cumulative noise impacts. Therefore, construction (short-term) and operational (long-term) noise generated by the Proposed Action would not contribute to cumulative noise impacts because the projects are spaced far enough apart that the noise generated by one project will not substantially combine with the noise of another project. In addition, the project’s 15 trips per day would result in a very minor increase in traffic noise. Accordingly, cumulative projects would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (i.e., above 75 dB Leq measured at nearest sensitive receptor) (noise modeling conducted for cumulative traffic does not show noise levels exceeding applicable standards (see EIR/EA Section 4.8)).

Furthermore, with implementation of the mitigation measures for burrowing owl and sensitive bird species, as identified in Section 4.12 of this EIR/EA, there would be no cumulative noise impact under CEQA to these sensitive biological receptors. Table 5.1.8-2 provides a comparison of the Proposed Action and Alternatives related to cumulative noise impacts.

B. NEPA Impact Analysis

The construction phase is planned to take 17 months and would begin in September 2011. This would place the construction phase from September 2011 through January 2013. The midpoint of the construction would occur around the summer of 2012. Therefore, the construction phase opening day is taken as year 2012. For each roadway segment analyzed, the worst case average daily traffic volume (ADT) from construction-related traffic and observed/predicted speeds are shown, along with the corresponding reference noise level at 50-feet (in dBA). Additionally, the line-of-sight distance from the roadway centerline to the 60 through 75 CNEL contours are provided as an indication of the worst-case unobstructed theoretical traffic noise contour placement.

**TABLE 5.1.8-2
Comparison of Alternatives for Cumulative Noise Impacts**

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to noise, will not result in a cumulative impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative noise impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative noise impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative noise impact under CEQA.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to noise, will not result in a cumulative impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative noise impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative noise impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative noise impact under NEPA.

Source: BRG Consulting, Inc., 2011

As discussed in Section 4.8 of this EIR/EA no substantial project-related construction traffic noise increases would occur under the existing conditions (Year 2010) because there would be minimal or no project traffic. In the Year 2012, an exceedance of 5.3 dBA above the 3.0 dBA CEQA screening threshold (8.3 dBA CNEL total) would occur on Pulliam Road between State Route 98 and Anza Road. However, there are no sensitive receptors (areas of habitation) along this roadway segment that would be adversely impacted by construction traffic due to the Proposed Action. The nearest residence is 1,300 feet away, on Anza Road, from the closest portion of the project site. The second closest residence is approximately 5,000 feet away and there are less than 10 residences within 2 miles of the project site.

As described in Table 5.1.8-2, there are four cumulative projects located within a one-mile radius of the proposed transmission line. Three of the cumulative projects are existing transmission lines located within Utility Corridor "N." These transmission lines have the potential for noise impacts associated with operation of the transmission lines from corona (the electrical breakdown of air into charged particles) caused by the electrical field at the surface of the conductors. However, modern transmission lines are designed so that they operate below the corona inception voltage during dry weather conditions and therefore would result in relatively low (35 dBA DNL or less) noise output beyond edge of the ROW. The proposed Dixieland Connection to IID Transmission System project is also located within a one-mile radius of the proposed transmission line. However, the proposed Dixieland project would not directly or indirectly result in a noise impact.

There are no cumulative projects identified within the immediate vicinity of the solar energy facility portion of the Proposed Action nor are there cumulative projects identified immediately adjacent to the above mentioned sensitive receptors that would contribute to cumulative adverse noise impacts. Construction of the Proposed Action would result in a short-term incremental increase in noise levels within the area; however, this incremental increase would be minimal with regards to proximity of sensitive resources. The Proposed Action's short-term construction related noise levels would not be added to other projects proposed in the region since the distance of the cumulative projects in relation to the Proposed Action is outside of the geographical range for creating a cumulative noise impact.

It should be noted that the Noise Element of the General Plan identifies sensitive species such as bird species as sensitive receptors. As discussed in Section 3.12 of this EIR/EA, burrowing owls and other sensitive birds were observed within the solar facility site. See Section 4.12 of this EIR/EA for a detailed discussion on cumulative impacts to burrowing owls and other sensitive bird species (non-human sensitive receptor) and mitigation measures that will avoid, minimize, or mitigate potential impacts.

Operation of the facility is scheduled to begin in early 2013. Noise from the solar energy facility during operations will be limited to light duty vehicle traffic for security patrols, maintenance staff and solar panel wash crews. The operation of high voltage transmission lines and transformers generate a low level of noise. Noise generated during operation of transmission lines and transformers is at the quiet end of the noise spectrum (Table 4.8-5 in Section 4.3 of this EIR/EA). The Proposed Action would be required to comply with the County of Imperial Codified Ordinances Division 7 Noise Abatement and Control. This ordinance governs fixed operational noise within the proposed development area (below the 70 dBA noise level for

the “Manufacturing, all other industrial including agriculture and extraction” zone). As such, onsite operational noise would not exceed the standards of the County of Imperial Noise Ordinance. The Proposed Action’s incremental increase in ambient noise levels during operation of the facility would be minor. In addition, the Proposed Action is expected to generate a total of 15 vehicle trips per day during the operational phase. The vehicle trips per day would be minimal due to the minimal amount of workers (four full-time employees) required for the Proposed Action during operations. Table 5.1.8-2 provides a comparison of the Proposed Action and Alternatives related to cumulative noise impacts.

This page intentionally left blank.

5.1.9 Agricultural Resources

5.1.9.1 *Geographic Scope and Timeframe*

Table 5.1.9-1 lists the projects considered for the agricultural resources cumulative impact analysis. The rationale for inclusion or non-inclusion of each cumulative project as it relates to agricultural resources is presented in Table 5.1.9-1. The geographic scope of cumulative impacts related to agricultural resources is Imperial County because the Imperial Valley Agricultural Complex is 500,000 acres of more-or-less contiguous farm fields located in the Imperial Valley and surrounded by desert and mountain habitat. The timeframe considered is the life of the project since the land could be returned to agriculture after the project is dismantled.

5.1.9.2 *Existing Conditions*

The 946.6 gross acre (838 net buildable acres) solar energy facility portion of the project site is located on privately-owned, undeveloped and agricultural lands. A majority of this portion of the project site is currently used for agricultural purposes. According to the 2004 FMMP, the site contains approximately 820.7 acres of land designated as Prime Farmland and Farmland of Statewide Importance.

5.1.9.3 *Effects of the Proposed Action*

The Proposed Action will result in the permanent loss of 820.7 acres of agricultural lands designated as Prime Farmland and Farmland of Statewide Importance. In addition, the Proposed Action is not consistent with certain Agricultural Element Goals and Objectives of the County of Imperial General Plan. Thus, mitigation is required for the project. A Land Evaluation Site Assessment analysis has been prepared in accordance with the methodology recommended by the California Department of Conservation and the conversion of existing land on the project site to other uses has been determined to be significant under CEQA. Mitigation Measure AR1, as identified in Section 4.9 of this EIR/EA, would be required to either procure Agricultural Conservation Easements on a 2 to 1 basis for all 820.7 acres, of similar quality farmland, outside of the path of development, pay an in-lieu mitigation fee, or fully restore the solar site to a state suitable for agriculture upon completion of the project. Restoration of the solar site to a state suitable for agriculture upon completion of the project is proposed as a project design feature, and would also be included as a Condition of the Conditional Use Permit. As discussed in Section 4.9, implementation of Mitigation Measure AR1 would reduce this impact to a less than significant level under CEQA.

5.1.9.4 *Cumulative Impact Analysis*

A. CEQA Cumulative Impacts

Continuing development within the County of Imperial will result in the conversion of land currently utilized for agricultural production to urban and other land uses. This agricultural conversion has been a continuing trend in the County. As discussed above, the Proposed Action will result in the permanent loss of 820.7 acres of Important Farmland. With the implementation of Mitigation Measure AR1, this impact would be reduced to a level less than significant. The cumulative projects identified in Table 5.1.9-1 for which acreages of impacts are available would impact approximately 10,089 acres of farmland; for other projects, quantitative information was not available and therefore was not included within this evaluation.

TABLE 5.1.9-1
List of Projects Considered for Agricultural Resources Cumulative Impact Analysis

	Project Name	Included in Agricultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Agricultural Resources CI Analysis?	Impacts to Agricultural Resources (acres)
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	*Approximately Zero
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	1,931
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	36.2
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	1,048.4 ¹
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	820.7 ¹
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The project site is not located on agricultural land.	
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	The POD does not contain sufficient information details to analyze potential impacts of the project.	
8	Centinela Solar Power, LLC (CACA-052092)	No	<ol style="list-style-type: none"> 1. The POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. 	
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	ECO Substation components would not be located on land that is actively being farmed. The only exception is the 138-kV transmission line components, which would traverse approximately 1,750 linear feet of Ketchum Ranch land. Impacts were determined to be less than significant.	

	Project Name	Included in Agricultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Agricultural Resources CI Analysis?	Impacts to Agricultural Resources (acres)
			<p>Construction and decommissioning of the Tule Wind Project would not interfere with active agricultural operations or convert farmland to agricultural use (No Impact).</p> <p>Construction activities would not interfere with active agricultural operations (No Impact).</p>	
10	Dixieland Connection to IID Transmission System	Yes	--	Permanent: 2.49 Temporary: 8.11
11	Mount Signal Solar Farm I-82LV 8ME, LLC (CACA-052325)	No	1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project.	1,375
12	Superstition Solar 1	No	The project site is not located on agricultural land.	
13	Bethel Solar X, Inc.	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
14	Energy Source Solar I, LLC	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
15	Energy Source Solar II, LLC	No	The level of information available regarding this project was insufficient	Need more information from County or BLM

	Project Name	Included in Agricultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Agricultural Resources CI Analysis?	Impacts to Agricultural Resources (acres)
			to determine the project's potential impacts at the time this evaluation was prepared.	
16	Salton Sea Solar Farm I	No	The development application was received after the NOP was published.	
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published.	
18	Calipat Solar Farm I	No	The development application was received after the NOP was published.	
19	Calipat Solar Farm II	No	The development application was received after the NOP was published.	
20	Midway Solar Farm I	No	The development application was received after the NOP was published.	
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	
22	IV Solar Company	No	The project site not located on agricultural land.	
23	Chocolate Mountain	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
24	Ocotillo Express	No	The project site is not located on agricultural land.	
25	Hudson Ranch II	No	The level of information available regarding this project was insufficient	

	Project Name	Included in Agricultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Agricultural Resources CI Analysis?	Impacts to Agricultural Resources (acres)
			to determine the project's potential impacts at the time this evaluation was prepared.	
26	Black Rock Unit # 1 2 3	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
27	Ram Power/Overlay	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
28	Orni 19	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
29	Orni 21 (Wister)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
30	LADWP and OptiSolar Power Plant	No	The project site is not located on agricultural land.	
31	Orni 18, LLC Geothermal Power Plant	Yes	--	19
32	U.S. Naval Air Facility El Centro	No	No agricultural lands are involved with this project.	
33	Recreation Activities	No	This recreation area is not located on agricultural land.	

Project Name	Included in Agricultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Agricultural Resources CI Analysis?	Impacts to Agricultural Resources (acres)
34 Recreation Activities	No	This recreation area is not located on agricultural land.	
35 U.S. Gypsum Mining	No	The project site is not located on agricultural land.	
36 California State Prison, Centinela	No	The project site is not located on agricultural land.	
37 Recreation Activities	No	This recreation area is not located on agricultural land.	
38 IV Substation (TermoElectrica US, LLC)	No	Existing transmission line, no new impact to agricultural resources would occur.	
39 IV Substation (Baja California Power, Inc., aka, Intergen)	No	Existing transmission line, no new impact to agricultural resources would occur.	
40 IV Substation (SDG&E)	No	Existing transmission line, no new impact to agricultural resources would occur.	
41 Las Aldeas Specific Plan	Yes	--	683
42 Linda Vista	Yes	--	80
43 Desert Village #6	Yes	--	55
44 Commons	Yes	--	85
45 Imperial Valley Mall	Yes	--	160
46 Miller Burson	Yes	--	160
47 Courtyard Villas	Yes	--	24
48 Willow Bend (East) & Willow Bend (West)	Yes	--	74
49 Lotus Ranch	Yes	--	213
50 Mosaic	Yes	--	201
51 Hallwood/Calexico Place 111 & Casino	Yes	--	231.8
52 Calalexico Mega Park	Yes	--	133.3
53 County Center II Expansion	Yes	--	160
54 Desert Springs Resort	Yes	--	539

	Project Name	Included in Agricultural Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Agricultural Resources CI Analysis?	Impacts to Agricultural Resources (acres)
55	Coyote Wells (Wind Zero)	No	The project site is not located on agricultural land.	
56	Granite Carroll Sand and Gravel Mine	No	The project site is not located on agricultural land.	
57	Atlas Storage Facility	No	The project site is not located on agricultural land.	
58	Mixed-Use Development	Yes	--	36
59	Mixed-Use Development	No	The project is not located on agricultural land.	
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	The proposed project would build a pedestrian fence along the U.S./Mexico border. The project site is not located on agricultural land.	
61	Mixed-Use Recreation	No	The project site is not located on agricultural land.	
62	Seeley Wastewater Treatment Plant Upgrade	No	This project would upgrade equipment in the existing plant. Furthermore, the surrounding land is not in agricultural production.	
63	Cahuilla Gold Project	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

Note: * = Approximately Zero because agricultural operations can continue under transmission lines.

1= Temporary impact to agricultural resources

Source: BRG Consulting, Inc., 2011

As with the Proposed Action, cumulative projects would be required to provide mitigation for any impacts to agricultural resources. Current agricultural acreage in the County for alfalfa and Bermuda grass alone is approximately 415,365 acres. County-wide important farmland totaled 545,612 acres in 2006.

In the County, the amount of agricultural land in production in any one year varies widely. As discussed in Section 5.2.1.12, tens of thousands of acres of farmland is either out of production or intentionally fallowed at any given time. The cumulative impact of the projects quantified in Table 5.1.9-1 falls well within the annual variation of out-of-production/fallowed farmland.

The cumulative impact associated with agricultural conversion is approximately 1.8% of all County-wide important farmland.

For all of these reasons, the contribution of the Proposed Action to any potentially significant loss of farmland, if any, would not be considerable. The incremental impact of the loss of approximately 820 acres would be mitigated via full restoration of the solar site to comparable agricultural production post-project, purchase of an agricultural easement at a 2:1 ratio, or payment into the County's agricultural mitigation fund, which the County uses at its discretion to mitigate for farmland loss consistent with its General Plan policies. Table 5.1.9-2 provides a comparison of the Proposed Action and Alternatives related to cumulative agricultural resources impacts.

B. NEPA Impact Analysis

No portion of the Proposed Action located within BLM lands is utilized for agriculture, nor is the land designated by BLM as agricultural lands. As discussed in Section 4.2 of this EIR/EA, the portion of the Proposed Action located 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.

As discussed above in the CEQA Cumulative Impacts, the Proposed Action will result in the permanent loss of 820.7 acres of Important Farmland within Imperial County jurisdiction. Implementation of Mitigation Measure AR1 would compensate for the loss of agricultural land and reduce the project's cumulative impact within the County. The cumulative projects identified in Table 5.1.9-1 for which acreages of impacts are available would impact approximately 10,089 acres of farmland. For the other projects, quantitative information was not available at the time this EIR/EA was prepared; therefore, this information was not included within this evaluation. As with the Proposed Action, cumulative projects would be required to provide mitigation for any impacts to agricultural resources. Current agricultural acreage in the County for alfalfa and Bermuda grass alone is approximately 415,365 acres. County-wide important farmland totaled 545,612 acres in 2006. Within the County the amount of agricultural land in production in any one year varies widely. As discussed in section 5.2.1.12, tens of thousands of acres of farmland is either out of production or intentionally fallowed at any given time. The cumulative impact of the projects quantified in

Table 5.1.9-1 falls well within the annual variation of out-of-production/fallowed farmland. As concluded above, the incremental impact of the loss of approximately 820 acres would be mitigated via full restoration of the solar site to comparable agricultural production post-project, purchase of an agricultural easement at a 2:1 ratio, or payment into the County’s agricultural mitigation fund, which the County uses at its discretion to mitigate for farmland loss consistent with its General Plan policies.

Table 5.1.9-2 provides a comparison of the Proposed Action and Alternatives related to cumulative agricultural resources impacts.

TABLE 5.1.9-2
Comparison of Alternatives for Cumulative
Agricultural Resources Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
CEQA Impact Analysis			
The Proposed Action would impact 820.7 acres of agricultural lands designated as Prime Farmland and Farmland of Statewide Importance. The cumulative impact would total 10,089 acres.	The cumulative impact would be the same as the Proposed Action.	Due to a reduced solar energy facility site, this alternative would reduce the agricultural impact to approximately 458.77 acres. Therefore, the cumulative impact to agricultural resources would be less than the Proposed Action.	This alternative would reduce the agricultural impact by 820.7 acres as the site would not be developed.
NEPA Impact Analysis			
The Proposed Action would impact 820.7 acres of agricultural lands designated as Prime Farmland and Farmland of Statewide Importance. The cumulative impact would total 10,089 acres.	The cumulative impact would be the same as the Proposed Action.	Due to a reduced solar energy facility site, this alternative would reduce the agricultural impact to approximately 458.77 acres. Therefore, the cumulative impact to agricultural resources would be less than the Proposed Action.	This alternative would reduce the agricultural impact by 820.7 acres as the site would not be developed.

Source: BRG Consulting, Inc., 2011

This page intentionally left blank.

5.1.10 Health, Safety and Hazardous Materials/Fire and Fuels Management

5.1.10.1 *Geographic Scope and Timeframe*

Table 5.1.10-1 lists the projects considered for the health, safety and hazardous materials/fire and fuels management cumulative impact analysis. The geographic scope considered for cumulative impacts from health, safety and hazardous materials/fire and fuels management is the area within 1 mile of the boundary of the Proposed Action site. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials.

5.1.10.2 *Existing Conditions*

According to the Phase I ESA, the Proposed Action site contains some areas where hazardous materials may be present. These include the potential presence of pesticides/herbicide residue and scattered trash and debris. Miscellaneous trash and debris was observed throughout the entire solar facility site. The Proposed Action site is currently and was recently used for agricultural purposes, which may present a hazard if there is contamination from pesticides and herbicides. However, the Proposed Action site is not included on a list of hazardous materials sites based on the ASTM Standard Practice E2247-08 database search conducted as part of the Phase I ESA.

5.1.10.3 *Effects of the Proposed Action*

Potential hazardous materials currently on or near the solar energy facility portion of the project site include pesticides and herbicides, and scattered trash and debris. There is a potential for residual low-level concentrations of pesticides and herbicides to be present in soil and/or groundwater. However, the Federal Insecticide, Fungicide, and Rodenticide Act authorizes the legitimate application of herbicides and pesticides used in accordance with manufacturer prescribed and labeled instructions. Under FIFRA, all pesticides that are distributed or sold in the United States must be registered (licensed) by EPA. Before EPA may register a pesticide, the applicant must show, among other things, that using the pesticide according to specifications "will not generally cause unreasonable adverse effects on the environment." As a result of regulations implemented under Section 307(a) of the Clean Water Act and the State Porter-Cologne Act (See, Cal. Water Code Sections 13172, 13173.2, Cal. Health and Safety Code Section 25140), pesticide and herbicide applications are trending away from legacy chemicals that can take years to degrade. Many legacy pesticides, such as DDT, which may have been used decades ago have fully degraded and no longer present a hazard, or will do so soon. (See, Pfafflin, J.R., Ziegler, E.N. Encyclopedia of Environmental Science and Engineering, Volume 2. p. 962 (2006) [showing that it takes approximately 4-10 years to achieve 70-95% loss of DDT in soil].) Therefore, the potential presence of low concentrations of agricultural chemicals on the solar energy facility site is considered to be insignificant.

As described above, the Proposed Action site contains scattered trash and debris. In addition, during project construction and operation of the solar facility, herbicides will be used for weed management. These are considered potentially significant impacts. However, with implementation of Mitigation Measures HM1 and HM2, as identified in Section 4.10 of this EIR/EA, these impacts would be reduced to below a minimum level Mitigation HM1 would require all trash and debris within the project site to be disposed of off-

TABLE 5.1.10-1
List of Projects Considered for Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact Analysis

Project Name		Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
1	"S" Line Upgrade 230-kV Transmission Line Project	No	The S Line upgrade replaces existing poles and lines and would not result in impacts to health and safety/hazardous materials.	N/A
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	The 6,500-acre project site consists of approximately 6,140 acres of Federal land administered by BLM and 360 acres of private land subject to Imperial County jurisdiction. 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 seismic ground shaking, and site security. These impacts, however, would be reduced with the implementation of mitigation measures, project design features, and other measures to levels less than significant. No mitigation, project design features, or other

Project Name	Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
			measures have been identified for health and safety because the project would not result in significant impacts.
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	-- Would extend for 150 miles and traverse numerous government jurisdictions and land use types. No significant and unavoidable impacts have been identified with health, safety and hazardous materials associated with project. Any impacts associated with the project would be reduced to levels less than significant with the implementation of mitigation measures.
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	-- The solar energy facility site is located within an unincorporated area of Imperial County and is predominately surrounded by agriculture and government land uses. Implementation of the project would result in significant impacts on health, safety, and hazardous materials, however, with the implementation of mitigation measures, these levels would be reduced to less than significant.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	-- The solar energy facility site is currently used for agricultural purposes. The proposed transmission line corridor is located in the desert. The proposed access road is located along an existing dirt road that is currently used by the IID and others for access to the Westside Main Canal in the area. Implementation of the project would result in significant impacts on health, safety, and hazardous materials, however, with the implementation of mitigation measures, these levels would be reduced to less than significant.
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The level of information available regarding this project was insufficient to

Project Name	Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
		determine the project's potential impacts at the time this evaluation was prepared.	
7	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
8	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
9	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A

Project Name		Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
10	Dixieland Connection to IID Transmission System	Yes	--	The resultant impacts of the proposed project are identified as less than significant and therefore, no mitigation measures are required.
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
12-21	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
22	IV Solar Company	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation	
23-29	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A

Project Name		Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
30	LADWP and OptiSolar Power Plant	No	Applicant withdrawn	N/A
31	Orni 18, LLC Geothermal Power Plant	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
32	U.S. Naval Air Facility El Centro	No	This project is an existing facility that has been included in the evaluation of existing conditions.	N/A
33-34	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
35	U.S. Gypsum Mining	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
36	California State Prison, Centinela	No	This project is an existing facility that has been included in the evaluation of existing conditions.	N/A
37	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the	N/A

Project Name	Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
			existing activities that would result in adverse effects to hazards.
38	IV Substation (TermoElectrica US, LLC)	Yes	<p>Transmission line workers and recreational visitors may be exposed to magnetic field exposure. However, exposure data suggest that temporary exposure would not result in adverse health impacts.</p> <p>Also, there may be a small increase in asthma due to air pollutant emissions.</p>
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	Transmission line workers and recreational visitors may be exposed to magnetic field exposure. However, exposure data suggest that temporary exposure would not

Project Name	Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
			<p>result in adverse health impacts.</p> <p>Also, there may be a small increase in asthma due to air pollutant emissions.</p>
40	IV Substation (SDG&E)	No	<p>This project is an existing transmission line that has been included in the evaluation of existing conditions.</p> <p style="text-align: right;">N/A</p>
41-53	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	<p>These projects occur outside the scope for cumulative projects for this resource issue.</p> <p style="text-align: right;">N/A</p>
54	Desert Springs Resort	No	<p>This project occurs outside the scope for cumulative projects for this resource issue.</p> <p style="text-align: right;">N/A</p>
55-56	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	<p>These projects occur outside the scope for cumulative projects for this resource issue.</p> <p style="text-align: right;">N/A</p>
57	Atlas Storage Facility	No	<p>The level of information available regarding this project was insufficient to</p> <p style="text-align: right;">N/A</p>

Project Name	Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
			determine the project's potential impacts at the time this evaluation was prepared.
58	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
59	Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	This project occurs outside the scope for cumulative projects for this resource issue
61	Mixed Use – Recreation	No	This project occurs outside the scope for

Project Name	Included in Health, Safety and Hazardous Materials/Fire and Fuels Management Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Health, Safety and Hazardous Materials/Fire and Fuels Management CI Analysis?	Impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management
			cumulative projects for this resource issue
62	Seeley Wastewater Treatment Plant Upgrade	Yes	<p>--</p> <p>No mitigation measures are expected to be required for impacts to health and safety associated with the project. The upgrade would result in minor changes that will not cause significant construction operation related impacts to public health. Further, the anticipated duration of the construction phase of the upgrade would be less than one year and as a result, significant public health effects are not expected. The upgrade and associated activities, however, could potentially result in impacts from hazardous materials release; with the implementation of identified mitigation measures, impacts would be reduced to less than significant.</p>
63	Cahuilla Gold Project	No	This project occurs outside the scope for cumulative projects for this resource issue

Source: BRG Consulting, Inc., 2011

site, in accordance with current, local, and federal disposal regulations. Mitigation Measure HM2 would require the approval of a weed control plan by the County of Imperial Agricultural Commissioner prior to application of herbicides on the solar facility.

Prior to construction, a Hazardous Material Management Program (HMMP) will be developed and implemented. The HMMP will be in accordance with federal and state requirements. Due to these provisions, a less than significant impact is identified related to the transport and use of hazardous materials during construction and operation of the Proposed Action.

No significant fire hazard impact would occur with implementation of the Proposed Action because a Fire Protection Prevention Plan consistent with federal, state, and local standards for fire protection will be implemented.

The potential impact of the proposed transmission line on human health is considered less than significant due to its proposed location within a designated utility corridor and the extremely rural agricultural setting of the surrounding area.

The proposed facility presents an unlikely target for an intentionally destructive act and has an extremely low probability of attack. Preventative measures (fences, gates, lighting) and safeguards (cameras and gatehouse) for the facility would restrict vehicle access and deter intentionally destructive acts. As such, no significant environmental impacts would be expected from physical damage to the Proposed Action or from loss of power delivery.

5.1.10.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

There are no cumulative projects close to the Proposed Action site that would contribute to cumulative adverse health, safety and hazardous materials/fire and fuels management impacts. Cumulative projects that are not located within 1 mile of the boundary of the Proposed Action site would be outside of the geographic scope of the consideration of an impact. Thus, development of the Proposed Action would not contribute to a significant, cumulative health, safety and hazardous materials/fire and fuels management impact. Furthermore, the health, safety and hazardous materials/fire and fuels management conditions are limited to the Proposed Action site and would be mitigated with implementation of Mitigation Measures HM1 and HM2, as identified in Section 4.10 of this EIR/EA, and the implementation of an HMMP and FPPP. Thus, the Proposed Action's incremental contribution to any cumulative impacts would not be considerable. Table 5.1.10-2 provides a comparison of the Proposed Action and Alternatives related to cumulative health, safety and hazardous materials/fire and fuels management impacts.

TABLE 5.1.10-2
Comparison of Alternatives for Cumulative
Impacts Relating to Health, Safety and Hazardous Materials/
Fire and Fuels Management

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
CEQA Impact Analysis			
The potential cumulative impacts to Health, Safety and Hazardous Materials/Fire and Fuels Management of the Proposed Action would be mitigated to less than significant levels under CEQA through the implementation of Mitigation Measures HM1, HM2, an HMMP, and an FPPP.	As with the Proposed Action, with the implementation of Mitigation Measures HM1, HM2 this alternative would result in a less than significant cumulative impact under CEQA to health, safety and hazardous materials/fire and fuel management.	As with the Proposed Action, with the implementation of Mitigation Measures HM1, HM2 this alternative would result in a less than significant cumulative impact under CEQA to health, safety and hazardous materials/fire and fuel management.	This alternative would not result in a significant, cumulative impact to health, safety and hazardous materials/fire and fuel management.
NEPA Impact Analysis			
With the implementation of Mitigation Measures HM1, HM2, the Proposed Action's cumulative impact under NEPA to health, safety and hazardous materials/fire and fuel management would be reduced.	As with the Proposed Action, with the implementation of Mitigation Measures HM1, HM2, this Alternative's cumulative impact under NEPA to health, safety and hazardous materials/fire and fuel management would be reduced.	As with the Proposed Action, with the implementation of Mitigation Measures HM1, HM2, this Alternative's cumulative impact under NEPA to health, safety and hazardous materials/fire and fuel management would be reduced.	This alternative would not result in a cumulative impact under NEPA to health, safety and hazardous materials/fire and fuel management.

Source: BRG Consulting, Inc.

B. NEPA Impact Analysis

There are no cumulative projects close to the Proposed Action site to contribute to cumulative adverse health, safety and hazardous materials/fire and fuels management impacts. Cumulative projects that are not located within 1 mile of the boundary of the Proposed Action site would be outside of the geographic scope of the consideration of an impact from hazardous materials sites. Furthermore, the health, safety and hazardous materials/fire and fuels management conditions are limited to the Proposed Action site and would be mitigated with implementation of Mitigation Measures HM1 and HM2, as identified in Section 4.10 of this EIR/EA, and the implementation of an HMMP and FPPP. Thus, the Proposed Action's incremental contribution to cumulative impacts is minimal and mitigated. Table 5.1.10-2 provides a comparison of the Proposed Action and Alternatives related to cumulative health, safety and hazardous materials/fire and fuels management impacts.

This page intentionally left blank.

5.1.11 Hydrology and Water Quality

5.1.11.1 *Geographic Scope and Timeframe*

Table 5.1.11-1 lists the projects considered for the hydrology and water quality cumulative impact analysis. The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Hydrological Unit as defined by the Colorado Basin RWQCB Basin Plan (2006), which is the scope of the Proposed Action and alternatives' direct and indirect effects.

5.1.11.2 *Existing Conditions*

As discussed in section 3.11, the existing land use for the solar energy facility site is irrigated agricultural land. Existing land coverage consists of agricultural cropland, with flat slopes. The existing drainage patterns at the solar energy facility site indicate that onsite storm runoff ponds form in many locations. Existing irrigation ditches and culverts around the perimeter of many of the fields also convey runoff, which drain to downstream IID facilities. In addition, there is an onsite system comprised of perforated tile drains that may convey flows to the IID drain system. These drains include the Mt. Signal Drain #3 and #4, the Carpenter Drain #1, and the Greeson Drain.

An offsite tributary drainage area of approximately 1,450 acres is located west of the solar energy facility site, with approximately 1,100 acres directed to the southwest corner of the site and 350 acres to the northwest corner.

The solar energy facility site is in area determined to be outside of the 0.2% annual chance floodplain. The impaired waterbodies listed on the 303(d) list include the New River and Salton Sea. Groundwater in the area is not used for municipal or domestic supply and there are no nearby wells.

5.1.11.3 *Effects of the Proposed Action*

As discussed in section 4.11 of this EIR/EA, the transmission line corridor portion of the Proposed Action will not result in significant hydrology and water quality impacts for the following reasons: (1) the proposed transmission line will not change in current topography; (2) the proposed transmission line would result in a minimal impervious footprint due to the minimal area required for transmission pole and tower footings; and, (3) access roads will remain pervious.

The runoff on the solar energy facility site portion of the Proposed Action site would be intercepted and collected at various points. Drainage infrastructure would include detention basins, perimeter channels, and existing drains and culverts. An approximately 23-acre triangular-shaped area of land will be provided for detention. With an average depth of four feet, the detention basin provides approximately 80 acre-feet of storage. In combination with the existing Mt. Signal Drain #3 and the proposed northerly perimeter channel, a total of 86 acre-feet of storage is achieved. According to hydrograph analyses, runoff peak flows and volumes generated by the site will be reduced in the proposed developed condition. This is a result of the change in land use from agriculture to a solar energy facility and of the additional drainage infrastructure. Implementation of the Proposed Action would not contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems.

TABLE 5.1.11-1
List of Projects Considered for Hydrology and Water Quality Cumulative Impact Analysis

Project Name		Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
1	"S" Line Upgrade 230-kV Transmission Line Project	No	The project replaces existing poles along the existing S Line transmission facility.	N/A
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	<p>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. The projected water use for the project is estimated to be approximately 33,550 gallons per day (gpd) or approximately 32.7 acre feet (af) per year. To meet the increased water demands, the applicant committed to financing an upgrade to the Seeley Wastewater Treatment Plant (SWWTP) to meet water needs for the project. Additionally, the applicant would construct a pipeline from the SWWTP to the project site to make approximately 200,000 gpd available to the project.</p> <p>This project is located on approximately 6,500 acres of vacant land; 6,140 ac of which are on federal land administered by BLM and 360 ac are privately owned land.</p>
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	<p>Implemented mitigation measures would result in impacts less than significant to hydrology and water quality. Impacts associated with construction activities were found to be less than significant or less than significant with the implementation of mitigation measures. Primary source of construction related impacts are access roads and transmission towers due to the potential of disturbing sediments and releasing contaminants that could enter surface water or groundwater. These impacts,</p>

Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
			<p>however, would be mitigated to levels less than significant. Impacts associated with operations would primarily be related to the towers which could obstruct flows or be, themselves, subject to damage from flooding or erosion. As with construction, any impacts found to be significant with operations would be mitigated to levels less than significant.</p>
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	<p>--</p> <p>The ISEC West project would not result in a significant hydrology impact. Onsite drainage will be designed to replicate the existing conditions and the project site will maintain all existing condition points of discharge. The construction of drainage infrastructure will reduce peak flow rates.</p> <p>Contamination associated with urban non-point source pollution could enter the on-site detention basins as a result of construction or post-construction related activities. However, implementation of the mitigation measure identified in the EIR/EA would reduce the impact to a level less than significant.</p>
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	<p>--</p> <p>The Proposed Action would not result in a significant hydrology impact. Onsite drainage will be designed to replicate the existing conditions and the project site will maintain all existing condition points of discharge. The construction of drainage infrastructure will reduce peak flow rates.</p> <p>Contamination associated with urban non-point source pollution could enter the on-site detention basins as a result of construction or post-construction related activities. However, implementation of the mitigation measure identified in the EIR/EA would reduce the impact to a level less than significant.</p>
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	<p>The level of information available regarding</p>

Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
			this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
8	Centinela Solar Power, LLC (CACA-052092)	Yes	--
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	This project occurs outside the scope of cumulative projects for this resource issue.
10	Dixieland Connection to IID Transmission System	Yes	--
			N/A
			Although the project alignment is located within the Salton Sea Transboundary Watershed, which has been identified as a Class I (impaired) watershed, the project would not violate any water quality standards or waste discharge requirements and thus,

Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality	
			<p>would result in less than a significant impact. Construction activities resulting in storm water runoff or wastewater would have to be managed in accordance with an approved SWPPP. Because other project related impacts are also identified as less than significant, no mitigation measures are required.</p> <p>Approximately 63.50 acres of impacts are estimated for the project (30.03 permanent and 33.47 temporary).</p>	
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	<ol style="list-style-type: none"> 1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. 	N/A
12-21	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	The level of information available regarding these projects was insufficient to determine the potential impacts at the time this evaluation was prepared.	N/A

Project Name		Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
22	IV Solar Company	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
23	Chocolate Mountain	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
24	Ocotillo Express	No	This project occurs outside the scope of cumulative projects for this resource issue.	N/A
25-31	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	The level of information available regarding these projects was insufficient to determine the potential impacts at the time this evaluation was prepared.	N/A

Project Name		Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
32	U.S. Naval Air Facility El Centro	No	This project is an existing facility that has been included in the evaluation of existing conditions.	N/A
33-34	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	The efforts associated with ongoing recreation activities do not include expansion or changes in the existing activities that would result in new adverse effects to hydrology or water quality.	N/A
35	U.S. Gypsum Mining	No	This project occurs outside the scope for cumulative projects for this resource issue.	
36	California State Prison, Centinela	No	This project is an existing facility that has been included in the evaluation of existing conditions.	N/A
37	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that	N/A

	Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
			would result in new adverse effects to hydrology or water quality.	
38	IV Substation (TermoElectrica US, LLC)	Yes	--	Impacts directly associated with project plant operations include a reduction in the flow of water to the New River due to water extractions from the Zaragoza Oxidation Lagoons and alteration of water quality of the New River.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	Impacts directly associated with project plant operations include a reduction in the flow of water to the New River due to water extractions from the Zaragoza Oxidation Lagoons and alteration of water quality of the New River.
40	IV Substation (SDG&E)	Yes	--	Additional project specific information is required.
41	Las Aldeas Specific Plan	No	--	The proposed project will alter existing surface drainage patterns and increase impervious surfaces by constructing buildings, roadways, parking lots, and other concrete/asphalt surfaces on the site. Placing portions of existing drains underground could affect efficiency of flows where gradient or capacity changes, leading to potential flood conditions. Implementation of the mitigation measures identified in the EIR would reduce the impact to hydrology below the level of significance.
42	Linda Vista	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this	N/A

Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
			evaluation was prepared.
43	Desert Village #6	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
44	Commons	Yes	<p>--</p> <p>Runoff from the Imperial Valley Commons can be safely collected and conveyed during a 10-year storm event and protected from flooding during a 100-year storm using the basin design concepts and preliminary drainage system presented in the Hydrology Study prepared for the project.</p> <p>The proposed project would not substantially degrade water quality while satisfying local stormwater runoff requirements nor substantially degrade or deplete groundwater resources or interfere substantially with groundwater recharge.</p> <p>The construction of the detention basin and preparation of and compliance with the SWPPP would ensure that the project did not cause substantial flooding, erosion, or siltation in either the construction or post-construction period.</p>
45-49	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the	No	The level of information available regarding these projects was insufficient to

	Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
	Cumulative Impact Analysis		determine the potential impacts at the time this evaluation was prepared.	
50	Mosaic	Yes		<p>Because a majority of the project site is currently undeveloped, proposed development will create an increase in impervious surface area and there will be a corresponding level of increased stormwater runoff volumes. However, the development of the site will not cause any diversion to or from the existing condition watershed.</p> <p>Contamination associated with urban non-point source pollution could enter the on-site detention basins as a result of construction or post-construction-related activities, resulting in potentially significant water quality impacts. However, implementation of mitigation measures identified in the EIR would reduce impacts to below a level of significance.</p> <p>No significant impact regarding flooding.</p>
51	Hallwood/Calexico Place 111 & Casino	Yes	--	<p>Implementation of the proposed project has the potential to result in a violation of water quality standards in local surface waters through sedimentation/siltation or emissions from construction related activities. This issue is considered a significant impact but would be reduced to a level less than significant with implementation of mitigation measures.</p> <p>The implementation of the proposed project will result in an increased amount of impervious surfaces on the project site, which creates the potential for runoff during a storm event to transport pollutants to local surface waters. As such, the</p>

	Project Name	Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
				<p>implementation of the proposed project will result in a significant long-term impact to surface water quality. This issue is considered a significant impact but would be reduced to a level less than significant with implementation of mitigation measures.</p> <p>No significant impact regarding flooding.</p>
53	County Center II Expansion	Yes	--	<p>The proposed project would include the construction of hardscape surfaces associated with the various uses on the project site. Because a majority of the project site is currently undeveloped, proposed development will create an increase in impervious surface area and there will be a corresponding level of increased stormwater runoff volumes. This is considered a significant impact but would be reduced to a level less than significant with implementation of mitigation measures.</p> <p>In addition, short-term and long-term water quality impacts are anticipated. This is considered a significant impact but would be reduced to a level less than significant with implementation of mitigation measures.</p>
54	Desert Springs Resort	Yes	--	Impacts to water quality, upon the implementation of mitigation measure HWQ-1 would be reduced to a level less than significant.
55	Coyote Wells (Wind Zero)	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
56-60	* Please Refer to Table 5-1 for a complete list of Potential Projects	No	The level of information available regarding these projects was	N/A

Project Name		Included in Hydrology and Water Quality Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Hydrology and Water Quality CI Analysis?	Impacts to Hydrology and Water Quality
	Considered for the Cumulative Impact Analysis		insufficient to determine the potential impacts at the time this evaluation was prepared.	
61	Mixed Use Recreation	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in new adverse effects to hydrology or water quality.	N/A
62	Seeley Wastewater Treatment Plant Upgrade	Yes	--	At this time, it is uncertain whether the SWWRF upgrade and associated activities would result in significant impacts to water. Additional hydrologic studies are required.
63	Cahuilla Gold Project	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was	N/A

Source: BRG Consulting, Inc., 2011

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the project site is located in Zone X, which is an area determined to be outside of the 0.2% annual chance floodplain. The Proposed Action does not propose the placement of housing or structures within a 100-year flood hazard area. As such, the potential flood hazard associated with a 100-year floodplain or failure of a dam is considered less than significant under CEQA. There is no potential for the project site to be inundated by seiches, tsunamis, or mudflows, because the site is more than two miles away from the nearest lake and over 100 miles from the Pacific Ocean

Contamination associated with urban non-point source pollution (e.g., grease, oils, sediment, and heavy metals) could enter the on-site detention basins as a result of construction or post-construction related activities. The project applicant would obtain permit coverage under the appropriate National Discharge Pollution Discharge Elimination System (NPDES) general permit, and comply with 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. In addition, implementation of Mitigation Measure HWQ1, as identified in Section 4.11 of this EIR/EA, will reduce water quality impacts by requiring, among other things, the use of Best Management Practices, efficient design, and maintenance of the drainage infrastructure, .

A significant impact to CDFG and RWQCB jurisdictional water resources is anticipated from the widening of the access road and transmission line construction. However, with the implementation of Mitigation Measure B9, this impact will be reduced to a level less than significant under CEQA. Mitigation Measure B9 would mitigate the jurisdictional resources impact through mitigation ratios. In addition, a Section 1600 Streambed Alteration Agreement would need to be authorized for the impact to CDFG resources. See Section 4.12 Biological Resources for a full analysis of the Proposed Action's impact to jurisdictional waters.

Cumulative impact to groundwater quality is not evaluated as groundwater in the area is not used for municipal or domestic supply and there are no nearby wells. All water in the County is supplied by the Imperial Irrigation District, which has rights to 3.2 MAFY of Colorado River water. The existing agricultural farm currently uses far more water than the proposed solar facility would need during and post construction. In addition, the Proposed Action does not propose to use the groundwater as a water source; therefore groundwater supplies would not be effected.

5.1.11.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

The construction of the solar energy facility portion 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 identified in Table 5.1.11-1. However, compliance with the SWRCB's National Discharge Pollution Discharge Elimination System (NPDES) general permit for activities associated with construction (2009-0009-DWQ) 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.

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. This 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 CGP. 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 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. Quantitative information for cumulative projects considered for long-term water quality impacts was not available; however, 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 impacts with regard to water quality would be considered less than significant under CEQA.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the project site and the majority of the cumulative projects listed in 5.1.11-1 are not located within Zone X, which is an area determined to be outside of the 0.2% annual chance floodplain. However, six of the cumulative projects listed on 5.1.11-1 (Granite Carroll Sand and Gravel Mine, Imperial Valley Solar, Black Rock Unit #1 2 3, Coyote Wells (Wind Zero), SDG&E Proposed Photovoltaic Solar Field, and Ocotillo Express) are within or near flood Zone A, 100-year floodplain. However, construction of these projects are required to comply with federal, state, and local regulations regarding development within a 100-year floodplain. As such, the Proposed Action would not result in a significant cumulative flooding hazard impact. Table 5.1.11-2 provides a comparison of the Proposed Action and Alternatives related to cumulative hydrology and water quality impacts.

TABLE 5.1.11-2
Comparison of Alternatives for Cumulative Hydrology and Water Quality Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
<p>Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to hydrology and water quality, will result in a cumulative short-term impact during construction. Compliance with NPDES general permit regulations, 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 will mitigate the short-term cumulative impacts. Implementation of site design, source control, and treatment control BMP's for operation of cumulative projects will ensure no long-term impacts occur.</p>	<p>As with the Proposed Action, this alternative would result in a significant, cumulative water quality impact under CEQA during the construction phase of the project only. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative hydrology or water quality impact would result.</p>	<p>As with the Proposed Action, this alternative would result in a significant, cumulative water quality impact under CEQA during the construction phase of the project only. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative hydrology or water quality impact would result.</p>	<p>This alternative would not result in a significant, cumulative impact under CEQA to hydrology and water quality as the proposed project would not be constructed.</p>

TABLE 5.1.11-2
Comparison of Alternatives for Cumulative Hydrology and Water Quality Impacts (cont'd.)

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
NEPA Impact Analysis			
<p>Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to hydrology and water quality, will result in a cumulative short-term impact during construction.</p> <p>Compliance with NPDES general permit regulations, 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 will mitigate the short-term cumulative impacts.</p> <p>Implementation of site design, source control, and treatment control BMP's for operation of cumulative projects will ensure no long-term impacts occur under NEPA.</p>	<p>As with the Proposed Action, this alternative would result in a cumulative water quality impact during the construction phase of the project only. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative hydrology or water quality impact would result under NEPA.</p>	<p>As with the Proposed Action, this alternative would result in a cumulative water quality impact during the construction phase of the project only. The short-term cumulative impact would be the same as the Proposed Action. No long-term cumulative hydrology or water quality impact would result under NEPA.</p>	<p>This alternative would not result in a cumulative impact to hydrology and water quality as the proposed project would not be constructed.</p>

Source: BRG Consulting, Inc., 2011

B. NEPA Impact Analysis

The construction of the solar energy facility portion 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 identified in Table 5.1.11-1. 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. 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. Quantitative information for cumulative projects considered for long-term water quality impacts was not available; however, 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 construction and operation of the Proposed Action would be reduced.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the project site and the majority of the cumulative projects listed in Table 5.1.11-1 are not located within Zone X, which is an area determined to be outside of the 0.2% annual chance floodplain. However, six of the cumulative projects listed on Table 5.1.11-1 (Granite Carroll Sand and Gravel Mine, Imperial Valley Solar, Black Rock Unit #1 2 3, Coyote Wells (Wind Zero), SDG&E Proposed Photovoltaic Solar Field, and Ocotillo Express) are within or near flood Zone A, 100-year floodplain. However, construction of these projects is required to comply with federal, state, and local regulations regarding development within a 100-year floodplain. As such, the Proposed Action would not result in a cumulative flooding hazard impact. Table 5.1.11-2 provides a comparison of the Proposed Action and Alternatives related to cumulative hydrology and water quality impacts.

This page intentionally left blank.

5.1.12 Biological Resources

5.1.12.1 *Geographic Scope and Timeframe*

Table 5.1.12-1 lists the projects considered for the biological resources cumulative impact analysis. The rationale for inclusion or non-inclusion of each cumulative project as it relates to biological resources is presented in Table 5.1.12-1. The geographic scope for considering cumulative impacts on biological resources includes the flat-tailed horned lizard (FTHL) habitat in California, specifically in the Yuha Desert FTHL Management Area. In addition, the geographic scope for the mountain plover is limited to agricultural lands within the County of Imperial, because the agricultural lands are considered high quality for this species.

5.1.12.2 *Existing Conditions*

Eight vegetation communities were mapped within the survey area, including creosote bush-white burr sage scrub, desert saltbush scrub, desert wash (smoke tree woodland mix), cattail marsh, arrow weed thicket, mesquite thicket, tamarisk thicket, and active agricultural fields.

Priority plant species observed on-site include Wolf's cholla, Thurber's pilostyles, and Parish's desert thorn. The vegetation areas and survey results are described in greater detail in Section 3.12.2.1 and Table 3.12-2.

The wildlife species observed on-site were typical of the desert scrub, desert wash, and agricultural habitats, which provide cover, foraging, and breeding habitat for a variety of native wildlife species. Animals observed onsite within the Proposed Action, Alternative 1-Alternative Transmission Line Corridor, and Alternative 2-Reduced Solar Energy Facility Site are listed in Attachment 3 of the biological technical report (Appendix I-1 of this EIR/EA). Sensitive animal species observed throughout the site include the flat-tailed horned lizard, Colorado Desert fringe-toed lizard, Crissal thrasher, and Yellow warbler.

No ACOE wetland areas were identified within the ISEC-South survey area. Some man-made features (e.g., farm drains/ditches) that occur within the survey area are potentially exempt from ACOE jurisdiction. Jurisdictional non-wetland waters within the Imperial Solar Energy Center-South project survey area include one or more ephemeral drainages and a large expanse of the Pinto Wash alluvial fan that appears to occur within the active floodplain.

A complete discussion of the existing biological resources can be found in Section 3.12.2.

5.1.12.3 *Effects of the Proposed Action*

The Proposed Action includes the solar energy facility and access road (R-2, IVS-6, and IVS-8) and transmission corridor portions (IVS-1 and IVS-3). The Proposed Action has the potential to result in impacts to sensitive vegetation communities, flat-tailed horned lizards, burrowing owls, nesting raptors, migratory birds and other sensitive non-migratory bird species, and CDFG jurisdictional resources. However, with the implementation of Mitigation Measures B1 through B9, these impacts would be reduced to a level of less than significant. A complete discussion of impacts on Biological Resources is presented in Section 4.12 and the tables that accompany that section.

TABLE 5.1.12-1

List of Potential Projects Considered for Biological Resources Cumulative Impact Analysis

Project Name	Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis?	Impacts to Biological Resources	Assumptions
1 "S" Line Upgrade 230-kV Transmission Line Project	Yes	--	Impacts to the burrowing owl, Yuma clapper rail, and flat-tailed horned lizard. Mitigation reduces impacts to less than significant.	For 18 miles of transmission line, there are approximately 108 acres of disturbance. Approximately 2.15 acres is on BLM lands and the rest is on private land. Approximately 2.15 acres are within the FTHL MA.
2 Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	Biological resources impact to approximately 92.8 acres of Sonoran creosote bush scrub. Compensatory mitigation for approximately 6,619.9 acres of FTHL suitable habitat. Loss of approximately 165 acres of waters of the U.S. and 840 acres of CDFG jurisdictional streambeds. Conversion of approximately 6,500 acres of land – mitigation is required. Approximately 6,375.76 acres of BLM land.	Approximately 6,000 acres of FTHL suitable habitat. Loss of approximately 165 acres of waters of the U.S. and approximately 312 acres of CDFG jurisdictional streambeds. Approximately 92.8 acres are within the FTHL MA.
3 Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	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).	Approximately 45 acres within the FTHL MA.

Project Name	Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions	
				During operation, the project would cause permanent (displacement of vegetation with project features such as towers or permanent access roads) impacts to vegetation communities. In total, the project would permanently impact approximately 441 acres of sensitive vegetation (48 acres of non-sensitive vegetation).	
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	Proposed ROW lies within the Yuha Basin ACEC and in the Yuha Desert MA for FTHL. Construction of the solar energy facility and the transmission line would result in permanent impacts to approximately 1,078 acres of vegetation communities. Construction of the solar energy facility and the transmission line would result in temporary impacts to 6.9 acres on vegetation communities. The total project impacts to vegetation communities (permanent and temporary) are 1,085 acres.	Impacts to 13.7 acres of BLM land within the Yuha FTHL MA. Approximately 7 acres of BLM land disturbed permanently. All within the FTHL MA.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	The project plans a 120 foot wide ROW from the project site, along BLM land to the Imperial Valley Substation in order to accommodate the transmission	The Imperial Solar Energy Center-South 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.

Project Name	Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions	
				corridor. The transmission line ROW corridor, within BLM lands comprises approximately 82.7 acres. The Imperial Solar Energy Center-South 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.	
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The BLM did not have complete POD as of the NOP date. The project was considered speculative and therefore, not viable at the time. Multiple PODs have been requested by BLM with the project shrinking each time.	Impacts to biological resources have yet to be assessed fully.	Approximately 100 acres of FTHL MA would be disturbed.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	Yes	--	Approximately three acres would be impacted in the FTHL MA.	
8	Centinela Solar Power, LLC (CACA-052092)	No	1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient	Lies in the Yuha Basin ACEC in the Yuha Desert MA for FTHL. Approximately 6 permanent acres of impact; approximately 32 temporary acres of impact. Impacts to non-wetland	Approximately 10.1 acres of BLM lands disturbed all within the FTHL MA.

Project Name	Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions	
			information details to analyze potential impacts of the project.	jurisdictional waters. Total approximate ROW acreage is 80 acres of BLM land.	
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	The project site is located outside of the FTHL habitat area.		
10	Dixieland Connection to IID Transmission System	Yes	--	Lies in the Yuha Basin ACEC in the Yuha Desert Management Area for flat-tailed horned lizards and Western burrowing owl (impacts to be mitigated).	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.
11	Mount Signal Solar Farm I-82LV 8ME, LLC (CACA-052325)	No	1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project.	Lies in the Yuha Basin ACEC in the Yuha Desert Management Area for flat-tailed horned lizards and Western burrowing owl (impacts will be mitigated).	

Project Name	Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
12 Superstition Solar 1	No	The project site is located a long way from the Yuha Desert FTHL MA. The project is located outside the West Mesa FTHL MA.		
13 Bethel Solar X, Inc.	No	1. The project site is located several miles east of the Yuha Desert FTHL MA. 2. The project site is not located on FTHL habitat.		
14 Energy Source Solar I, LLC	No	The project site is located outside of the Yuha Desert FTHL MA but FTHL have been recorded at this site.		
15 Energy Source Solar II, LLC	No	The project site is located outside of the Yuha Desert FTHL MA.		
16 Salton Sea Solar Farm I	No	The development application was received after the NOP was published.		

Project Name	Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published.	
18	Calipat Solar Farm I	No	The development application was received after the NOP was published.	
19	Calipat Solar Farm II	No	The development application was received after the NOP was published.	
20	Midway Solar Farm I	No	The development application was received after the NOP was published.	
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	
22	IV Solar Company	No	The project site is located outside of the Yuha Desert FTHL MA.	
23	Chocolate Mountain	No	The project site is located outside of the Yuha Desert FTHL MA.	

Project Name		Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
24	Ocotillo Express	No	The project site is located outside of the Yuha Desert FTHL MA.		
25	Hudson Ranch II	No	The project site is located on agricultural land located several miles from the closest FTHL MA.		
26	Black Rock Unit #1 2 3	No	The project site is located on agricultural land located several miles from the closest FTHL MA.		
27	Ram Power/Overlay	No	The project site is located on agricultural land located several miles from the closest FTHL MA.		
28	Orni 19	No	The project site is located on agricultural land located several miles from the closest FTHL MA.		

Project Name		Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
29	Orni 21 (Wister)	No	The project site is located on agricultural land located several miles from the closest FTHL MA.		
30	LADWP and OptiSolar Power Plant	No	The project is not located within the Yuha Desert FTHL MA.		
31	Orni 18, LLC Geothermal Power Plant	No	The project site not located within the Yuha Desert FTHL MA.		
32	U.S. Naval Air Facility El Centro	No	The project site is not located within the Yuha Desert FTHL MA.		
33	Recreation Activities	No	This recreation area is located in the West Mesa FTHL MA; thus, is not located in the Proposed Action's geographic scope (Yuha Desert FTHL MA).		
34	Recreation Activities	Yes	--		The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in adverse effects to the FTHL MA.

Project Name		Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
35	U.S. Gypsum Mining	No	The project site is not located within the Yuha Desert FTHL MA.		
36	California State Prison, Centinela	No	The project site is not located within the Yuha Desert FTHL MA.		
37	Recreation Activities	No	--		The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in adverse effects to the FTHL MA.
38	IV Substation (TermoElectrica US, LLC)	No	Existing transmission line. No additional impact to biological resources.		
39	IV Substation (Baja California Power, Inc., aka, Intergen)	No	Existing transmission line. No additional impact to biological resources.		
40	IV Substation (SDG&E)	No	Existing transmission line. No additional impact to biological resources.		
41	Las Aldeas Specific Plan	No	The project site is not located within the Yuha Desert FTHL MA.		
42	Linda Vista	No	The project site is not located within the Yuha Desert FTHL MA.		

Project Name		Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
43	Desert Village #6	No	The project site is not located within the Yuha Desert FTHL MA.		
44	Commons	No	The project site is not located within the Yuha Desert FTHL MA.		
45	Imperial Valley Mall	No	The project site is not located within the Yuha Desert FTHL MA.		
46	Miller Burson	No	The project site is not located within the Yuha Desert FTHL MA.		
47	Courtyard Villas	No	The project site is not located within the Yuha Desert FTHL MA.		
48	Willow Bend (East) & Willow Bend (West)	No	The project site is not located within the Yuha Desert FTHL MA.		
49	Lotus Ranch	No	The project site is not located within the Yuha Desert FTHL MA.		

Project Name		Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
50	Mosaic	No	The project site is located on agricultural land located several miles from the closest FTHL MA.		
51	Hallwood/ Calexico Place 111 & Casino	No	The project site is not located within the Yuha Desert FTHL MA.		
52	Calexico Mega Park	No	The project site is not located within the Yuha Desert FTHL MA.		
53	County Center II Expansion	No	The project site is not located within the Yuha Desert FTHL MA.		
54	Desert Springs Resort	No	The project site is not located within the Yuha Desert FTHL MA.		
55	Coyote Wells (Wind Zero)	No	The project site is not located within the Yuha Desert FTHL MA.		
56	Granite Carroll Sand and Gravel Mine	No	The project site is not located within the Yuha Desert FTHL MA.		

Project Name		Included in Biological Resources Cumulative Impact (CI) Analysis?	Rationale for Potential Projects Not Included in the Biological Resources CI Analysis? ¹	Impacts to Biological Resources	Assumptions
57	Atlas Storage Facility	No	The project site is not located within the Yuha Desert FTHL MA.		
58	Mixed-Use Development	No	The project site is not located within the Yuha Desert FTHL MA.		
59	Mixed-Use Development	No	The project site is not located within the Yuha Desert FTHL MA.		
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	The project site is not located within the Yuha Desert FTHL MA.		
61	Mixed-Use Recreation	Yes	--		The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in adverse effects to the FTHL MA.
62	Seeley Wastewater Treatment Plant Upgrade	No	The project site is not located within the Yuha Desert FTHL MA.		
63	Cahuilla Gold Project	No	The project site is not located within the Yuha Desert FTHL MA.		

Source: BRG Consulting, Inc., 2011

5.1.12.4 Cumulative Impact Analysis

A. CEQA Impact Analysis

As described above, the Proposed Action has the potential to result in biological resources impacts. However, with the implementation of Mitigation Measures B1 through B13, as identified in Section 4.12 of this EIR/EA, these impacts would be reduced to a level of less than significant under CEQA. As with the Proposed Action, each of the following cumulative projects would be required to provide mitigation for impacts to biological resources. Although some quantitative information regarding cumulative project biological impacts was available, such information was not available for most. Therefore, the analysis below is conducted qualitatively.

The requirements that the cumulative projects reduce and mitigate their impacts on biological resources come from a variety of statutes and administrative frameworks.

Plant and animal species are protected by the Federal Endangered Species Act of 1973 (ESA), which provides a framework for the protection of plant and animal species that are at risk of becoming extinct. Section 7 of the ESA requires each federal agency to consult with the USFWS about projects that may adversely affect species listed as threatened or endangered under the ESA (“listed species”). Habitat critical to these listed species may also be separately designated under the ESA. ESA Section 9 prohibits “take” of federally listed species.

The potential for the introduction and establishment of invasive plant species on BLM lands would be prevented, controlled, and treated through an Integrated Pest Management approach per the *Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (PER 2007)*.

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. Raptors and active raptor nests are protected under California Fish and Game Code 3503.5, 3503, 3513.

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.

Flat-tailed Horned Lizards receive protection via the BLM’s FTHL Rangewide Management Strategy (FTHL RMS). 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 Desert Management Area, the area in which the project transmission line would be located, as a management unit.

Regional land designations also provide protection for wildlife species and biological resources. 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. The County of Imperial General Plan also has provisions to protect biological resources, as described in Table 3.12-1.

The Federal Clean Water Act and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit.

The Proposed Action would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative actions within the geographic scope of the Proposed Action will be required to comply with the legal frameworks set forth above, as well as others. The cumulative actions will be required to mitigate their impacts to a less than significant level. Because the identified laws, regulations and guidelines are implemented at the federal, State, and local level through NEPA, CEQA, and local planning compliance, they form comprehensive protection scheme for the biological resources identified in Section 4.12.

Furthermore, cumulative impacts on biological resources were analyzed in the Solar Programmatic Environmental Impact Statement (see EIR PEIS page 6-96). BLM and DOE analyzed the cumulative impacts of solar development across a six-state study area and found that cumulative impacts on wildlife and aquatic biota from foreseeable development in the six-state region would be small provided mitigation measures to preserve important habitat and migration corridors are implemented (or sufficient alternative lands are set aside as compensation).

As shown in Table 5.1.12-2, the habitat disturbances that have occurred since the adoption of the FTHL Management Strategy and those that could result from the Proposed Actions and the reasonably foreseeable projects are estimated to impact a total of 354.8 acres of the 60,200-acre Yuha MA. These habitat disturbances constitute approximately 0.5 percent of the 1% of habitat take allowable within the Yuha MA. These impacts, still under the 1% threshold for impacts acreage, will be mitigated in accordance with the RMS, thereby reducing impacts to a level less than significant.

TABLE 5.1.12-2
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)
Existing disturbance			88
Sunrise Powerlink			45
"S" Line Upgrade 230-kV Transmission Line Project (Imperial Irrigation District)	106	2	2
Imperial Valley Solar (Stirling Energy Systems Two, LLC)	-	6,571	93
Proposed Action-ISEC Solar South (CSOLAR)	837.5	10.1	10.1
ISEC Solar West (CSOLAR)	1071.5	13.7	13.7
SDG&E Photovoltaic Solar Field	-	100	100 ¹
North Gila to Imperial Valley #2 (Southwest Transmission Partners)	-	450	3
Dixieland to IV Substation Line (Imperial Irrigation District)			Footnote 2
Centinela (LS Power) Footnote 3			
Total	2,015	7,146.8	354.8

Source: Recon Environmental, Inc., 2010.

1. This proposed project had not submitted an acceptable development application by the release of the Notice of Preparation; therefore, it is considered a speculative proposal. However, in order to present the most conservative "worst-case" scenario, this project's impacts to biological resources are included in the analysis.
2. This project shares the access route and alignment with ISEC West's preferred alternative route; therefore, would not contribute significant additional habitat impacts in addition to those already considered for the ISEC West project.
3. All other projects listed in Table 5.0-1 are either located outside the geographic scope of cumulative effects analysis for the biological resources or did not submit an application before the Notice of Preparation was released.

Mountain Plover

Occurrence within the Action Area Mountain plovers are known to over-winter in the Imperial Valley, foraging within the large agricultural complex that surrounds El Centro and spans from Mexico to the Salton

Sea. In 2009, the Imperial County Agricultural Crop and Livestock Report (Imperial County 2009) reported approximately 353,128 acres of field crops being grown within this large agricultural complex, including primarily alfalfa hay, Bermuda grass hay, Kleingrass hay, pastured crops, Sudan grass hay, and wheat. An additional 62,237 acres of primarily alfalfa and Bermuda grass were grown as seed crops (Imperial County 2010), totaling over 415,365 acres of alfalfa and grass crops.

Additional grass crop fields are present south of the border in Mexico. Mountain plover forage in the fields at various stages of the crop rotation, including when soils are freshly tilled prior to planting, when the crops are young and vegetative growth is still under 25 centimeters in height, after the crops have been harvested and short stubble is present, and after the fields have been burned to prepare for the next crop.

As the crops and rotation schedules on any given field within the Imperial Valley often differ from year to year, the amount of foraging habitat available to mountain plover at any specific time period would also differ from year to year. Assuming that any given crop/field is suitable as foraging habitat for 50 percent of the wintering months of November through February, either because it provides habitat after being planted until it grows too tall or because the crops are harvested and/or burned mid-winter in preparation for a spring crop, it is estimated that an average of 214,962 acres of foraging habitat would be available at any given time during winter months in Imperial Valley, as detailed in the Table 5.1.12-3.

TABLE 5.1.12-3
Agricultural Crop History For 2005–2009 in the Imperial Valley

Field Crop	Seed Crop	Total	Estimated ¹	Variation ²	Variation ³	
Year	(Acres)	(Acres)	(Acres)	(50% of Total)		
2009	353,128	62,237	415,365	207,683	(30,759)	7,279
2008	412,335	64,547	476,882	238,441	31,583	23,480
2007	352,156	61,561	413,717	206,859	(11,179)	8,103
2006	361,383	74,691	436,074	218,037	14,249	3,076
2005	351,866	55,711	407,577	203,789	11,173	
Average	366,174	63,749	429,923	214,962	214,962	10,622

Source: Imperial County (2006–2010)

Notes: - Variation in acres of estimated foraging habitat varies year by year by 10,000 to 30,000 acres.

- Total estimated foraging habitat is stable or even trending up.

¹ Estimated Habitat Available During Winter Months; ² Variation from Prior Year;

³ Variation from Average

A study conducted in 1999 by the Point Reyes Bird Observatory catalogued the avifauna using the Salton Sea and surrounding agricultural complex (Shuford et al. 2000). In 1999, the study counted approximately 2,486 Mountain Plovers in the Imperial Valley in February, 2,790 in November, and 3,758 in December. The mean number for these three surveys represents about 30–38 percent of the species' estimated population of 8000 to 10,000 individuals (Anonymous 1999 as cited in Shuford et al. 2000). On prior surveys across the California wintering range, the 2,072 and 755 Mountain Plovers recorded in the Imperial Valley in 1994 and 1998, respectively, represented 61 percent and 35 percent of the totals of 3,390 and 2,179 individuals found statewide (B. Barnes in CDFG unpublished data; K. Hunting cited in Shuford et al. 2000). The higher totals in the Imperial Valley in 1999 are thought to reflect an increase in observer coverage there over prior years rather than a population increase (Shuford et al. 2000). In 1999, plovers were distributed widely over the Imperial Valley with no consistent areas of concentration, presumably reflecting the shifting availability of suitable fields with the temporal and spatial variation in cultivation practices (Shuford et al. 2000). Concentrations of plovers in a relatively few sites in February appeared to reflect a preference by plovers for burned fields at that season (Shuford et al. 2000). As seen in Figure 7, the study shows various sized flocks foraging throughout this agricultural complex during the winter months surveyed, including a large assemblage (>250 individuals) observed adjacent to the proposed solar field in the month of February.

A more recent survey, coordinated by the Natural History Museum of Los Angeles County (NHMLAC), was conducted throughout the Imperial Valley on January 21–23, 2011. This survey recorded 877 mountain plovers within approximately 20 percent of the 23 search areas; no mountain plovers were detected south of Interstate 8 (K. Molina, pers. comm. 2011). This study shows a marked decline in population numbers from previous surveys coordinated by the NHMLAC in 2007 (which yielded 4,687 birds within 86 percent of areas surveyed) and in 2008 (which yielded 2,955 birds within 74 percent of the search areas).

This decline in population numbers does not appear to relate directly to the amount of foraging habitat available in the Imperial Valley. As shown in the table above, acreage of agricultural fields fluctuated by tens of thousands of acres between 2005 and 2009, but the fluctuations in acreage remained within ± 15 percent of the average acreage every year (Imperial County 2006, 2007, 2008, 2009, 2010). The population numbers of mountain plover decreased from 2007 to 2008 (K. Molina, pers. comm. 2011), while the acreage of field crops increased from 2007 to 2008.

For all of these reasons, the reduction in potentially suitable foraging habitat caused by the Proposed Action would not be a considerable contribution to any potentially significant cumulative effects with respect to mountain plover foraging habitat within the Imperial Valley Agricultural Complex.

Impacts to Salton Sea

The Proposed Action will result in a temporary fallowing of agricultural land as a result of conversion of the site for solar use. Other cumulative projects previously identified in Table 5.1.9-1, which are proposed on privately-owned agricultural land, will also result in this temporary conversion. Unlike a permanent conversion of agricultural land to urban or industrial use, the solar projects are required to restore the sites back to agricultural use. With respect to the Proposed Action, agricultural runoff caused by temporary agricultural land conversion to solar use is not a significant environmental impact. Unlike a permanent

conversion of agricultural land to urban or industrial use, the solar project is akin to a long-term fallowing because the project is required to restore the site back to agricultural use pursuant to the terms of its lease. Although there is a reduction in water use at the site, the project will continue to contribute relatively clean water to the New River and the Salton Sea from periodic panel washing runoff and stormwater collection systems. The BMP to control the rate of water runoff and reduce water quality impacts are discussed in Chapter 4.11 of the EIR/EA, with a focus on the use of specially designed detention ponds that allow sediments and other types of pollutants to settle to the bottom prior to release of the water downstream, eventually into the Salton Sea.

The Proposed Project's reduction in agricultural water use at the site aids the IID in fulfilling its legal obligations under State Water Resources Control Board orders, the Quantification Settlement Agreement (QSA), and IID Water Transfer Agreement, which includes mitigation of water quality and biological impacts to the Salton Sea. As such, the Proposed Project is consistent with the IID Water Transfer Agreement HCP EIR/EIS, the existing section 7 Biological Opinion, and IID CESA Permit 2081. The IID has created an Equitable Distribution Plan to give itself the flexibility to meet changing circumstances in supply and demand. The Equitable Distribution Plan would essentially create an agricultural fallowing incentive program in the event of a supply/demand imbalance (SDI). By October of each year, the IID staff must forecast water demand and available supply and recommend whether there will be a SDI. With the knowledge that the Proposed Project is anticipated to use only 5 AFY of water during its long lease period, instead of a more intense agricultural water use, IID can account for this lower water demand when determining whether there will be a SDI and may help prevent the need to activate the Equitable Distribution Plan, which will allow more agricultural landowners to use their agricultural water supply, which is expected to result in a neutral impact on water flowing to the Sea.

Likewise, in the years when IID must trigger the Equitable Distribution Plan, the water conservation from the Proposed Project reduces the need to induce fallowing on as many agricultural acres to generate the additional water conservation needed to meet its transfer obligations and Salton Sea mitigation obligations. According to IID's Equitable Distribution Plan Negative Declaration, in 2003, IID implemented a rotation fallowing program to successfully create conserved water to deliver to the Salton Sea and now IID plans to increase fallowing incrementally to a maximum of about 25,000 acres. With the knowledge that the Proposed Project will be using less water, IID can fallow less than the 25,000 acres to produce the same amount of water needed to meet its transfer obligations and conserve water to deliver to the Salton Sea. As such, to the extent IID believes mitigation is needed, IID controls the mitigation by selecting how many farmland acres to enroll in its fallowing program to create the Salton Sea mitigation water.

In addition, IID acknowledged in its Negative Declaration certifying the Equitable Distribution program that the fallowing necessary to provide the transfer and Salton Sea mitigation water would not have a significant impact on water quality or biology. Specifically, it states for biology, "Implementation of the EDP would not have an effect on any biological resources within the IID water service area. The EDP could result in minor short-term changes in the location of water use and therefore, the volume of flows in the drains. However, any changes in the location of flows are expected to be both short-term and negligible, and well within historic variations, and therefore not to result in any adverse effects on biological resources

that rely on the drains for habitat....[i]t is expected that under an SDI [state and federal refuges in the IID service area] will have sufficient supplied to maintain current uses and operations and/or to fulfill obligations under environmental permits issued to IID. No impacts to these areas will occur under the EDP." For water quality, it states, "The proposed EDP would not result in any impacts associated with hydrology and water quality....the magnitude of any potential change is anticipated to be minimal and, due to constant variation in cropping patterns and locations of idled lands, most likely to undetectable when compared to the existing condition."

Finally, Figure 3 of the Negative Declaration shows how insignificant the IID's EDP following program is in comparison with the historic variation in following levels in Imperial Valley. The EIR/EA tiers off this conclusion and incorporates it by reference into the Proposed Project's analysis and response to comments. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=240> Therefore, not only does the Proposed Action reduce the need for as much following under the Equitable Distribution Plan, but Figure 3 demonstrates, even without aiding the IID's Equitable Distribution Plan, the Proposed Action's long-term following of agricultural lands is not significant compared to the historic levels of following in Imperial County. As such, the Proposed Action's agricultural use water reduction is not significant compared to the historic levels of agricultural use water reductions from following activities.

The IID's Equitable Distribution Plan Negative Declaration also analyzed the cumulative impacts of the Equitable Distribution Plan's following program and concluded "Because there are no environmental impacts associated with implementation of the EDP, there are no cumulative impacts to consider." The Proposed Project's conservation of water reduces the need to declare a SDI, aids the IID in meeting its water transfer and mitigation water obligations, and is so far within the historic levels of following within Imperial County that the County has come to the same cumulative impact conclusion as IID did for IID's EDP. Table 5.1.12-4 provides a comparison of the Proposed Action and Alternatives related to cumulative biological resources impacts CEQA.

B. NEPA Impact Analysis

As described above, the Proposed Action has the potential to result in direct and indirect biological resources impacts. However, with the implementation of Mitigation Measures B1 through B9, as identified in Section 4.12 of this EIR/EA, will reduce these impacts. As with the Proposed Action, each of the cumulative projects listed in Table 5.1.12-1 would be required to provide mitigation for impacts to biological resources. Although some quantitative information regarding cumulative project biological impacts was available, such information was not available for most projects. Therefore, the analysis below is conducted qualitatively.

The requirements that the cumulative projects reduce and mitigate their impacts on biological resources come from a variety of statutes and administrative frameworks.

Based on the analysis provided above under the CEQA Impact Analysis, the Proposed Action would comply with the federal and state laws, regulations, and guidelines mentioned above and other laws, regulations and guidelines; and, therefore would not contribute considerably to a cumulative biological

resources impact. Similarly, the cumulative actions within the geographic scope of the Proposed Action will be required to comply with the legal frameworks set forth above, as well as others. The cumulative actions will be required to mitigate their impacts. Because the identified laws, regulations and guidelines are implemented at the federal, State, and local level through NEPA, CEQA, and local planning compliance, they form comprehensive protection scheme for the biological resources identified in EIR/EA Section 4.12.

Furthermore, cumulative impacts on biological resources were analyzed in the Solar Programmatic Environmental Impact Statement (see EIR PEIS page 6-96). BLM and DOE analyzed the cumulative impacts of solar development across a six-state study area and found that cumulative impacts on wildlife and aquatic biota from foreseeable development in the six-state region would be small provided mitigation measures to preserve important habitat and migration corridors are implemented (or sufficient alternative lands are set aside as compensation).

As shown in Table 5.1.12-2 above, the habitat disturbances that have occurred since the adoption of the FTHL Management Strategy and those that could result from the Proposed Actions and the reasonably foreseeable projects are estimated to impact a total of 354.8 acres of the 60,200-acre Yuha MA. These habitat disturbances constitute approximately 0.5 percent of the 1% of habitat take allowable within the Yuha MA. These impacts, still under the 1% threshold for impacts acreage, will be mitigated in accordance with the RMS, thereby reducing these impacts.

Mountain Plover

Based on the analysis provided above under the CEQA Impact Analysis, it is estimated that an average of 214,962 acres of foraging mountain plover habitat would be available at any given time during winter months in Imperial Valley.

A study conducted in 1999 by the Point Reyes Bird Observatory catalogued the avifauna using the Salton Sea and surrounding agricultural complex (Shuford et al. 2000). In 1999, the study counted approximately 2,486 Mountain Plovers in the Imperial Valley in February, 2,790 in November, and 3,758 in December. The mean number for these three surveys represents about 30–38 percent of the species' estimated population of 8000 to 10,000 individuals (Anonymous 1999 as cited in Shuford et al. 2000). On prior surveys across the California wintering range, the 2,072 and 755 Mountain Plovers recorded in the Imperial Valley in 1994 and 1998, respectively, represented 61 percent and 35 percent of the totals of 3,390 and 2,179 individuals found statewide (B. Barnes in CDFG unpublished data; K. Hunting cited in Shuford et al. 2000). The higher totals in the Imperial Valley in 1999 are thought to reflect an increase in observer coverage there over prior years rather than a population increase (Shuford et al. 2000). In 1999, plovers were distributed widely over the Imperial Valley with no consistent areas of concentration, presumably reflecting the shifting availability of suitable fields with the temporal and spatial variation in cultivation practices (Shuford et al. 2000). Concentrations of plovers in a relatively few sites in February appeared to reflect a preference by plovers for burned fields at that season (Shuford et al. 2000). As seen in Figure 7, the study shows various sized flocks foraging throughout this agricultural complex during the winter months surveyed, including a large assemblage (>250 individuals) observed adjacent to the proposed solar field in the month of February.

A more recent survey, coordinated by the Natural History Museum of Los Angeles County (NHMLAC), was conducted throughout the Imperial Valley on January 21–23, 2011. This survey recorded 877 mountain plovers within approximately 20 percent of the 23 search areas; no mountain plovers were detected south of Interstate 8 (K. Molina, pers. comm. 2011). This study shows a marked decline in population numbers from previous surveys coordinated by the NHMLAC in 2007 (which yielded 4,687 birds within 86 percent of areas surveyed) and in 2008 (which yielded 2,955 birds within 74 percent of the search areas).

This decline in population numbers does not appear to relate directly to the amount of foraging habitat available in the Imperial Valley. As shown in the table above, acreage of agricultural fields fluctuated by tens of thousands of acres between 2005 and 2009, but the fluctuations in acreage remained within ± 15 percent of the average acreage every year (Imperial County 2006, 2007, 2008, 2009, 2010). The population numbers of mountain plover decreased from 2007 to 2008 (K. Molina, pers. comm. 2011), while the acreage of field crops increased from 2007 to 2008.

For all of these reasons, the reduction in potentially suitable foraging habitat caused by the Proposed Action would not be a considerable contribution to a cumulative impact with respect to mountain plover foraging habitat within the Imperial Valley Agricultural Complex.

Impacts to Salton Sea

The Proposed Action will result in a temporary fallowing of agricultural land as a result of conversion of the site for solar use. Other cumulative projects previously identified in Table 5.1.9-1, which are proposed on privately-owned agricultural land, will also result in this temporary conversion. Unlike a permanent conversion of agricultural land to urban or industrial use, the solar projects are required to restore the sites back to agricultural use. With respect to the Proposed Action, agricultural runoff caused by temporary agricultural land conversion to solar use is not a significant environmental impact. Unlike a permanent conversion of agricultural land to urban or industrial use, the solar project is akin to a long-term fallowing because the project is required to restore the site back to agricultural use pursuant to the terms of its lease. Although there is a reduction in water use at the site, the project will continue to contribute relatively clean water to the New River and the Salton Sea from periodic panel washing runoff and stormwater collection systems. The BMP to control the rate of water runoff and reduce water quality impacts are discussed in Chapter 4.11 of the EIR/EA, with a focus on the use of specially designed detention ponds that allow sediments and other types of pollutants to settle to the bottom prior to release of the water downstream, eventually into the Salton Sea.

The Proposed Project's reduction in agricultural water use at the site aids the IID in fulfilling its legal obligations under *State Water Resources Control Board* orders, the Quantification Settlement Agreement (QSA), and IID Water Transfer Agreement, which includes mitigation of water quality and biological impacts to the Salton Sea. As such, the Proposed Project is consistent with the IID Water Transfer Agreement HCP EIR/EIS, the existing section 7 Biological Opinion, and IID CESA Permit 2081. The IID has created an Equitable Distribution Plan to give itself the flexibility to meet changing circumstances in supply and demand. More detail regarding this Plan is provided above under the CEQA Impact Analysis section. Therefore, not only does the Proposed Action reduce the need for as much fallowing under the Equitable

Distribution Plan, even without aiding the IID's Equitable Distribution Plan, the Proposed Action's long-term fallowing of agricultural lands is not significant compared to the historic levels of fallowing in Imperial County. As such, the Proposed Action's agricultural use water reduction is not a considered a cumulative impact as compared to the historic levels of agricultural use water reductions from fallowing activities.

The IID's Equitable Distribution Plan Negative Declaration also analyzed the cumulative impacts of the Equitable Distribution Plan's fallowing program and concluded "Because there are no environmental impacts associated with implementation of the EDP, there are no cumulative impacts to consider." The Proposed Project's conservation of water reduces the need to declare a SDI, aids the IID in meeting its water transfer and mitigation water obligations, and is so far within the historic levels of fallowing within Imperial County that the County has come to the same cumulative impact conclusion as IID did for IID's EDP. Table 5.1.12-4 provides a comparison of the Proposed Action and Alternatives related to cumulative biological resources impacts under NEPA.

TABLE 5.1.12-4
Comparison of Alternatives for Cumulative
Biological Resources Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to biological resources will not result in a significant cumulative impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant cumulative impact to biological resources under CEQA.	As with the Proposed Action, this alternative would not result in a significant cumulative impact to biological resources under CEQA.	This alternative would avoid any impact to biological resources, as no development would occur under this alternative.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to biological resources will not result in a cumulative impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative impact to biological resources under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative impact to biological resources under NEPA.	This alternative would avoid any impact to biological resources, as no development would occur under this alternative.

Source: BRG Consulting, Inc., 2011

This page intentionally left blank.

5.1.13 Paleontological Resources

5.1.13.1 *Geographic Scope and Timeframe*

Table 5.1.13-1 lists the projects considered for the paleontological resources cumulative impacts analysis. The rationale for inclusion or non-inclusion of each cumulative project as it relates to paleontological resources is presented in Table 5.1.13-1. The geographic scope for the analysis of cumulative impacts related to paleontological resources within the Mount Signal area 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' 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' contour, the geographic scope was expanded to one mile around the 40' 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. 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." (BLM NEPA Handbook § 6.8.3.2.) 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 paleontological resources in the vicinity of the Proposed Action.

The cumulative impact to paleontological resources in the geographic scope of the Proposed Action is defined as the incremental physical impact to such resources of the Proposed Action when added to other closely related past, present, and reasonably foreseeable probable future projects.

5.1.13.2 *Existing Conditions*

The site of the Proposed Action (which includes the solar energy facility and transmission corridor) 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.

TABLE 5.1.13-1
List of Projects Considered for Paleontological Resources Cumulative Impact Analysis

Project Name		Included in Paleontological Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Paleontological Resources CI Analysis?	Impacts to Paleontological Resources
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	No paleontological resources impacted
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	The paleontological formations on the project site that have moderate to high sensitivity could be adversely affected during construction as a result of disturbance by grading or construction activities. However, impacts to paleontological resources would be reduced with implementation of mitigation measures identified in the FEIS. No impacts to paleontological resources are anticipated during the operation of the project.
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	Potential to impact paleontological resources with a high sensitivity rating during construction. However, impacts to paleontological resources would be reduced to a level less than significant with implementation of mitigation measures identified in the EIR/EIS.
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	<p>Paleontological resources potentially located on the project site could be adversely affected during construction of the solar energy facility and transmission lines as a result of disturbance by 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, with the implementation of mitigation measures, paleontological resource impacts during construction would not be significant.</p> <p>No significant impacts to paleontological resources are anticipated during operation of the ISEC West project.</p>

Project Name	Included in Paleontological Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Paleontological Resources CI Analysis?	Impacts to Paleontological Resources	
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	<p>Paleontological resources potentially located on the project site could be adversely affected during construction of the solar energy facility and transmission lines as a result of disturbance by 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, with the implementation of mitigation measures, paleontological resource impacts during construction would not be significant.</p> <p>No significant impacts to paleontological resources are anticipated during operation of the Proposed Action.</p>
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	STP is preparing a Plan of Development. NEPA analysis has not yet commenced.	N/A
8	Centinela Solar Power, LLC (CACA-052092)	No	The level of information available regarding this project was insufficient to	N/A

Project Name	Included in Paleontological Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Paleontological Resources CI Analysis?	Impacts to Paleontological Resources
		determine the project's potential impacts at the time this evaluation was prepared.	
9	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
10	Yes	--	One paleontological resource was previously identified within a 1-mile radius of the project site. Fossils collected at this resource include freshwater invertebrates and terrestrial vertebrates and were identified within Quaternary lake deposits associated with ancient Lake Cahulla. Sensitivity to paleontological resources in Quaternary lake deposits is considered high. Implementation of mitigation measures would reduce the impact to a level less than significant.
11	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A

Project Name		Included in Paleontological Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Paleontological Resources CI Analysis?	Impacts to Paleontological Resources
12-29	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
30	LADWP and OptiSolar Power Plant	No	Applicant Withdrawn	N/A
31	Orni 18, LLC Geothermal Power Plant	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
32	U.S. Naval Air Facility El Centro	No	This project occurs outside the scope for cumulative projects for this resource issue.	N/A
33	Recreation Activities	Yes	--	Because OHV use is permitted, such activity has the potential to impact paleontological resources.
34	Recreation Activities	Yes	--	This area is located within the Yuha Desert ACEC. This region is rich with paleontological resources and recreational activities such as OHV use may result in impacts to paleontological resources.
35-37	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
38	IV Substation (TermoElectrica US, LLC)	Yes	--	Potential to impact paleontological resources. The applicant would commit to stringent monitoring and mitigation requirements to protect paleontological resources. Several features of the projects' design and construction methods are intended to reduce the amount of surface disturbance and therefore the potential impacts on environmental resources.

Project Name	Included in Paleontological Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Paleontological Resources CI Analysis?	Impacts to Paleontological Resources	
			<p>These include locating the support structures (steel lattice towers, crossing structures, and steel monopoles) so that new access roads can be kept as short as possible; using existing access roads to the maximum extent possible; and using a helicopter to place lattice tower assemblies onto footings to reduce the amount of ground disturbance that would otherwise be caused by the use of lay-down areas and operation of cranes.</p>	
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	<p>Potential to impact paleontological resources. The applicant would commit to stringent monitoring and mitigation requirements to protect paleontological resources. Several features of the projects' design and construction methods are intended to reduce the amount of surface disturbance and therefore the potential impacts on environmental resources. These include locating the support structures (steel lattice towers, crossing structures, and steel monopoles) so that new access roads can be kept as short as possible; using existing access roads to the maximum extent possible; and using a helicopter to place lattice tower assemblies onto footings to reduce the amount of ground disturbance that would otherwise be caused by the use of lay-down areas and operation of cranes.</p>
40	IV Substation (SDG&E)	No	No paleontological resources impact identified	
41-63	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A

Source: BRG Consulting, Inc., 2011

Lake Cahuilla deposits have also yielded vertebrate fossils, including teeth and bones of birds, horses, bighorn sheep, and reptiles. Therefore, the paleontological sensitivity of these lakebed deposits within the project site boundary is considered to be high.

In addition, the BLM uses a Potential Fossil Yield Classification (PFYC) System that classifies the paleontological resource sensitivity for geologic units and assists in determining proper mitigation approaches for surface disturbing activities. The PFYC uses five classes, with Class 1 being Very Low Potential and Class 5 being Very High Potential. According to the BLM's PFYC System, the lakebed deposits of ancient Lake Cahuilla located within the project site is identified as Class 4b. Class 4b is defined by the BLM as an area underlain by geologic units with high potential to yield fossils but have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation due to alluvial material, or other conditions that may lessen or prevent potential impacts to the bedrock resulting from the activity. Management concern for paleontological resources in Class 4 is moderate to high, depending on the proposed action. For the Proposed Action, the management concern for paleontological resources is considered to be high.

5.1.13.3 Effects of the Proposed Action

Paleontological resources potentially located on the project site could be adversely affected during construction of the solar energy facility and transmission lines as a result of disturbance by 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, with the implementation of Mitigation Measures P1 through P5 (as identified in EIR/EA Section 4.13 Paleontological Resources), paleontological resource impacts during construction would not be significant under CEQA.

No significant impacts under CEQA to paleontological resources are anticipated during operation of the Proposed Action.

5.1.13.4 Cumulative Impact Analysis

A. CEQA 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. As discussed above, there is a potential for paleontological resources on the project site to be impacted during construction of the Proposed Action. However, the impact to paleontological resources would be mitigated with implementation of Mitigation Measures PR1 through PR5, as identified in EIR/EA Section 4.13 of this EIR/EA.

As noted in the BLM's Paleontological Resource Guidelines is discretionary. 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. 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 PR1 through PR5. With implementation of Mitigation Measures PR1 through PR5, the Proposed Action's impacts are reduced to such an extent that they would not have a considerable contribution to a cumulative impact to paleontological resource, if any. With avoidance of impacts, and/or recovery of fossil materials and field data as well as confirmed museum deposition, the Proposed Action's incremental contribution to any cumulative impact is less than significant under CEQA. Table 5.1.13-2 provides a comparison of the Proposed Action and Alternatives related to cumulative paleontological resources impacts under CEQA.

**TABLE 5.1.13-2
Comparison Of Alternative For Cumulative
Paleontological Resources Impacts**

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action and Mitigation Measures PR1 – PR5, in conjunction with applicable cumulative projects as it relates to paleontological resources will not result in a significant cumulative impact under CEQA.	As with the Proposed Action, this alternative as mitigated by implementation of Mitigation Measures PR1 – PR5 would not result in a significant, cumulative impact to paleontological resources under CEQA.	As with the Proposed Action, this alternative as mitigated by implementation of Mitigation Measures PR1 – PR5 would not result in a significant, cumulative impact to paleontological resources under CEQA.	This alternative would avoid any impact to paleontological resources, as no development would occur under this alternative.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action and Mitigation Measures PR1 – PR5, in conjunction with applicable cumulative projects as it relates to paleontological resources will not result in a cumulative impact under NEPA.	As with the Proposed Action, this alternative as mitigated by implementation of Mitigation Measures PR1 – PR5 would not result in a cumulative impact to paleontological resources under NEPA.	As with the Proposed Action, this alternative as mitigated by implementation of Mitigation Measures PR1 – PR5 would not result in a cumulative impact to paleontological resources under NEPA.	This alternative would avoid any impact to paleontological resources, as no development would occur under this alternative.

Source: BRG Consulting, Inc., 2011

B. 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. As discussed above, there is a potential for paleontological resources on the project site to be impacted during construction of the Proposed Action. However, the impact to paleontological resources would be mitigated with implementation of Mitigation Measures PR1 through PR5, as identified in EIR/EA Section 4.13 of this EIR/EA.

As noted in the BLM's Paleontological Resource Guidelines is discretionary. 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. 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 PR1 through PR5. With implementation of Mitigation Measures PR1 through PR5, the Proposed Action's impacts are reduced. With avoidance of impacts, and/or recovery of fossil materials and field data as well as confirmed museum deposition, the Proposed Action's would not result in incremental contribution to a cumulative paleontological resources impact under NEPA. Table 5.1.13-2 provides a comparison of the Proposed Action and Alternatives related to cumulative paleontological resources impacts under NEPA.

This page intentionally left blank.

5.1.14 Socioeconomics and Environmental Justice

5.1.14.1 *Geographic Scope and Timeframe*

Table 5.1.14-1 lists the projects considered for the socioeconomics and environmental justice cumulative impact analysis. The geographic scope of cumulative impacts related to socioeconomics and environmental justice is Imperial County. This is an appropriate area to consider because the impacts of the Proposed Action on socioeconomic factors such as public services and benefits would be manifested in Imperial County. The geographic scope for the labor force would be the Counties of Imperial, San Diego, Riverside, and San Bernardino. This is the appropriate geographic for cumulative labor force impacts because those Counties comprise a two-hour commute radius, and workers are unlikely to commute from further distances.

The cumulative impacts timeframe is the construction phase of the Proposed Action in the short term, and the operational phase in the long term.

5.1.14.2 *Existing Conditions*

According to the employment characteristics from the California Employment Development Department, in June 2010, Imperial County's civilian labor force was estimated to be 76,400 persons. Of this number, 55,300 were employed and 21,100 were unemployed. The unemployment rates (not seasonally adjusted) for Imperial County, the State of California, and the United States for June 2010 were 27.6 percent, 12.2 percent, and 9.6 percent, respectively. Imperial County's unemployment rate substantially exceeds that of the State of California and the United States.

The three largest sectors with the largest employment in Imperial County are agriculture, government, trade, transportation and utilities. Like many other sectors in Imperial County, these three sectors have experienced job loss due to the recent downturn in the economy.

The project site is located within Imperial County Census Tract 011900, which has a total 2000 population of 3,938. The census tract has a predominately Hispanic or Latino ethnic composition of the overall population. The median household income in this census tract is \$32,273. As such, this census tract is considered a low-income and minority neighborhood.

The City of Calexico is the closest city to the Proposed Action site, located approximately 11 miles east of the Proposed Action site. The median household income for the City of Calexico is \$28,929 and the percentage of the population not in the labor force is 47.1%. The next closest city to the Proposed Action site is the City of El Centro, located approximately 12 miles northeast. The City of El Centro has a median household income of \$33,161 and the percentage of the population not in the labor force is 44.2%. The percentage of families living in poverty in the City of Calexico and City of El Centro are 20.6% and 22.6%, respectively. Similar to the census tract where the Proposed Action is located, the cities in the vicinity of the Proposed Action site are considered low-income and minority neighborhoods.

TABLE 5.1.14-1
List of Projects Considered for Socioeconomic Conditions and Environmental Justice
Cumulative Impact Analysis

Project Name		Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	The proposed project would increase electric reliability by upgrading the structural capacity of the transmission line to meet regulations and future demand and by providing enhanced infrastructure, and indirectly induce planned growth. Improved dependability of the electrical service to the area serves planned residences and businesses and provides additional service for future needs. No existing housing or residents would be displaced by the proposed project.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	Because the majority of the construction workforce currently resides within Imperial, San Diego, San Bernardino, and Riverside Counties, construction, operation, and decommissioning of the project would have little impact with respect to inducing substantial population growth. Inducement of substantial population growth either directly or indirectly by the project would not be adverse. The labor force would be within commuting distance of the project site. As such, it is anticipated that a majority of construction workers would commute to the site daily from their existing residences. No new housing construction would be required. Furthermore, the project would not displace any people or necessitate construction of replacement housing elsewhere.

	Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	<p>The Sunrise Powerlink Transmission Project would result in socioeconomics/environmental justice impacts due to the following:</p> <ol style="list-style-type: none"> 1. Project construction and/or transmission line presence would cause a substantial change in revenue for businesses, tribes, or government. 2. Construction would disrupt the existing utility systems or cause a collocation accident. 3. Project construction and operation would increase the need for public services and facilities. 4. Visual impact would constitute a significant and unmitigable environmental impact to a high-minority group (Barona Reservation). 5. Air quality impact would constitute a significant and unmitigable environmental impact to a high-minority group (Barona Reservation).
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	<p>Based on the available housing stock, there are anticipated to be more than enough vacant homes to support any project-related immigration. As such, the construction of the ISEC West project would place a negligible, temporary demand on housing, which is not considered a significant impact. The project would not displace any residents or traverse an established community because the project would be located on agricultural land and within a designated utility corridor. Furthermore, the project will provide beneficial effects on the surrounding area by providing social and environmental benefits, promoting stable electricity prices, reducing reliance on imported fuels, protecting public health, and benefits to communities with minority or low-income populations by creating local employment opportunities.</p>

Project Name		Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	Based on the available housing stock, there are anticipated to be more than enough vacant homes to support any project-related immigration. As such, the construction of the Proposed Action would place a negligible, temporary demand on housing, which is not considered a significant impact. The Proposed Action would not displace any residents or traverse an established community because the project would be located on agricultural land and within a designated utility corridor. Furthermore, the Proposed Action will provide beneficial effects on the surrounding area by proving social and environmental benefits, promoting stable electricity prices, reducing reliance on imported fuels, protecting public health, and benefits to communities with minority or low-income populations by creating local employment opportunities.
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	STP is preparing a Plan of Development. NEPA analysis has not yet commenced.	

	Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
8	Centinela Solar Power, LLC (CACA-052092)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects			The project would not displace substantial numbers of people or existing housing. Beneficial effects would result such as a change in revenue for businesses, tribes or governments. Property tax revenues from project presence would benefit public agencies. The construction and operation of the project would not result in disproportionately high or adverse effects on minority or low-income populations.
10	Dixieland Connection to IID Transmission System	Yes	--	No significant permanent environmental impacts would result from this project. Potentially significant impacts can be fully mitigated to a less-than-significant level. Therefore, no permanent adverse human health effects or permanent adverse environmental effects are likely to affect any population near the project site. No permanent impacts to low-income or minority groups are anticipated.
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time	

Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
		this evaluation was prepared.	
12	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
13	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
14	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

Project Name		Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
15	Energy Solar Source II, LLC	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
16	Salton Sea Solar Farm I	No	The development application was received after the NOP was published.	
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published.	
18	Calipat Solar Farm I	No	The development application was received after the NOP was published.	
19	Calipat Solar Farm II	No	The development application was received after the NOP was published.	
20	Midway Solar Farm I	No	The development application was received after the NOP was published.	

Project Name		Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	
22-31	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	The level of information available regarding these projects was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
32	U.S. Naval Air Facility El Centro	No	Existing facility. No additional socioeconomic and environmental justice impacts.	
33	Recreation Activities	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

Project Name		Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
34	Recreation Activities	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
35	U.S. Gypsum Mining	Yes	--	<p>The project relies on water supply wells located in the Ocotillo/Coyote Wells Groundwater Basin which includes several communities. These communities rely on the Ocotillo/Coyote Wells groundwater basin as their sole source of potable water. The project anticipates increasing groundwater pumping from these existing wells. Several areas within the affected region have minority and low-income census tracts. However, the areas of direct impacts relative to Water Supply have both a minority population and a low-income population well below the respective County percentages. Therefore, no disproportionate effects on minority of low-income communities have been identified.</p> <p>The project would contribute 140 new jobs through direct employment and also contribute to the economic well-being of Imperial County through secondary effects such as commerce and increased consumer spending in local communities.</p>
36	California State Prison, Centinela	No	Existing facility. No additional socioeconomic	

Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
			conditions and environmental justice impacts.
37	Recreation Activities	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
38	IV Substation (TermoElectrica US, LLC, aka Sempra)	Yes	<p>--</p> <p>Temporary impacts from noise and dust emissions during transmission line construction and more long-term impacts from noise in the vicinity of the transmission lines would not contribute to high and adverse impacts to the general population or to disproportionately high and adverse impacts to minority and low-income populations in any block group.</p> <p>Environmental justice impacts due to power plant emissions would not contribute to high and adverse impacts to general population or to disproportionately high and adverse impacts to minority and low-income populations in any block group because emissions were found to be negligible.</p>
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	<p>--</p> <p>Temporary impacts from noise and dust emissions during transmission line construction and more long-term impacts from noise in the vicinity of the transmission lines would not contribute to high and adverse impacts to the general population or to disproportionately high and adverse impacts to minority and low-income populations in any block group.</p>

Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
			Environmental justice impacts due to power plant emissions would not contribute to high and adverse impacts to general population or to disproportionately high and adverse impacts to minority and low-income populations in any block group because emissions were found to be negligible.
40	IV Substation (SDG&E)	No	Existing line that was built in 1982. No additional socioeconomic conditions and environmental justice impacts.
41-49	*Please Refer to Table 5-1 for a complete list of Potential Projects Considered for the Cumulative Impact Analysis	No	The level of information available regarding these projects was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
50	Mosaic	Yes	<p>The proposed project site is primarily vacant with the exception of one mobile home. However, the project would not require a large amount of existing residences or people to be displaced and no replacement housing is necessary. Therefore, no impact is identified for the issue area.</p> <p>The proposed project involves approval of a Specific Plan, which will ensure that public services and facilities are</p>

Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
			provided to serve development and the service needs of future residents.
51	Yes	--	<p>The proposed project would result in the development of commercial highway uses and a casino resort complex/hotel, which will increase local employment opportunities. As discussed in the EIR, "in-migration" is when new workers, who had previously lived and worked outside the region, move to a location that is closer to their new place of employment. This phenomenon is not anticipated to occur because the unemployment rate in Calexico is already high, which indicates that most of the people who would work at the proposed project site already live within the area. Therefore, the proposed project would not alter the growth rate of the human population planned for the area.</p> <p>Furthermore, the project site is currently vacant. No existing residences would be displaced and no replacement housing is necessary for the development of the proposed project. Therefore, implementation of the proposed project would not result in a significant impact to housing/population.</p>
52	Yes	--	<p>The proposed project would not displace homes or people. Although the proposed project would provide more jobs, this would not likely induce anymore population growth than is already expected, and thus, the project would result in less than significant impacts on population and housing.</p>
53	Yes	--	<p>The proposed project is the expansion of the County Center II and will include the development of government, institutional, and commercial uses. "In-migration" is when new workers, who had previously lived and worked outside the region, move to a location that is closer to their new place of</p>

Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
			<p>employment. This phenomenon is not anticipated to occur because the unemployment rate in Imperial County is already high, which indicates that most of the people who would potentially work at the project site already live within the area. Therefore, the proposed project would not alter the growth rate of the human population planned for the area.</p> <p>Furthermore, the project site is currently developed with the County Center II and used for agricultural production. No existing residences would be displaced and no replacement housing is necessary for the development of the proposed project. Therefore, the implementation of the proposed project would not result in a significant impact to population/housing.</p>
54	Desert Springs Resort	Yes	--
55	Coyote Wells (Wind Zero)	Yes	--

Project Name	Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
56-59	No	The level of information available regarding these projects was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
60	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	
61	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

Project Name		Included in Socioeconomic Conditions and Environmental Justice Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Socioeconomic Conditions and Environmental Justice CI Analysis?	Impacts to Socioeconomic Conditions and Environmental Justice
62	Seeley Wastewater Treatment Plant Upgrade	Yes	--	Because of the limited population in the town of Seeley, construction workers would most likely be from larger nearby cities such as El Centro. While there is limited housing in the town of Seeley, workers could easily commute from cities and towns within the El Centro region. Because of the limited number of workers required during for the project, and the available works and high unemployment rate, it is expected that there would be no potentially significant socioeconomic impacts.
63	Cahuilla Gold Project	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	

Source: BRG Consulting, Inc., 2011

5.1.14.3 *Effects of the Proposed Action*

As identified in Section 4.14 of this EIR/EA, the Proposed Action would not trigger any other development that would place socioeconomic/environmental justice burdens on the County of Imperial and nearby cities.

The Proposed Action is expected to consist of 250 workers during the temporary construction phase. The construction activities are expected to require approximately 17 months. During operations and maintenance of the proposed facilities, approximately four fulltime personnel would be required. Some of the workers would be recruited locally and available through the existing labor pool, and some would be specialized technical workers from outside of the local area. Most workers are expected to stay in local hotels or rental housing units. Based on the available regional housing stock, there are anticipated to be more than enough vacant homes to support any project-related immigration under the Proposed Action. The California Department of Finance estimates Imperial County's housing vacancy rate was 10.91 percent on January 1, 2010, which equated to over 6,100 vacant housing units. Therefore, based on the available regional housing stock, there are anticipated to be more than enough vacant homes to support any project-related immigration under the Proposed Action. As such, the Proposed Action would not displace any existing housing or displace any people, necessitating the construction of replacement housing elsewhere.

The Proposed Action would be constructed in an uninhabited area. The portion of the project site within the County of Imperial is currently used for agricultural production. The transmission line corridor and portion of the access road are located on existing BLM land. Therefore, the Proposed Action would not displace people or existing housing. In addition, the proposed transmission line would be constructed within an area on BLM land currently designated as a utility corridor and would not physically divide any community. Therefore, no significant impact is identified for this issue area.

Thus, the construction of the Proposed Action would place a negligible, temporary demand on housing, which is not considered a significant impact under CEQA.

Imperial County predominately consists of minority and low-income individuals. However, the Proposed Action is considered a public benefit and would not result in environmental effects to the minority population residing within and surrounding the Imperial County area. The Proposed Action would not displace any residents or traverse an established community because the project would be located on agricultural land and within a designated utility corridor.

According to the property owners of the site, a total of two employees were employed for the harvesting or planting period. In 2009, one person was employed year round and one additional person from May through November for labor work. It is estimated that 1.25 employees would lose their job if the ranch were taken out of production and placed in a fallowing program. According to Kelly Strickland of Cassidy Turley BRE Commercial, Renewable Energies Division, the employment of security alone for the solar facility will generate more employment than the current agriculture use. As such, the construction and operation of the solar energy facility is considered a public benefit by providing employment opportunities to low-

income and minority populations in the area. The placement of the Proposed Action in this portion of the County would not result in adverse effects or impacts that are appreciably more severe in magnitude or are predominately borne by any segment of the population, such as household population with low income or a minority population in comparison with a population that is not low income or minority.

The Proposed Action will provide beneficial effects on the surrounding area by providing social and environmental benefits, promoting stable electricity prices, reducing reliance on imported fuels, protecting public health, and benefits to communities with minority or low-income populations by creating local employment opportunities.

5.1.14.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

Imperial County has been hard hit by the recent downturn in the economy. The Proposed Action, in conjunction with other cumulative projects would benefit Imperial County in the short-term by creating local construction work, and in the long-term with work associated with the operation of projects. Imperial County has an unemployment rate of 27.6 percent, which is currently higher than the unemployment rate of the State of California and United States. Like the Proposed Action, cumulative projects could have similar beneficial impacts because the construction and operation of the projects would provide local employment, which in turn could lower the unemployment rate in Imperial County.

In addition, the current housing vacancy rate for Imperial County is 12.3%. The current annual average unemployment rate for Imperial County is 28.3%. The proposed project would require approximately 250 construction workers during the temporary construction period and four employees during the long-term operation of the project; however, due to the current workforce (high unemployment rate) and housing supply in Imperial County no substantial adverse impacts on housing or the displacement of residents would occur with implementation of the Proposed Action. Therefore, the Proposed Action is anticipated to contribute to beneficial socioeconomic effects and would not contribute to any cumulative adverse socioeconomic and environmental justice impacts under CEQA in Imperial County. Table 5.1.14-2 provides a comparison of the Proposed Action and Alternatives related to cumulative socioeconomics and environmental justice impacts under CEQA.

B. NEPA Impact Analysis

No direct or indirect impacts on housing or the displacement of residents would occur with implementation of the Proposed Action. Based on the analysis provided above under the CEQA Impact Analysis, the Proposed Action is anticipated to contribute to beneficial socioeconomic effects and would not contribute to a cumulative socioeconomic and environmental justice impact in Imperial County. Table 5.1.14-2 provides a comparison of the Proposed Action and Alternatives related to cumulative socioeconomics and environmental justice impacts under NEPA.

TABLE 5.1.14-2
Comparison Of Alternatives For Cumulative
Socioeconomics And Environmental Justice Impacts

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to socioeconomics and environmental justice, will not result in a cumulative impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative socioeconomics and environmental justice impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative socioeconomics and environmental justice impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative socioeconomics and environmental justice impact under CEQA.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to socioeconomics and environmental justice, will not result in a cumulative impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative socioeconomics and environmental justice impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative socioeconomics and environmental justice impact under NEPA.	As with the Proposed Action, this alternative would not result in a significant, cumulative socioeconomics and environmental justice impact under NEPA.

Source: BRG Consulting, Inc., 2011

5.1.15 Recreation

5.1.15.1 *Geographic Scope and Timeframe*

Table 5.1.15-1 lists the projects considered for the geology/soils and mineral resources cumulative impact analysis. The geographic scope for the analysis of cumulative impacts related to recreation includes the local and regional recreation facilities in the County of Imperial. This is the appropriate geographic scope because the Proposed Action is located entirely within the County of Imperial and is not expected to have direct or indirect effects on recreation beyond the County.

5.1.15.2 *Existing Conditions*

As discussed in EIR/EA Section 3.15, the proposed solar energy facility site is located on private land designated for agricultural use in the County of Imperial and is not designated or zoned for recreation use. The transmission line corridor would be located within an area currently designated by the BLM as Utility Corridor “N.” The entire transmission line corridor is located 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 overall 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 23, 33, and 14.6 miles away from the proposed project site, respectively.

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. Table 3.15-1 describes the recreation areas in the vicinity of the project site.

5.1.15.3 *Effects of the Proposed Action*

The Limited Use designation of the transmission line corridor and portion of the access road within BLM lands are suitable for recreation, but limits all motorized travel to designated routes. Utility Corridor “N” is not designated for OHV recreation; however, the BLM lands located adjacent to the Utility Corridor “N” can be used for OHV recreation. Also, the existing dirt access road proposed to be utilized for access to the solar facility site is not designated as a route under the WECO plan. With the installation of the transmission line corridor within the designated Utility Corridor “N” and access road, the Proposed Action would not preclude the surrounding BLM lands to be used for recreational uses, such as OHV recreation, and impacts to recreational uses would be de minimis. In addition, the Proposed Action would not construct access routes within the BLM lands that could potentially be used as a corridor for OHV use. The Proposed Action involves widening an existing dirt road, which a portion of which traverses BLM lands for construction and

TABLE 5.1.15-1
List of Projects Considered for Recreation Resources Cumulative Impact Analysis

	Project Name	Included in Recreation Resources Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation Resources CI Analysis?	Impacts to Recreation Resources
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	The proposed project would not increase the demand for parks or other recreations facilities. The proposed project does not include recreational facilities and would not have an adverse effect on surrounding areas.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	<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:</p> <ul style="list-style-type: none"> • off highway vehicle (OHV) Open Routes; • the Anza Trail Corridor Historical context <p>Impacts associated with the conversion of recreation land uses would result in unavoidable adverse impacts after the implementation of mitigation measures.</p>
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	The proposed 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 de-designation of affected wilderness lands, thereby resulting in significant, unmitigatable 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.

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	Because no significant recreation impacts have been identified for this project, no mitigation measures have been proposed.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	Because no significant recreation impacts have been identified for this project, no mitigation measures have been proposed.
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	Yes	--	Located on approximately 100 acres of Federal land directly adjacent to SDG&E's IV Substation.
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
8	Centinela Solar Power, LLC (CACA-052092)	Yes	--	Located on approximately 2,067 acres of privately owned agricultural land in the western portion of Imperial County near the IV Substation. The proposed transmission line corridor will follow the 230-kV lines from the international border going north.
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A
10	Dixieland Connection to IID Transmission System	Yes	--	The proposed project would result in construction operations within an area that is used for limited recreation, including hiking, camping, off-road-vehicle use, and horseback riding. The permanent components of the Proposed Action would not interfere with the continuation of these uses and the

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
			maintenance road may result in increased exploration by recreation users. Because interruptions to recreation use would only be temporary, the proposed project would not have a potentially adverse effect on recreational resources or create any new demand for such resources.
11 Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	Yes	--	Located on 1,375 acres of privately owned land located 2.5 to 7.5 miles west of Calexico in southern Imperial County. ROW is located within BLM lands.
12 Superstition Solar 1	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
13 Bethel Solar X, Inc.	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
14 Energy Solar Source I, LLC	No	The level of information available regarding this project was insufficient to determine the project's potential	N/A

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
			impacts at the time this evaluation was prepared.
15	Energy Solar Source II, LLC	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared. N/A
16	Salton Sea Solar Farm I	No	The development application was received after the NOP was published. N/A
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published. N/A
18	Calipat Solar Farm I	No	The development application was received after the NOP was published. N/A
19	Calipat Solar Farm II	No	The development application was received after the NOP was published. N/A
20	Midway Solar Farm I	No	The development application was received after the NOP was published. N/A

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	N/A
22	IV Solar Company	Yes	--	Located on 1,375 acres of privately owned land located 2.5 to 7.5 miles west of Calexico in southern Imperial County. ROW is located within BLM lands. Additional project specific information is needed.
23	Chocolate Mountain	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
24	Ocotillo Express	Yes	--	The project site is public land that is available for limited recreational use, including dispersed recreation opportunities such as hiking, camping, and biking. Nearby areas area also used for recreational purposes, including BLM wilderness areas and Anza-Borrego Desert State Park.
25	Hudson Ranch II	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
26	Black Rock Unit # 1 2 3	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
27	Ram Power/Overlay	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
28	Orni 19	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
29	Orni 21 (Wister)	No	The level of information available regarding this project was insufficient to determine the	N/A

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
		project's potential impacts at the time this evaluation was prepared.	
30 LADWP and OptiSolar Power Plant	No	Applicant Withdrawn	N/A
31 Orni 18, LLC Geothermal Power Plant	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
32 U.S. Naval Air Facility El Centro	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
33 Recreation Activities	No	The efforts associated with ongoing recreation activities do not include expansion or changes in the existing activities that would result in new	N/A

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
		adverse effects to recreational uses.	
34 Recreation Activities	No	The efforts associated with ongoing recreation activities do not include expansion or changes in the existing activities that would result in new adverse effects to recreational uses.	N/A
35 U.S. Gypsum Mining	Yes	--	The Plant site totals approximately 473 acres with 309 disturbed/developed acres prior to 1998. The Quarry consists of 2,048 acres, approximately 1,668 acres of private land, and 380 acres of unpatented placer mining claims on Federal land currently administered by BLM. Recreational land uses within project vicinity include dispersed recreational opportunities (hiking, backpacking, horseback riding, and camping) at Fish Creek Wilderness Area and Anza-Borrego Desert State Park. However, continued quarrying activities in the canyon would not significantly affect recreational opportunities on these adjacent public lands and therefore, require no mitigation measures be implemented. Because the potential effects of proposed project would be similar to existing Quarrying activities, there would not be a substantial change from baseline conditions resulting in less than significant impacts.
36 California State Prison, Centinela	No	This project is an existing facility that has been included in the evaluation of existing conditions.	N/A

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
37	Recreation Activities	No	The efforts associated with ongoing OHV recreation activities do not include expansion or changes in the existing activities that would result in new adverse effects to recreational uses.	N/A
38	IV Substation (TermoElectrica US, LLC)	Yes	--	The Western Colorado Desert Routes and Travel Designation Plan identifies the recreational activities that are allowed in the Yuha Basin ACEC; recreational uses are limited to camping and off-road activity is restricted to county roads. There are no designated camping areas within 10 miles of the proposed transmission line routes.
39	IV Substation (Baja California Power, Inc., aka, Intergen)	Yes	--	The Western Colorado Desert Routes and Travel Designation Plan identifies the recreational activities that are allowed in the Yuha Basin ACEC; recreational uses are limited to camping and off-road activity is restricted to county roads. There are no designated camping areas within 10 miles of the proposed transmission line routes.
40	IV Substation (SDG&E)	Yes	--	Additional project specific information is required.
41	Las Aldeas Specific Plan	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A

Project Name		Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
42	Linda Vista	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
43	Desert Village #6	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
44	Commons	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
45	Imperial Valley Mall	No	The level of information available regarding this project was insufficient to determine the	N/A

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
			project's potential impacts at the time this evaluation was prepared.
46	Miller Burson	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
47	Courtyard Villas	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
48	Willow Bend (East) & Willow Bend (West)	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
49	Lotus Ranch	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
50	Mosaic	Yes	--	The project site is used primarily for agricultural purposes. It is located in the town of Heber and is within the Heber Urban Area Plan. The project site and is designated as Low-Density Residential and General Commercial land use and the townsite of Heber is primarily an "Urban Area." There are no identified recreational land uses within the boundary of the project and therefore would not result in impacts to recreational uses.
51	Hallwood/Calexico Place 111 & Casino	Yes	--	The proposed project would result in the development of commercial highway uses and a casino resort complex/hotel. No residential uses are proposed under the proposed project. As such, inclusion of parkland into the development is not required. Such uses may be included in the development of the proposed project with the use of the detention basins as fields for occasional recreation use. However, the use of the detention basins would not have an adverse physical effect on the environment. Therefore, a less than significant impact is identified for the issue areas identified for recreation. Furthermore, the project site does not currently contain any recreation areas or parks and will not result in the removal of recreational facilities. Therefore, implementation of the proposed project would not have a significant impact on existing recreational facilities in the community.

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
52	Calexico Mega Park	Yes	--	The proposed project could potentially amplify the use of existing City Parks due to increased population growth as a result of new jobs generated from new commercial construction. The anticipated project, however, would not generate enough of a population growth that would require construction or expansion of recreational facilities.
53	County Center II Expansion	Yes	--	The project site consists of 240 acres of land with an 80 acre portion of the site currently developed by existing County Center II facilities (approximately 74 acres) and Imperial County Office of Education facilities (approximately 6 acres). The remaining 160-acre portion is currently undeveloped and used for agricultural production. Surrounding land uses are agricultural with a few agricultural-related residences located within these areas. Because this project will not have an impact to recreational resources, no mitigation measures have been identified.
54	Desert Springs Resort	Yes	--	The majority of 1,105-acres project site is currently used for agricultural production or has been utilized for agriculture. The remainder is currently undeveloped and vacant and is identified as fallow and/or disturbed desert areas. Surrounding land uses include government/special use areas to the north and west, the Fillaree Canal to the east, the Westside main Canal to the southeast, and agriculture land to the south. Because this project will not have an impact to recreational resources, no mitigation measures have been identified.
55	Coyote Wells (Wind Zero)	Yes	--	The Imperial County General Plan Parks and Receptions Element requires the provision of five net acres of parkland for every 1,000 residents. Based on the project's potential population at buildout, the proposed project would not require additional parkland. Further, the Coyote Wells Specific Plan project proposes 204.5 acres of open space preservation area and 380.6 acres of private recreational area. Permitted uses

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
			within the open space preservation area would include picnic grounds, a tourist center with parking, and designated archaeological points of interest. The project impacts associated with an increase in the demand for parks and recreation facilities would be less than significant and therefore, require no mitigation measures.
56 Granite Carroll Sand and Gravel Mine	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
57 Atlas Storage Facility	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
58 Mixed-Use Development	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this	N/A

Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources	
59	Mixed-Use Development	No	evaluation was prepared.	N/A
60	Pedestrian Fence 225 and Pedestrian Fence 70	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
61	Mixed Use – Recreation	No	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.	N/A
62	Seeley Wastewater Treatment Plant Upgrade	Yes	--	No recreation areas occur on site and no recreational areas are located within 1,000 feet of the facility.

	Project Name	Included in Recreation Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Recreation CI Analysis?	Impacts to Recreation Resources
63	Cahuilla Gold Project	No	These projects occur outside the scope for cumulative projects for this resource issue.	N/A

Source: BRG Consulting, Inc., 2011

operation access to the solar site. The project would not preclude, or alter the continuation of this use, although users may experience short-term impacts during the construction phase of the project because project construction traffic would use this access road. As such, the construction of the transmission line corridor and access road proposed under the Proposed Action would result in short-term and relatively minor impacts associated with OHV recreation.

The solar energy facility and the portion of the access road located within privately owned land of the Proposed Action does not involve the construction of recreation facilities. Furthermore, the Proposed Action is the construction and operation of a solar energy facility and would not contain a residential component. As discussed Section 6.1.2 Growth Inducing Impacts, the Proposed Action does not involve the development of permanent residences that would result in a direct population growth in the area. The construction workforce for the Proposed Action is expected to reach a peak of approximately 250 temporary workers. The Proposed Action would require the employment of four full-time personnel and one security guard for the operation of the solar energy facility. As such, the Proposed Action would not induce substantial growth in the area. As such, development of the Proposed Action would not require a need for the construction or expansion of recreational facilities. Therefore, the project would not have an impact with regard to recreational facilities.

5.1.15.4 Cumulative Impact Analysis

A. CEQA Impact Analysis

As discussed above under the Effects of the Proposed Action, the Proposed Action would not affect the recreational uses of the surrounding BLM lands. These BLM lands would remain available for recreational activities that are permitted within their specified use designations. Furthermore, the solar energy facility portion of 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 or regional park or other recreational facilities such that substantial physical deterioration would occur. Therefore, the Proposed Action would not result in a cumulative impact to recreation. Table 5.1.15-2 provides a comparison of the Proposed Action and Alternatives related to cumulative recreation impacts.

B. NEPA Impact Analysis

As discussed above under Effects of the Proposed Action, the location of project components would be consistent with intended land use designations set forth by BLM's CDCA Plan. The proposed 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 located within areas designated by the CDCA as Multiple-Use areas which allow low to moderate density uses and restrict motorized travel to designated routes. Further, access to the transmission structures would be made available by widening an existing dirt road that is not a designated route under the WECO plan. The Proposed Action would adhere to assigned land use

designations and consequently would not contribute to cumulative Recreation impacts. Because other proposed projects developed on BLM lands would have to comply with the same assigned land use designations, the project, in combination with other proposed projects, would not cumulatively impact recreational uses. Table 5.1.15-2 below summarizes the Proposed Action and Alternatives related to cumulative Recreation impacts.

**TABLE 5.1.15-2
Comparison of Alternatives for Cumulative
Recreation Impacts**

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to recreation, will not result in a significant cumulative impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative impact to recreation under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative impact to recreation under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative impact to recreation under CEQA.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to recreation, will not result in a cumulative impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative recreation impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative recreation impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative recreation impact under NEPA.

Source: BRG Consulting, Inc., 2011.

This page intentionally left blank.

5.1.16 Special Designations

5.1.16.1 *Geographic Scope and Timeframe*

Table 5.1.16-1 lists the projects considered for the special designations cumulative impact analysis. The geographic scope for considering cumulative impacts on Special Designations areas is the Yuha Basin Area of Critical Environmental Concern. As discussed in Section 3.16, the project site for the Proposed Action, Alternative 1-Alternative Transmission Line Corridor, and Alternative 2-Reduced Solar Energy Facility Site does not have any special designations involving wilderness areas, donated lands, National Wild and Scenic Rivers and BLM-designated range allotments or pasture, therefore no direct or indirect impacts to these certain resources would occur and they will not be discussed further in this section.

5.1.16.2 *Existing Conditions*

As discussed in EIR/EA Section 3.16, the area covered by the Proposed Action does not have any of the following special designations: Wilderness Areas, donated lands, National Wild and Scenic Rivers, BLM designated range allotments or pasture for wildlife or livestock, and designated wilderness areas. However, the Proposed Action transmission line corridor site is located within the Yuha Basin Area of Critical Environmental Concern under BLM jurisdiction.

According to the BLM National Historic Trails and National Scenic Trails Map, dated April 2010, no national scenic and historic trails are located within the project site. The closest trail is the Juan Bautista de Anza National Historic Trail located approximately 5 miles east of the Proposed Action. Furthermore, as discussed in Section 4.1, this trail is not visible from the project site. Potentially, people could have a view of transmission towers from this trail; however, the proposed transmission towers would be similar to what other towers currently exists in the area.

5.1.16.3 *Effects of the Proposed Action*

As discussed in EIR/EA Section 4.12 Biological Resources, the BLM manages all land uses within the ACEC in order to minimize impact to this sensitive area. The Proposed Action is an allowable use under the CDCA, as the proposed ROW for the transmission line corridor falls within the CDCA designated "Utility Corridor N." The portion of the access road that traverses BLM lands is an existing designated dirt access road and is not located within the CDCA. Proposed impacts to biological resources discussed in EIR/EA Section 4.12.2 are in conformance with the CDCA and the integrity and intent of the Conservation Plan would be maintained with implementation of the project. Therefore, the Proposed Action would not conflict with the management goals of any special designation area. However, as discussed in EIR/EA Section 4.1 Visual Resources, the Proposed Action may have a direct impact on Visual Resources by slightly affecting views of the Juan Batista de Anza Trail, which is analyzed further in EIR/EA Section 4.1 Visual Resources.

5.1.16.4 *Cumulative Impact Analysis*

A. CEQA Impact Analysis

The Proposed Action is an allowable use under the CDCA. As discussed in EIR/EA Section 4.12.2, proposed impacts to biological resources are in conformance with the CDCA and the integrity and intent of the Conservation Plan would be maintained. Furthermore, the Proposed Action would not have impacts on

TABLE 5.1.16-1
List of Projects Considered for Special Designations Cumulative Impact Analysis

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
1	"S" Line Upgrade 230-kV Transmission Line Project	Yes	--	The "S" Line upgrade would install approximately (+/-) 285 new double-circuit steel poles to replace the existing wood poles supporting a single 230-kV circuit. No significant impact to special designations would occur because the project would upgrade (i.e., replace) equipment within the existing "S" line transmission corridor.
2	Imperial Valley Solar (Formerly called SES Solar Two Project)	Yes	--	<p>This project is not in or adjacent to any designated Wilderness Area. Therefore, the project would not affect any designated Wilderness Areas or otherwise conflict with the management goals established for Wilderness Areas in the CDCA Plan.</p> <p>The proposed project will not take any land from the Yuha Desert ACEC and, because it is across I-8, it is not expected to adversely affect this ACEC in the context of its special land use designation.</p> <p>Other than the potential effects to the Juan Bautista de Anza National Historic Trail on and immediately adjacent to the project site, the project would not impact the Yuha Desert ACEC.</p> <p>There are no designated Special Areas on or in the vicinity of the project site. Therefore, the project will not impact any designated Special Areas.</p>
3	Sunrise Powerlink Transmission Project (CACA-047658)	Yes	--	<ul style="list-style-type: none"> • Construction activities would temporarily reduce access and visitation to recreation or wilderness areas. • Presence of a transmission line in a designated wilderness or wilderness study area would result in loss of wilderness land.

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
4	Imperial Solar Energy Center-West (CACA-51644)	Yes	--	The ISEC West project is an allowable use under the CDCA, as the proposed ROW falls within the CDCA designated "Utility Corridor N." Proposed impacts to resources discussed in EIR/EA Section 4.12.2 are in conformance with the CDCA and maintains the integrity and intent of the Conservation Plan. Therefore, the ISEC West project would not conflict with the management goals of any special designation area.
5	Proposed Action-Imperial Solar Energy Center-South (CACA-51645)	Yes	--	The Proposed Action is an allowable use under the CDCA, as the proposed ROW falls within the CDCA designated Utility Corridor "N." Proposed impacts to resources are in conformance with the CDCA and maintains the integrity and intent of the Conservation Plan. Therefore, the Proposed Action would not conflict with the management goals of any special designations area. However, the Proposed Action may have a direct impact on visual resources by slightly affecting views of the Juan Bautista de Anza Trail.
6	SDG&E Proposed Photovoltaic Solar Field (CACA-051625)	No	The BLM did not have complete POD as of the NOP date. The project was considered speculative and therefore, not viable at the time. Multiple PODs have been requested by BLM with the project shrinking each time.	

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
7	North Gila to Imperial Valley #2 Transmission Line (CACA-51575)	No	STP is preparing a Plan of Development. NEPA analysis has not yet commenced.	
8	Centinela Solar Power, LLC (CACA-052092)	No	<ol style="list-style-type: none"> 1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. 	
9	San Diego Gas & Electric (SDG&E) East County (ECO) Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects	No	This project occurs outside the scope for cumulative projects for this resource issue.	
10	Dixieland Connection to IID Transmission System	Yes	--	The CDCA designates the Yuha Basin as an ACEC and BLM has designated the area south of I-8 as a Flat-tailed Horned Lizard Management Area. Project impacts to FTHL and other sensitive biological resources would occur during construction and operation of the proposed facilities, primarily along the transmission line corridor south of I-8. In addition to FTHL, potential impacts were also identified to burrowing owls and other sensitive wildlife species, and to potential jurisdictional wetlands and other waters of the U.S. and state. Implementation of mitigation measures would reduce the impacts to less than significant.

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
11	Mount Signal Solar Farm I- (82 LV 8ME, LLC (CACA-052325)	No	<ol style="list-style-type: none"> 1. POD has not been accepted by BLM and determined to be complete. 2. POD does not contain sufficient information details to analyze potential impacts of the project. 	
12	Superstition Solar 1	No	This project occurs outside the scope for cumulative projects for this resource issue.	
13	Bethel Solar X, Inc.	No	This project occurs outside the scope for cumulative projects for this resource issue.	
14	Energy Solar Source I, LLC	No	This project occurs outside the scope for cumulative projects for this resource issue.	
15	Energy Solar Source II, LLC	No	This project occurs outside the scope for cumulative projects for this resource issue.	
16	Salton Sea Solar Farm I	No	The development application was received after the NOP was published.	

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
17	Salton Sea Solar Farm II	No	The development application was received after the NOP was published.	
18	Calipat Solar Farm I	No	The development application was received after the NOP was published.	
19	Calipat Solar Farm II	No	The development application was received after the NOP was published.	
20	Midway Solar Farm I	No	The development application was received after the NOP was published.	
21	Midway Solar Farm II	No	The development application was received after the NOP was published.	
22	IV Solar Company	No	This project occurs outside the scope for cumulative projects for this resource issue.	
23	Chocolate Mountain	No	This project occurs outside the scope for cumulative projects for this resource issue.	
24	Ocotillo Express	No	This project occurs outside the scope for	

Project Name	Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
		cumulative projects for this resource issue.	
25	Hudson Ranch II	No	This project occurs outside the scope for cumulative projects for this resource issue.
26	Black Rock Unit # 1 2 3	No	This project occurs outside the scope for cumulative projects for this resource issue.
27	Ram Power/Overlay	No	This project occurs outside the scope for cumulative projects for this resource issue.
28	Orni 19	No	This project occurs outside the scope for cumulative projects for this resource issue.
29	Orni 21 (Wister)	No	This project occurs outside the scope for cumulative projects for this resource issue.
30	LADWP and OptiSolar Power Plant	No	This project occurs outside the scope for cumulative projects for this resource issue.
31	Orni 18, LLC Geothermal Power Plant	No	This project occurs outside the scope for cumulative projects for this resource issue.

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
32	U.S. Naval Air Facility El Centro	No	This project occurs outside the scope for cumulative projects for this resource issue.	
33	Recreation Activities	No	This project occurs outside the scope for cumulative projects for this resource issue.	
34	Recreation Activities	No	Existing recreation area. No new conflicts with the management goals of any special designation area.	
35	U.S. Gypsum Mining	No	This project occurs outside the scope for cumulative projects for this resource issue.	
36	California State Prison, Centinela	No	This project occurs outside the scope for cumulative projects for this resource issue.	
37	Recreation Activities	No	Existing recreation area. No new conflicts with the management goals of any special designation area.	
38	IV Substation (TermoElectrica US, LLC)	No	This project is an existing transmission line that has been included in the	

Project Name	Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
		evaluation of existing conditions.	
39	No	This project is an existing transmission line that has been included in the evaluation of existing conditions.	
40	No	This project is an existing transmission line that has been included in the evaluation of existing conditions.	
41-60	No	These projects occur outside the scope for cumulative projects for this resource issue.	
61	No	Existing facility. No new conflicts with the management goals of any special designation area.	
62	No	This project occurs outside the scope for cumulative projects for this resource issue.	

Project Name		Included in the Special Designations Cumulative Impact (CI) Analysis?	Rationale for Not Including Potential Projects in the Special Designations CI Analysis?	Impacts to Special Designations
63	Cahuilla Gold Project	No	This project occurs outside the scope for cumulative projects for this resource issue.	

Source: BRG Consulting, Inc., 2011

Wilderness Areas, donated lands, National Wild and Scenic Rivers, BLM designated range allotments or pasture for wildlife or livestock, and designated wilderness areas. The Proposed Action may have a direct impact on Visual Resources by slightly affecting views of the Juan Batista de Anza Trail, which is analyzed further in EIR/EA Section 4.1 Visual Resources. This impact is considered to be minor, because of the large distance of five miles between the Juan Batista de Anza Trail and the Project Site. Additionally, the impacts of the Proposed Action on views from the Trail would be very similar to pre-existing impacts on Trail views.

Of the cumulative projects analyzed in Table 5.1.16-1, only the Imperial Valley Solar (Formerly called SES Solar Two Project) is expected to have an impact on the Juan Batista de Anza Trail. Therefore, the cumulative impacts on the Trail are not expected to be major, because the view from the trail is already affected by pre-existing transmission towers. For purposes of CEQA, cumulative impacts on the Trail are less than significant. Table 5.1.16-2 provides a comparison of the Proposed Action and Alternatives related to cumulative special designations impacts.

**TABLE 5.1.16-2
Comparison Of Alternatives For Cumulative
Special Designations Impacts**

Proposed Action	Alternative 1 – Alternative Transmission Line Corridor	Alternative 2 – Reduced Solar Energy Facility Site	Alternative 3 – No Action/No Project Alternative
<i>CEQA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to special designations, will not result in a significant cumulative impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative special designations impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative special designations impact under CEQA.	As with the Proposed Action, this alternative would not result in a significant, cumulative special designations impact under CEQA.
<i>NEPA Impact Analysis</i>			
Implementation of the Proposed Action, in conjunction with applicable cumulative projects as it relates to special designations, will not result in a cumulative impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative special designations impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative special designations impact under NEPA.	As with the Proposed Action, this alternative would not result in a cumulative special designations impact under NEPA.

Source: BRG Consulting, Inc., 2011

B. NEPA Impact Analysis

As discussed in Section 3.16, the project site for the Proposed Action does not have any special designations involving wilderness areas, donated lands, National Wild and Scenic Rivers and BLM-designated range allotments or pasture. The Proposed Action is an allowable use under the CDCA, as the proposed ROW for the transmission line corridor falls within the CDCA designated “Utility Corridor N.” The portion of the access road that traverses BLM lands is an existing designated dirt access road and is not located within the CDCA. Proposed impacts to biological resources discussed in EIR/EA Section 4.12.2 are in conformance with the CDCA and the integrity and intent of the Conservation Plan would be maintained. Therefore, the Proposed Action would not conflict with the management goals of any special designation area.

According to the BLM National Historic Trails and National Scenic Trails Map, dated April 2010, no national scenic and historic trails are located within the project site. The Proposed Action may have a direct impact on Visual Resources by slightly affecting views from the Juan Batista de Anza Trail, which is analyzed further in EIR/EA Section 4.1 Visual Resources. As discussed in Section 4.1, this trail is not visible from the project site. However, there is the potential that people could have a view of transmission towers from this trail. The proposed transmission towers would be similar in appearance to other towers that currently exist in the area. Of the cumulative projects analyzed in Table 5.1.16-1, only the Imperial Valley Solar (formerly called the SES Solar Two Project) is expected to have an impact on the Juan Batista de Anza Trail.

The Proposed Action would not otherwise impact wilderness areas, donated lands, National Wild and Scenic Rivers or BLM-designated range allotments or pasture with special land use and conservation designations. Therefore, the Proposed Action would not contribute, incrementally, to cumulative impacts on any resources within the CDCA or the National Historic Trails and National Scenic Trails. Table 5.1.16-2 provides a comparison of the Proposed Action and Alternatives related to cumulative special designations impacts.