

## 5.11 Socioeconomics

This section addresses the potential socioeconomic impacts of construction and operation of the Amended Project. It describes baseline conditions and evaluates Project-related impacts on public services and infrastructure (e.g., schools, protective services, housing, and local government revenues). The section also evaluates potential impacts on community issues such as environmental justice.

### 5.11.1 Summary of Differences between the Amended Project and Original SSU6

The socioeconomic impacts of the Amended Project will be similar to those of the original SSU6 project. Neither the original project nor the Amended Project would result in significant adverse socioeconomic impacts during construction or operation. Both the original and Amended Project will contribute to Imperial County's economic base by providing increased employment and additional revenue sources from commercial geothermal development. Because of its larger construction workforce, resulting higher payroll, higher capital cost, and higher level of local expenditures during construction, the Amended Project will have greater positive economic impacts during construction than the original SSU6 project. Because employment levels and local expenditures during operation will be essentially the same for the Amended Project as for the original project, long-term economic impacts would be very similar to the original SSU6 project.

### 5.11.2 LORS Compliance

Potentially applicable LORS are summarized in Table 5.11-1 and in the text immediately following the table. The Project will comply with all applicable Federal, State, and local LORS during both construction and operation.

**Table 5.11-1 LORS Applicable to Socioeconomics**

<b>LORS</b>	<b>Applicability</b>	<b>Where Addressed in AP</b>
<b>Federal</b>		
Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."	As a result of the Executive Order, the U.S. Environmental Protection Agency (EPA) issued guidelines requiring Federal agencies and State agencies receiving Federal funds to develop strategies to address environmental justice issues.	Section 5.11.4
<b>State</b>		
California Government Code (GC) Sections 65995-65997 (amended by SB 50).	Public agencies may impose fees, charges or other financial requirements on developers to offset the cost for school facilities.	Section 5.11.4

**Table 5.11-1 LORS Applicable to Socioeconomics**

<b>LORS</b>	<b>Applicability</b>	<b>Where Addressed in AP</b>
Title 14 California Code of Regulations (CCR), Section 15131.	The California Environmental Quality Act (CEQA) and its guidelines state that economic or social factors of a project may be included in an Environmental Impact Report (EIR), but shall not be treated as significant effects on the environment.	Section 5.11.4
Public Resources Code Section 71110 et seq.	Establishes environmental justice program in Cal EPA with specific requirements for developing environmental justice policy, strategy and guidelines	Section 5.11.4
<b>Local</b>		
Imperial County General Plan (Land Use Element).	Ensures that school facilities and all private and public facilities are adequate based on the projected population.	Section 5.11.4

### 5.11.1.1 Federal LORS

#### **Executive Order 12898**

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," is required by the U.S. EPA to develop environmental justice strategies. As a result of the Executive Order, EPA issued guidelines requiring Federal and State agencies receiving Federal funds to develop strategies to address environmental justice issues (EPA, 1998). The agencies are required to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

### 5.11.1.2 State LORS

#### **California Government Code Sections 67995-65997**

California GC Sections 65995-65997 (amended by SB 50) state that public agencies may not impose fees, charges, or other financial requirements to offset the cost for school facilities. However, the code does include provisions for levies against development projects near schools. The Calipatria Unified School District would receive this fee.

#### **Title 14, California Code of Regulations, Section 15131**

CEQA and its guidelines state that a project's economic or social effects may be included in a CEQA document, but shall not be treated as significant effects on the environment. However, a project's economic or social effects may be used to determine the significance of the project's physical changes. In addition, public agencies must consider economic, social, and housing factors together with technological and environmental factors in deciding whether changes in a project are feasible ways to reduce or avoid any significant effects on the environment.

**Public Resources Code Section 71110 et seq.**

This code section establishes an environmental justice program within Cal/EPA with specific requirements for developing environmental justice policy, strategy, and guidelines. The Cal/EPA environmental justice program home page (<http://www.calepa.ca.gov/EnvJustice>) articulates policy as according “the highest respect and value to every individual and community”, by conducting activities “ in a manner that promotes equity and affords fair treatment, accessibility, and protection for all Californians, regardless of race, age, culture, income, or geographic location”.

**5.11.1.3 Local LORS****Imperial County General Plan**

Imperial County General Plan Land Use Element Goal 8, Objectives 8.3 and 8.4, are intended to ensure that all private and public facilities, including school facilities, are adequate in light of the projected population. The California Energy Commission (CEC) will coordinate with Imperial County to ensure that local requirements are considered in the CEC review process for the Amendment Petition.

**5.11.1.4 Required Permits and Permitting Schedule**

There are no required permits related to socioeconomics.

**5.11.1.5 Required Permits and Permitting Schedule**

Table 5.11-2 lists agency contacts for socioeconomic issues associated with the Amended Project.

**Table 5.11-2 Agencies and Agency Contacts**

<b>Agency Contact</b>	<b>Phone/Email</b>	<b>Permit/Issue</b>
Lily Lee EPA, Region IX 75 Hawthorne Street San Francisco, California 94105	(415) 972-3848 lee.lily@epa.gov	Executive Order 12898 (Environmental Justice)
Jurg Heuberger, AICP Planning & Development Services Director Imperial County Planning Department 939 Main Street El Centro, California 92243-2875	(760) 482-4310 jurgheuberger@imperialcounty.net	Imperial County General Plan Compliance

**5.11.3 Affected Environment**

This section discusses the existing socioeconomic resources potentially affected by the Amended SSU6 Project.

**5.11.3.1 Study Area**

The Project consists of the construction and operation of three geothermal power plants on a single site in an unincorporated area of central Imperial County, south of the Salton Sea. This region of Imperial Valley is

used mostly for agriculture and geothermal power production. Nine existing geothermal power plants are within a two-mile radius of the Project area.

Imperial County encompasses approximately 4,600 square miles in the southeastern portion of California. Imperial County was originally part of San Diego County, but became its own county in 1907. The County has a strong agricultural economy and is among the top counties in California in terms of agricultural production.

The study area for the evaluation of socioeconomic impacts encompasses census tract 101 of Imperial County. Census tract 101 is approximately 197,215 acres and includes the Project site, a portion of the Salton Sea, and the communities of Calipatria (the nearest residential community to the site), at a distance of approximately 6 miles to the southeast, and Niland, 7.5 miles northeast of the site. As shown on Figure 5.11-1, the study area also includes other communities within easy commuting distance of the Project site, including Brawley (17 miles southeast) and El Centro (approximately 30 miles southeast). It is assumed that many Project workers will either be permanent residents of these communities or will reside there temporarily during construction work assignments at the site. The nearest residence is the residence of the ranger at the Sonny Bono Salton Sea National Wildlife Refuge, which is approximately 0.8 mile from the Project site.

### 5.11.3.2 Population

The Amended Project site is in an area characterized by low population density. In 2000, the total population of the approximately 308.2 square miles of land area in census tract 101 was 9,586, with an average density of about 41 persons per square mile (U.S. Census Bureau, 2000). Excluding the populations of Calipatria and Niland, total census tract population is approximately 1,150.

In 1990, Imperial County had a population of 109,303 persons (U.S. Census Bureau, 1990). As of the 2000 census, Imperial County had a population of approximately 142,361 persons, and as of the 2006 American Community Survey, Imperial County had a population of approximately 160,301 persons, showing an increase of approximately 30.2 percent from 1990 to 2000, and 12.6 percent from 2000 to 2006 (U.S. Census Bureau 2000; 2006).

Table 5.11-3 shows the populations of the affected communities in 2000. El Centro, the largest city in the study area, had a population of 37,853 persons, which is about 26.6 percent of the total population in the County. Brawley is the second largest community in the study area with a population of 22,052 persons in 2000. Other smaller communities in the study area include Calipatria, Westmorland, and Niland.

**Table 5.11-3 Population of the Study Area**

County/City	Population 1990 <sup>1</sup>	Population 2000 <sup>1</sup>	Population 2010	Population 2020
Imperial County	109,303	142,361	202,267 <sup>3</sup>	276,023 <sup>3</sup>
El Centro	31,384	37,853	42,829 <sup>2</sup>	47,760 <sup>2</sup>
Brawley	18,923	22,052	29,525 <sup>2</sup>	39,622 <sup>2</sup>
Census Tract 101	NA	9,586	NA	NA
Calipatria	2,690	7,289	8,339 <sup>2</sup>	9,491 <sup>2</sup>

**Table 5.11-3 Population of the Study Area**

County/City	Population 1990 <sup>1</sup>	Population 2000 <sup>1</sup>	Population 2010	Population 2020
Westmorland	1,380	2,131	2,483 <sup>2</sup>	3,274 <sup>2</sup>
Niland	1,183	1,143	NA	NA
1. Source: U.S. Census Bureau 1990, 2000				
2. Source: SCAG 2004 RTP Growth Forecast				
3. Source: SCAG 2008 Integrated Growth Forecast				

### 5.11.3.3 Employment and Economy

Historically, Imperial County's employment and economy have been tied to agriculture. Of the County's approximately three million acres, approximately 19.2 percent was used for agriculture in 2002 (California Department of Finance, 2008). Although agriculture has long been the leading industry in the County, the labor force and industrial base are becoming more diversified, with opportunities in trade, transportation, utilities, and government increasing from 2002 to 2006 (EDD, 2007).

Employment by industry group is provided in Table 5.11-4. The largest employer in the County is the government sector, which includes the local, State, and Federal levels and accounts for 18,200 of the County's jobs. Additional industry categories in the area include natural resources, mining, and construction; manufacturing; transportation; trade (wholesale and retail); information; financial activities; services (e.g., professional, business, educational, health); and military service. Government, agriculture, and retail trade are the leading industry groups in terms of employment, in that order.

**Table 5.11-4 Employment by Industry Group - Imperial County<sup>1</sup>**

Industry Group	Employment	Percent Total Employment *
Agriculture	11,800	20.3%
Natural Resources, Mining, and Construction	1,900	3.3%
Manufacturing	2,600	4.5%
Transportation, Warehousing, and Utilities	1,700	2.9%
Wholesale Trade	1,900	3.3%
Retail Trade	7,500	12.9%
Information	400	0.7%
Financial Activities	1,400	2.4%
Professional and Business Services	2,700	4.6%
Educational and Health Services	2,900	5.0%
All Other Services	4,700	8.1%
Government	18,200	31.3%
Military	418 <sup>2</sup>	0.7%

**Table 5.11-4 Employment by Industry Group - Imperial County<sup>1</sup>**

Industry Group	Employment	Percent Total Employment *
Total	58,118*	100.0%
1. Source: California Employment Development Department 2008d		
2. Source: U.S. Census Bureau 2006		
* "Total" and "Percent Total" include 2007 and 2006 data.		

The highest percentage of future job growth in Imperial County is expected to be in retail sales (Table 5.11-5). Job growth is also anticipated for professions in food preparation and service, law enforcement, and nursing.

**Table 5.11-5 Employment Growth by Occupation - Imperial County**

Occupation	Number of New Jobs Projected 2004-2014
Retail Salespersons	490
Food Preparation and Serving	220
Police and Sheriff's Patrol Officers	210
Registered Nurses	150
Construction Laborers	140
Teacher Assistants	130
Cooks, Fast Food	110
Janitors and Cleaners	110
Elementary School Teachers	110
Truck Drivers	100
Source: Employment Development Department 2008a	

### 5.11.3.4 Employment Data for Amended Project-Related Crafts

Table 5.11-6 presents Imperial County employment figures for those skilled workers (by craft) required for construction and operation of the Amended Project. Existing employment figures for 2004 are provided, as well as employment projections for the selected occupations for 2014. Employment figures for all occupations presented in Table 5.11-6 are anticipated to either remain constant or grow by 2014, with the largest proportion of growth experienced by carpenters (55.6 percent) and concrete masons (44.4 percent). Similar information for the San Diego/Carlsbad/San Marcos and Riverside/San Bernardino/Ontario Metropolitan Statistical Areas are presented in Table 5.11-7 and 5.11-8, respectively (EDD, 2008a).

**Table 5.11-6 Skilled Workers by Amended Project-Related Craft (Imperial County)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percent	New Jobs	Net Replacements	Total
Construction Managers	60	80	20	33.3	2	1	3
Construction Trades Workers	2,020	2,530	510	25.2	51	37	88
Carpenters	90	140	50	55.6	5	2	7
Cement Masons and Concrete Finishers	180	260	80	44.4	8	4	12
Construction Laborers	560	700	140	25.0	14	7	21
Paving, Surfacing, and Tamping Equipment Operators	40	50	10	25.0	1	1	2
Operating Engineers and Other Construction Equipment Operators	170	200	30	17.6	3	4	7
Drywall and Ceiling Tile Installers	160	190	30	18.8	3	4	7
Electricians	310	370	60	19.4	6	6	12
Painters - Construction and Maintenance	50	60	10	20.0	1	1	2
Plumbers, Pipefitters, and Steamfitters	220	280	60	27.3	6	5	11
Electrical Power-Line Installers and Repairers	110	130	20	18.2	2	4	6
Metal Workers and Plastic Workers	250	270	20	8.0	2	7	9
Helpers - Construction Trades	30	40	10	33.3	1	1	2
Maintenance and Repair Workers, General	460	500	40	8.7	4	9	13
Welders, Cutters, Solderers, and Brazers	170	190	20	11.8	2	5	7
Plant and System Operators	390	420	30	7.7	3	11	14
Power Plant Operators	130	140	10	7.7	1	4	5
Architects, Surveyors, and Cartographers	40	40	0	0.0	0	1	1

**Table 5.11-6 Skilled Workers by Amended Project-Related Craft (Imperial County)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percent	New Jobs	Net Replacements	Total
Engineering Managers	40	50	10	25.0	1	1	2
Supervisors - Construction and Extraction Workers	210	270	60	28.6	6	4	10
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	210	270	60	28.6	6	4	10
Machinists	50	60	10	20.0	1	1	2

Source: Employment Development Department 2008a  
<http://www.calmis.ca.gov/htmlfile/county/imperial.htm>

**Table 5.11-7 Skilled Workers by Craft Required by Project (San Diego/Carlsbad/San Marcos Metropolitan Statistical Area)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2006	2016	Number	Percent	New Jobs	Net Replacements	Total
Construction Managers	5,840	6,560	720	12.3	72	91	163
Construction Workers	82,620	90,040	7,420	9.0	742	1,345	2,087
Carpenters	18,440	20,120	1,680	9.1	168	250	418
Cement Masons and Concrete Finishers	2,200	2,420	220	10.0	22	64	86
Construction Laborers	16,890	18,520	1,630	9.7	163	127	290
Paving, Surfacing, and Tamping Equipment Operators	350	380	30	8.6	3	7	10
Operating Engineers and Other Construction Equipment Operators	3,030	3,310	280	9.2	28	59	87

**Table 5.11-7 Skilled Workers by Craft Required by Project (San Diego/Carlsbad/San Marcos Metropolitan Statistical Area)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2006	2016	Number	Percent	New Jobs	Net Replacements	Total
Drywall and Ceiling Tile Installers	4,530	4,930	400	8.8	40	62	102
Electricians	7,930	8,340	410	5.2	41	204	245
Painters - Construction and Maintenance	7,820	8,850	1,030	13.2	103	139	242
Plumbers, Pipefitters, and Steamfitters	6,170	6,590	420	6.8	42	127	169
Metal Workers and Plastic Workers	12,770	13,450	680	5.3	68	240	308
Helpers - Construction Trades	4,710	5,080	370	7.9	37	119	156
Maintenance and Repair Workers, General	11,830	13,020	1,190	10.1	119	29	148
Welders, Cutters, Solderers, and Brazers	2,060	2,390	330	16.0	33	44	77
Plant and System Operators	1,710	1,930	220	12.9	22	42	64
Power Plant Operators	100	120	20	20.0	2	3	5
Architects, Surveyors, and Cartographers	2,750	3,080	330	12.0	33	62	95
Engineering Managers	1,760	1,910	150	8.5	15	41	56
Supervisors - Construction and Extraction Workers	8,760	9,440	680	7.8	68	122	190
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	8,760	9,440	680	7.8	68	122	190
Machinists	3,560	3,870	310	8.7	31	55	86
Source: Employment Development Department 2008c							

**Table 5.11-8 Skilled Workers by Craft Required by Project (Riverside/San Bernardino/Ontario MSA)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2006	2016	Number	Percent	New Jobs	Net Replacements	Total
Construction Managers	4,380	5,110	730	16.7	73	68	141
Construction Workers	116,810	132,160	15,350	13.1	1,535	1,815	3,350
Carpenters	28,850	32,390	3,540	12.3	354	390	744
Cement Masons and Concrete Finishers	4,110	4,690	580	14.1	58	119	177
Construction Laborers	27,930	32,080	4,150	14.9	415	210	625
Paving, Surfacing, and Tamping Equipment Operators	630	720	90	14.3	9	13	22
Operating Engineers and Other Construction Equipment Operators	4,790	5,460	670	14.0	67	93	160
Drywall and Ceiling Tile Installers	7,570	8,310	740	9.8	74	104	178
Electricians	6,740	7,600	860	12.8	86	174	260
Painters - Construction and Maintenance	7,950	9,210	1,260	15.8	126	141	267
Plumbers, Pipefitters, and Steamfitters	4,630	5,330	700	15.1	70	96	166
Metal Workers and Plastic Workers	19,460	20,800	1,340	6.9	134	378	512
Helpers - Construction Trades	4,850	5,410	560	11.5	56	123	179
Maintenance and Repair Workers, General	11,920	13,690	1,770	14.8	177	29	206
Welders, Cutters, Solderers, and Brazers	3,960	4,640	680	17.2	68	84	152
Plant and System Operators	2,030	2,380	350	17.2	35	46	81
Power Plant Operators	310	370	60	19.4	6	11	17
Architects, Surveyors, and Cartographers	1,420	1,670	250	17.6	25	35	60
Engineering Managers	1,370	1,600	230	16.8	23	28	51

**Table 5.11-8 Skilled Workers by Craft Required by Project (Riverside/San Bernardino/Ontario MSA)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2006	2016	Number	Percent	New Jobs	Net Replacements	Total
Supervisors - Construction and Extraction Workers	10,990	12,380	1,390	12.6	139	153	292
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	10,990	12,380	1,390	12.6	139	153	292
Machinists	2,630	2,960	330	12.5	33	41	74
Source: Employment Development Department 2008b							

**Existing Unemployment Rates**

As of 2007, the County had a labor force of approximately 68,100 workers, of which 55,800 were employed. The unemployment rate based on these estimates was 18.1 percent (EDD, 2008d). The labor force of the County and study area communities is presented in Table 5.11-9.

**Table 5.11-9 Employment Data in the Study Area (Annual Average)<sup>1</sup>**

County/City	Civilian Labor Force	Total Employment	Number Unemployed	Unemployment Rate	Median Household Income <sup>2</sup>
Imperial County	68,100	55,800	12,300	18.1%	\$31,870
El Centro	19,900	16,500	3,400	17.1%	\$33,161
Brawley	11,600	9,300	2,300	19.8%	\$31,277
Calipatria	1,500	1,200	300	20.0%	\$30,962
Westmorland	1,200	900	300	25.0%	\$23,365
Niland <sup>2</sup>	359	302	57	15.9%	\$25,592
<sup>1</sup> . Source: Employment Development Department 2008 <sup>2</sup> . Source: U.S. Census Bureau 2000					

**Projected Unemployment Rates**

While no current data exist for projected unemployment rates in Imperial County, the national and global economic difficulties stemming from the current credit crunch, overall economic downturn, and volatility in the housing market suggest that unemployment rates may continue to rise in Imperial County in 2009 as they did in late 2008.

**5.11.3.5 Housing****Permanent Housing**

Table 5.11-10 presents the housing resources in the study area communities. As of 2006, there were an estimated 51,590 housing units in Imperial County with a vacancy rate of 12.3 percent (U.S. Census Bureau, 2006). As of 2000, 23,528 housing units were located in incorporated communities in the study area with vacancy rates in these communities ranging from 5.8 percent in Brawley to 20.4 percent in Niland (U.S. Census Bureau, 2000). The commonly accepted vacancy rate below which housing is considered in short supply is 5.0 percent. Housing is not considered in short supply in the area.

**Table 5.11-10 Housing in Communities Potentially Affected by the Project<sup>1</sup>**

County/City	Housing Units	Vacancy Rate	Estimated Motel/Hotel Rooms
Imperial County	51,590 <sup>2</sup>	12.3% <sup>2</sup>	NA
El Centro	12,263	6.7%	920

**Table 5.11-10 Housing in Communities Potentially Affected by the Project<sup>1</sup>**

County/City	Housing Units	Vacancy Rate	Estimated Motel/Hotel Rooms
Brawley	7,038	5.8%	178
Census Tract 101	2,069	12.7%	NA
Calipatria	961	6.5%	None
Westmorland	667	6.3%	50
Niland	530	20.4%	None
<sup>1.</sup> Source: U.S. Census Bureau, 2000 <sup>2.</sup> Source: U.S. Census Bureau, 2006			

### **Temporary Housing**

In addition to permanent housing, there is ample transient housing in the County and study area. Based on data from the website Hotels.com and other resources, there are about 1,148 hotel/motel rooms and suites in the study area communities. Additional housing opportunities are available in the form of RV and mobile home sites. Information for study area hotel/motel occupancy rates was not available.

### **5.11.3.6 Utilities**

#### **Water and Electric**

The Project site is within the Imperial Irrigation District (IID) service area, which provides irrigation water and electric power. IID is the largest irrigation district in the United States and receives its water from the Colorado River via the All-American Canal (IID, 2008a). The IID diverts and delivers approximately 3.1 million acre-foot per year (afy) of Colorado River water to seven municipalities, one private water company, and two community water systems. As stated on the agency's website (www.iid.com), approximately 97 percent of IID water is used to irrigate nearly 500,000 acres of agricultural lands in Imperial County with the remaining three percent distributed to municipalities, residential, commercial, and industrial customers.

As of the date of this Amendment Petition, the Applicant has engaged IID in informal discussions with respect to furnishing water for the Amended Project. These discussions have centered around the expected water usage as presented in Section 2.0, Project Description. IID has indicated that furnishing this water is consistent with their present and expected future system capacity. Formalization of these discussions is expected to occur in the first or second quarter of 2009.

IID also provides electric power to an area of 6,471 square miles. IID ranks as the sixth largest power utility in California based on power generation. owns generation facilities and purchases power from the Western Power Administration (Parker-Davis) and from the El Paso Electric Company to serve electricity to over 140,000 customers in Imperial County, along with portions of Riverside and San Diego counties (IID, 2008b). In August of 2008, demand typically ranged from 350 megawatts (MW) to 900 MW (IID Energy, 2008).

### **Natural Gas**

Southern California Gas is the provider of natural gas in the Project area but there is no natural gas service to the Project site. The Project will use propane for powering an air emission control device (recuperative thermal oxidizer) and will not utilize natural gas.

### **5.11.3.7 Public Services**

#### **Fire Protection**

The Calipatria Fire Department is under contract to Imperial County Fire Department to provide fire protection to a number of unincorporated areas of Imperial County near the city of Calipatria, including the Project area. Under the contract, the County Fire Department provides funding and a fire truck to the Calipatria Fire Department for fire protection in those unincorporated areas. The Calipatria Fire Station serves approximately 250 square miles, and protects an estimated 4,000 to 4,500 people (approximately 8,000 people if Calipatria State Prison is included).

The Calipatria Fire Station is approximately nine miles from the Amended Project site. The fire department has three paid professional and 13 volunteer firefighters, including a chief, three firefighter/advanced emergency medical technicians (EMTs), seven firefighter/EMTs, and six firefighter/first responders. Services include fire suppression, emergency medical services (EMS), vehicle rescue, hazardous materials response, and search and rescue (Firehouse Network, 2008). Estimated response time to the Amended Project site is approximately 15 minutes; however, response times are expected to be longer during nighttime hours (20 minutes) because the station is not staffed at night (Hall, 2008). Station equipment includes four engines, water tender, rescue squad, ladder truck, and a chief's vehicle. There are currently no plans for additional stations near the Project area.

#### **Law Enforcement**

The County Sheriff's Department provides law enforcement services in unincorporated Imperial County, including the Project area. The Department has approximately 111 full-time peace officers. The nearest substation is in Niland and, although not officially staffed 24 hours per day, there are officers on patrol throughout the day and night in the area of Niland. The nearest station that is staffed 24 hours per day is the main Sheriff's Department in El Centro, approximately 40 miles from the Project site. The average response time to the Project area is approximately 10 minutes, depending on where officers are located during their patrol. There are currently no plans for additional stations near the Project area.

The largest Federal law enforcement organization in Imperial County is the United States Border Patrol (USBP). The USBP recently constructed a regional headquarters in El Centro in February 2008, from which approximately 1,100 regional agents are managed. In addition to the El Centro headquarters, agents are stationed at three field stations throughout the region: Calexico, Indio, and Riverside. The USBP provides law enforcement backup and assistance for all state and local law enforcement entities in the region if required, even if the nature of the altercation is not related to immigration or narcotics enforcement. It is anticipated that any law enforcement support provided to the Project area would be dispatched from the Indio field station. Approximately 300 to 400 agents are located at the Indio field station, primarily conducting highway operations and the Highway 86 checkpoint. The USBP is currently aggressively hiring

additional agents and anticipates a total of approximately 1,300 agents in the El Centro region in the next few years (Velez, 2008).

### **Emergency Response**

For typical emergency medical service calls in the Project vicinity, Calipatria Fire Department EMTs are the first dispatched to the scene. Personnel and response times are detailed in the Fire Protection description above. The next service to be dispatched is Gold Cross Ambulance. With approximately 65 personnel and seven active ambulances, Gold Cross Ambulance is the only private company that can provide vehicular emergency transport in Imperial County. The ambulances are dispatched from four locations: two in El Centro, one in Brawley, and one in Holtville. Response times are 10 minutes within incorporated areas and one hour for rural areas, although most responses in rural areas (including the Project vicinity) can be completed within 30 to 40 minutes. There currently are no formal plans for additional stations near the Project area; however, Gold Cross Ambulance plans to expand services based on population growth in Imperial County and may begin dispatching services from the Niland or Calipatria area in the future (Wright, 2008).

An emergency helicopter is stationed at the Imperial County Airport and is operated by REACH Air Medical Services. The helicopter provides service to El Centro Regional Medical Center and Pioneers Memorial Hospital (Pioneers) in Brawley (Adair, 2008). The response time for the air ambulance service is approximately eight minutes to the Project area (Wright, 2008).

### **Medical Facilities**

Imperial County has two hospitals: Pioneers in Brawley, and El Centro Regional Medical Center in El Centro. At approximately 22 miles from the Project site, Pioneers is the closest hospital and has approximately 107 beds and 132 physicians. There currently is no plan to expand the facility.

### **School Districts**

Imperial County consists of 16 school districts, with a total of 24 elementary schools serving grades kindergarten through sixth grade, 10 elementary schools serving kindergarten through eighth grade, ten middle schools, and eight high schools (Imperial County Office of Education, 2007). The Project site is in the Calipatria Unified School District. Calipatria Unified has one primary school for grades kindergarten through four, one elementary school for grades kindergarten through five ; one middle school for grades five through eight ,and one high school for grades nine through twelve (California Department of Education, 2008a). For the 2007-2008 school year, total enrollment in the Calipatria Unified School District was 1,157 students, which represented 3.2 percent of all students in the county (California Department of Education, 2008b).

#### **5.11.3.8 Local Government Finance**

The local agencies with taxing powers over the proposed Project area are Imperial County and the Calipatria Unified School District. The total assessed value of all secured property in Imperial County in 2008 was approximately \$10 billion (Imperial County, 2008), and the total property tax revenues (including in-lieu taxes) collected in 2007 were roughly \$38.1 million (Imperial County, 2008). All secured property in

## 5.11 Socioeconomics

California is taxed at the rate of one percent of the total assessed value. Property taxes are collected by the county in which the property is located.

Total taxable sales in the county in 2007 were approximately \$2,159,043, up from about \$2,148,730 in 2006. Taxable retail sales in 2006 were approximately \$1,566,648 and approximately \$1,547,858 in 2007 (Board of Equalization, 2007). General Fund revenues for 2006-2007 totaled \$177,484,000, a 10.2 percent (\$161.0 million) increase over the prior year. General Fund expenditures 2006-2007 totaled \$171,588,000, a 7.1 percent (\$160.1 million) increase over the prior year (Imperial County, 2008). Table 5.11-11a presents a summary of Imperial County General Fund revenues for the year 2006-2007, and Table 5.11-11b summarizes General Fund expenditures for 2006-2007.

**Table 5.11-11a Imperial County General Fund Revenues for 2006-2007**

Revenue	2006-2007
Taxes	\$30,998,000
Licenses and Permits	\$2,701,000
Fine, Forfeitures, and Penalties	\$4,994,000
Use of Money and Property	\$2,362,000
Intergovernmental Aid	\$76,534,000
Federal Aid	\$41,018,000
Charges for Services	\$18,877,000
<b>Total Revenue</b>	<b>\$177,484,000</b>
Source: Imperial County, 2008	

**Table 5.11-11b Imperial County General Fund Expenditures for 2006-2007**

<b>Expenditures</b>	<b>2006-2007</b>
General Government	\$17,312,000
Public Protection	\$54,005,000
Health and Sanitation	\$28,757,000
Public Assistance	\$71,050,000
Public Ways and Facilities	\$464,000
<b>Total Expenditures</b>	<b>\$171,588,000</b>
Source: Imperial County, 2008	

### 5.11.3.9 Environmental Justice

Table 5.11-12 presents the racial and ethnic demographic characteristics of the study area communities. Overall, Hispanic/Latino is the largest ethnic group in the county. El Centro, Brawley, and Westmorland are similar to the County in their racial and ethnic composition. Calipatria has a significantly higher concentration of African Americans, who represent 21 percent of the population, while Hispanics make up

57 percent of the population of this community. Niland is generally split equally between its Hispanic and non-Hispanic populations.

The 2000 census data reported that the median household income in the county was \$31,870. The median household income for El Centro is slightly higher than the county median at \$33,161, while median household income in Brawley is roughly the same as the county average. The median household incomes for Calipatria and Niland are slightly lower than the county average, and, at \$23,365, Westmorland's median household income was the lowest among the communities in the study area (U.S. Census Bureau, 2000). Table 5.11-13 reports per capita income data for the study area.

**Table 5.11-12 Ethnic And Racial Composition (2008)<sup>1</sup>  
(Percent total population)<sup>2</sup>**

Area	Hispanic/Latino	White	Black	American Indian	Asian	Native Hawaiian	Two more races
Imperial County	72.2%	49.4%	4.0%	1.9%	2.0%	0.1%	3.6%
El Centro	74.6%	46.9%	3.2%	1.0%	3.5%	0.1%	3.7%
Brawley	73.8%	52.8%	2.4%	1.1%	1.3%	0.2%	4.3%
Census Tract 101	54.6%	40.7%	16.8%	1.1%	1.3%	0.0%	3.1%
Calipatria	57.3%	32.4%	21.3%	0.7%	0.6%	0.0%	2.2%
Westmorland	82.2%	55.7%	1.0%	0.7%	0.3%	0.0%	2.7%
Niland	55.3%	54.8%	3.1%	2.0%	4.5%	0.0%	7.4%

1. Source: U.S. Census Bureau 2000.

2. It should be noted that the Bureau of Census allows persons of Hispanic origin to identify with any of the minority population categories listed above, as well as with white, to capture undefined origins. Consequently, the sum of all categories is typically greater than 100 percent in areas with moderate to large Hispanic/Latino communities.

**Table 5.11-13 Poverty Status and Income of Study Area (1)**

Area	Percent Below Poverty Level <sup>2</sup>	Median Household Income (\$) <sup>1</sup>
Imperial County	22.6%	31,870
El Centro	22.8%	33,161
Brawley	26.6%	31,277
Census Tract 101	23.4%	26,139
Calipatria	24.2%	30,962
Westmorland	27.2%	23,365
Niland	21.4%	25,592

1. Source: U.S. Census Bureau 2000

2. Poverty level is defined by the U.S. Census as a function of the size of a family unit and the number of children under 18 years of age. For the 2000 Census, the poverty threshold income for a

**Table 5.11-13 Poverty Status and Income of Study Area (1)**

Area	Percent Below Poverty Level <sup>2</sup>	Median Household Income (\$) <sup>1</sup>
family of four with two children was \$17,463 (U.S. Census Bureau 2000).		

Figure 5.11-2 shows the distribution of minority populations within a six-mile radius of the Project site. As shown, this radius encompasses all or parts of two census tracts, tract 101 and 102. The Project site is in census tract 101, block group 6, and there are approximately 159 census blocks in the six-mile radius in both census tract 101 and 102. The total population in the 159 blocks within the six-mile radius is 108 individuals, of which a total of 84 are classified as Black [or African-American, American Indian (or Alaska Native), Asian, Native Hawaiian (or other Pacific Islander), Hispanic or Latino, or some other race (including two or more races)].

The census only provides income information at the block group level, not the block level. Table 5.11-14 provides the relevant income information. The proposed Project site is located in one block group (block group 6), and the specific location of income groups is unavailable.

**Table 5.11-14 Family Income Within Census Tract 101**

Number of Families	Family Income in 2000
9	under \$14,999
8	\$15,000- \$24,999
20	\$25,000- \$34,999
13	\$35,000- \$44,999
22	\$45,000- \$59,999
10	\$60,000- \$74,999
10	\$75,000- \$124,999
Source: U.S. Census Bureau 2000	

#### 5.11.4 Environmental Impacts

The following sections discuss the effects of Amended Project construction and operation on the socioeconomic resources of the area. As outlined in Appendix G of the CEQA Guidelines, Project-related socioeconomic impacts would be significant if they induced substantial growth or concentration of population, displaced a large number of people, or disrupted or divided the physical arrangement of an established community.

### **5.11.4.1 Plant Construction and Operation**

#### **Project Workforce and Population**

##### *Construction*

Project construction (power plant, wells, pipelines, etc. for all three units) is expected to take approximately 46 months from construction field mobilization to completion. Construction workers would work a single-shift, 10-hour-day, 5-day work week. As shown in Table 5.11-15, the number of workers associated with Project construction would peak at 642 in the Month 23 and average 323 workers over the 46-month construction schedule. As shown in Table 5.11-15, in most skill categories, the maximum number of workers needed is small. At the peak for each respective craft, the highest numbers are for laborers (216), electricians (57), operating engineers (55), teamsters (50), millwrights (49), pipefitters (38), and insulators (35). Based on previous experience, because of the small population and thus small local construction work force in rural southeastern California, the Applicant estimates that approximately 40 percent of the construction workforce (about 257 of the peak workforce and 129 workers on average) would be non-local.



According to the Electric Power Research Institute (EPRI) report entitled Socioeconomic Impacts of Power Plants, construction workers will commute as much as two hours to construction sites from their homes, rather than relocate even temporarily (EPRI, 1982). Table 5.11-16 shows the availability of construction workers by trade in Imperial County, San Diego County, and Riverside/San Bernardino Counties. As shown in Table 5.11-16, nearly 222,000 construction workers are available within the combined Imperial County, San Diego County, Riverside County, and San Bernardino County region. The Amended Project would be expected to draw from the entire construction force in the region, not merely those workers that are within a two-hour commute distance.

These non-local workers typically would use hotels or other temporary housing in the cities of Niland, Calipatria, Brawley, and El Centro. A typical pattern is for the construction workers to reside in the hotels/temporary housing during the workweek and return to their homes on weekends.

The non-local construction workforce would likely be distributed in the cities and towns in the County as follows:

- 50 percent would stay in El Centro and Brawley and other areas south of the site,
- 25 percent would stay in Calipatria and other areas east of the site, and
- 25 percent would stay in Niland and other areas north of the site.

These estimates assume that these non-local construction workers will likely reside in the larger communities in the study area where highway access, hotels/motels, and amenities are available, and where commute trips to the work site are of reasonable length. At peak construction time, it is estimated that about 129 of these workers will be located in El Centro and areas south of the site, about 64 workers will be located in Calipatria and areas east of the site, and 64 workers will be located in Niland and areas north of the site. Should some construction workers choose to stay temporarily at a local area motel or hotel, there are approximately 1,148 hotel rooms in the vicinity available to meet this demand. Should a portion of the workers relocate to the area for the duration of their construction assignments, impacts to available housing and population would be negligible, as vacancy rates in El Centro, Brawley, Calipatria, Westmorland, and Niland are 6.7, 5.8, 6.5, 6.3, and 20.4 percent, respectively.

With the exception of some specialized trades that likely will be drawn from the greater San Diego area, it is anticipated that the Amended Project construction force would be drawn from the local area (e.g., El Centro, Brawley, Calipatria, Westmorland, and Niland), the communities of Riverside County (e.g., Indio, Mecca), and eastern San Diego County. Therefore, Project construction labor would not significantly affect the availability of construction labor in the region.

As noted above, it is anticipated that, based on historical experience,, the majority of the construction workforce (a peak workforce of 642 workers and an average of 323 workers per day over the 46-month duration) likely would commute to the Project site daily rather than relocate even temporarily for the construction period or during the work week. Thus, impacts to population are expected to be minimal, and Project construction would not induce substantial growth.

**Table 5.11-16 Available Construction Labor by Skill**

<b>Occupational Title</b>	<b>Imperial County (2004)</b>	<b>San Diego County (2006)</b>	<b>Riverside/ San Bernardino County (2006)</b>	<b>Total for Three Areas</b>	<b>Total Workers Needed (Peak)</b>
Carpenters	90	18,440	28,850	47,380	35
Electricians	310	7,930	6,740	14,980	57
Insulation Workers (All)	0	590	270	860	35
Reinforcing Iron and Rebar Workers; Structural Iron and Steel Workers	0	1,080	1,940	3,020	45
Construction Laborers	560	16,890	27,930	45,380	216
Cement Masons and Concrete Finishers	180	2,200	4,110	6,490	20
Machinists	50	3,560	2,630	6,240	49
Operating Engineers, Equipment Operators	170	3,030	4,790	7,990	55
Painters (Construction and Maintenance)	50	7,820	7,950	15,820	15
Plumbers, Pipefitters, and Steamfitters	220	6,170	4,630	11,020	38
Truck Driver (Heavy and Tractor-Trailer)	650	8,750	23,350	32,750	50
Construction Managers	60	5,840	4,380	10,280	15
Supervisors (Construction and Extraction Workers)	210	8,760	10,990	19,960	14
Source: Employment Development Department 2008a, 2008b, 2008c					

### Operation

Following completion of construction, approximately 69 permanent employees would staff the power plant (Table 5.11-17). Operations personnel would be divided into four 12-hour rotating shifts. Some of the Project operations jobs may involve relocation to the area for workers with specialized technical or managerial skills. Ninety percent of the full-time staff is estimated to commute from El Centro, Brawley, Calipatria, or Niland areas. The remaining 10 percent of the full-time staff may commute from the cities of Indio or La Quinta in Riverside County. Population impacts are not anticipated to be significant.

**Table 5.11-17 Estimated Operations and Maintenance Staff**

<b>Staff Position</b>	<b>Number of Personnel</b>
<b>General/Administration</b>	
Site Manager	1
Senior Environmental Coordinator	1
Resource Technician	1
Procurement Specialist	1
HR Specialist	1
Storekeeper	2
<b>Engineering</b>	
Plant Engineer	1
Resource Engineer	1
Project Engineer	1
Project Analyst	1
Chemical Technician	2
NDE Technician	1
Engineering Technician	1
<b>Maintenance</b>	
Maintenance Planner	1
Mechanical Technicians	6
Electricians	3
Equipment Operators and Welders	6
Machinists	1
Auto Mechanics	1
<b>Operations</b>	
Shift Supervisor	4
Control Operator	4
Plant Operator	12

**Table 5.11-17 Estimated Operations and Maintenance Staff**

<b>Staff Position</b>	<b>Number of Personnel</b>
Operators	16
<b>Total</b>	<b>69</b>

## **Housing**

### *Construction and Operation*

Because, based on historical experience, most of the Amended Project construction workforce likely will commute to the area daily rather than relocate, increased demand on the local housing supply is expected to be minor. In addition, because of the availability of hotel and motel accommodations, and the housing vacancy rates in nearby communities as described previously, workers who choose to relocate temporarily would not be expected to have a significant impact on housing availability.

Operation of the Project would have an insignificant impact on housing because of the small number of workers needed for the operation of the plants and the availability of local housing (vacancy rates of 12.3 percent in Imperial County). The Project would be constructed in an agricultural area in close proximity to other power generation facilities, and would not physically alter any residential community or commercial area. Residential property values would not be expected to be affected in either direction. Because the Project site is not near residential areas and the operations-related population increase is expected to be minimal, no substantial change is expected in community interaction patterns, social organization, social structures, or social institutions.

## **Employment and Economy**

### *Construction*

Project construction would create a temporary, positive impact on the local economic base and fiscal resources. Construction employment wages and salaries would provide additional income to the area, as would local expenditures for construction materials and services. The Amended Project construction payroll has been estimated at approximately \$49 million over 46 months (\$12.8 million estimated annually). Capital expenditures and spending on construction materials and equipment are estimated to total approximately \$862 million over 46 months (\$224.9 million estimated annually).

The Amended Project construction is expected to create an average of 323 direct jobs over 46 months, with a peak of 642 direct jobs. These direct jobs will create both indirect and induced secondary employment in the region. Indirect employment is defined as employment that will be generated by the purchase of goods and services required by the Project. Induced employment is defined as employment that will be generated by the purchase of goods and services by the businesses that are indirectly supported by the Project.

An input-output model (IMPLAN Professional) was used to estimate economic impacts within Imperial County and the surrounding counties of San Diego, Riverside, and San Bernardino, based on the Project construction-phase expenditures that would benefit the local economies.<sup>1</sup> For the purpose of the input-output model, the following project expenditures (rounded values) were assumed to be the Project expenditures that would benefit the local economies: 1) Estimated Annual Payroll (\$12.8 million), and 2) Estimated Annual Capital Expenditures and Materials (\$224.9 million).

Based on the assumption stated above, the total estimated beneficial economic impacts from the 46-month construction phase within Imperial County and the surrounding counties would be as follows (rounded values):

Direct expenditures (estimated annual capital expenditures and materials): \$224.9 million  
Indirect regional revenues: \$90.8 million  
Induced regional revenues: \$31.2 million  
Total output: \$346.9 million

The top ten industries that would benefit the most in terms of economic output impacts include (listed in descending order): Engineering services, wholesale trade businesses, real estate, commercial and industrial machinery and equipment manufacturing, rental housing, truck transportation, banking, automotive repair, food service, and legal services.

Also, using the assumptions above, during the construction phase, the Project's estimated annual job creation within Imperial County and the surrounding counties would be as follows:<sup>2</sup>

Direct (Project) jobs: 323  
Indirect jobs: 624  
Induced jobs: 244  
Total jobs creation: 1,191

These additional jobs would result from the Amended Project's local construction expenditures as well as from spending by local construction workers. These indirect and induced jobs are expected to be filled both locally and regionally, and would result in positive economic impacts.

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<sup>1</sup> IMPLAN is a widely used, economic impact modeling tool that uses region-specific input/output accounts by industry to estimate secondary impacts of economic stimuli. Secondary impacts include (1) indirect impacts that occur due to the purchase of goods and services by firms involved with project construction or operation, and (2) induced impacts, which result from household spending. Secondary impacts can occur in the form of employment, income, output, and taxes.

The multipliers for the Amended Project impact analysis were derived by editing the specific industry data for the four-county study area in the IMPLAN input/output relationships to represent the direct economic impacts associated with the project (e.g., estimated annual construction cost and annual operation cost). IMPLAN sector 36, "Construction of other new nonresidential structures", is the IMPLAN sector recommended by the software to correspond closest to the North American Industry Classification System (NAICS) code 21, which is used for "Power plants, new construction". All figures are in 2008 dollars.

*Operations*

As stated above, 69 full-time employees would be needed to operate and maintain the Project, including 36 operations staff, eight engineering staff, seven maintenance staff, and seven general/administration personnel. Most of the 69 employees will be hired locally, with some specialized employees coming from outside the local area.

The IMPLAN Professional input-output model was used to estimate economic impacts within Imperial County and surrounding counties based on operation-phase Project expenditures that would benefit the local economies.<sup>3</sup> For the purpose of the input-output model, the annual expenditures that would benefit local economies were estimated to be \$17.0 million for materials, equipment, and supplies, and \$6.6 million in payroll. These figures were used as inputs into the model to predict economic and employment impacts.

The annual estimated beneficial economic impacts from the operation of the Amended Project within Imperial County and the surrounding counties would be as follows (rounded values):

Direct expenditures (materials, equipment, and supplies): \$17.0 million

Indirect regional revenues: \$3.1 million

Induced regional revenues: \$6.0 million

Total output: \$26.1 million

Also, using the assumptions above, during the operations phase, the Project's estimated annual job creation within Imperial County and the surrounding counties would be as follows:<sup>4</sup>

Direct (Project) jobs: 69

Indirect jobs: 24

Induced jobs: 48

Total jobs creation: 141

Ninety percent of the full-time staff is estimated to commute from El Centro, Brawley, Calipatria, or Niland areas. The remaining 10 percent of the full-time staff may commute from the cities of Indio or La Quinta in Riverside County.

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<sup>2</sup> Employment impacts are rounded to the closest whole number. Thus, some error has been introduced due to rounding.

<sup>3</sup> IMPLAN sector 33, "Water, sewage and other treatment delivery systems", is the IMPLAN sector recommended by the Minnesota Implan Group, Inc. to correspond closest to the NAICS code 221330, which is used for "Steam supply systems, including geothermal".

<sup>4</sup> Employment impacts are rounded to the closest whole number. Thus, some error has been introduced due to rounding.

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### **Locally Purchased Materials**

#### *Construction*

Local purchasing of equipment and supplies, as well as local spending by construction workers and permanent employee households, would also generate income for local governments in the form of sales tax revenues. The estimated construction payroll is approximately \$49 million, which would be disbursed over the 46 months; a significant portion of this income would likely be spent within the study area, resulting in sales tax revenue. Construction capital expenditures and payroll would generate about \$10.2 million in tax revenues, some of which would be returned to the County and the study area communities.

#### *Operations*

The annual operations payroll is expected to be about \$6.6 million. Typically, about 39 percent of household income is spent on taxable goods; therefore, this operations payroll is estimated to generate about \$199,000 in sales tax revenues annually. Some of these tax revenues would be returned to the County and the community in which the spending occurs. Additionally, equipment and materials worth about \$17 million would be purchased during operations. Some of these purchases would occur in the study area communities and would generate sales tax revenues for the County and the study area communities.

### **Capital Cost of the Project of the Potential Impacts on Tax Revenues**

The property tax rate where the Project is located is 1.171500 (Imperial County, 2008). The Applicant estimates that the annual property taxes from the project would be about approximately \$8.5 to \$9 million annually from 2013 until 2035. Under the current assessment method, this would accrue to Imperial County and would be distributed among a variety of agencies including County schools.

### **Utilities**

Increases in demand for utilities and public services because of Project construction and operation are not expected to be significant. Project construction would be temporary and would lead to minor increases in demand on utilities. Additionally, the Project would supply 159 MW (net) of renewable geothermal electrical energy, increasing the regional electrical energy generating capacity/supply.

### **Water**

IID canal water will be used temporarily during construction for dust control and other construction purposes. During operation, a potable water system would supply drinking water and water for other domestic uses, including emergency shower and eyewash equipment. The source of service water would be the IID canal; 95 percent of the plant's cooling water makeup would come from condensate associated with geothermal energy production. The Project will utilize a "worst-case" maximum of approximately 953 afy of water in total. "Nominal" case water consumption is estimated at 483 afy total. However, Project implementation will remove approximately 181 acres of land from agricultural production. This will lead to avoided agricultural water use of approximately 779 afy at an estimated average agricultural water use of 4.3 afy/acre. Thus, net water use by the Amended Project would be 174 afy under worst-case conditions. Under nominal case

conditions, the Amended Project will result in a net decrease in water use of approximately 293 afy. See Section 5.17, Water Resources for further discussion.

### **Public Services**

#### *Fire*

The Amended Project will be fully equipped with fire protection and suppression facilities, and operating staff would be trained in fire safety and basic first aid. As discussed in Section 5.11.3.7, the Calipatria Fire Department provides public fire protection in the Project area, and would provide backup assistance to onsite fire suppression systems. One additional industrial construction site in the vicinity would not be expected to significantly increase the demand for fire protection services and Project impacts on fire services are expected to be less than significant. Further, the Project will increase the tax base and stimulate economic activity which will provide additional revenues to fund upgraded public services and infrastructure when needed.

#### *Law Enforcement*

Project-related Increases in demand for law enforcement services are expected to be less than significant. While the construction work force would represent an increase in the size of the population served by local law enforcement, the population increase during Project construction would be temporary. The operation phase increase in population would be small and would represent only a small incremental service load.

#### *Emergency Response*

Increases in demand for emergency response personnel because of Project construction and operation are not expected to be significant. While the construction work force would increase the demand for emergency services somewhat, this would only be temporary. The long-term increase in population would be small would represent only a small increase in demand for emergency services. The addition of one industrial facility in the service area would not be expected to significantly increase the service load on local emergency response systems. Additionally, the Amended Project will have an emergency response plan and workers will be trained in emergency response procedures.

#### *Medical Facilities*

Pioneer Memorial Hospital in Brawley is the closest hospital to the Project site. Because increases in area population as a result of the Project are expected to be small, the increases in demand for medical facilities because of Project construction and operation are not expected to be significant.

#### *School Districts*

The Calipatria Union School District assesses developer fees at the rate of \$0.47 per square foot of roofed areas for commercial or industrial space (Verdugo, 2008). These funds may be used by the school district for both temporary and permanent construction. Roofed structures on the plant site consist of the control building (10,000 square feet), three turbine pedestals (4,000 square feet each), one pump house (2,000 square feet), and twelve other roofed structures related to power generation and distribution, and five power distribution centers (14,475 square feet total), resulting in a total of 38,475 square feet of eligible square

footage. The 38,475 square feet of development would result in a total economic benefit of approximately \$18,100 to the school district.

The Project would not place a significant demand on the study area schools because construction workers are not anticipated to relocate with their families to the area and the operation phase facility staff will be small. Additionally, many of the workers are likely to be residents of the County.

#### **5.11.4.2 Environmental Justice**

CEC siting regulations require a discussion of the potential for disproportionate impacts from a project on minority or low-income populations. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," was issued in 1993 and requires all Federal agencies to develop environmental justice strategies. Pursuant to this directive, the EPA issued guidelines that require all Federal and state agencies receiving Federal funds to develop strategies to address this issue. Because the CEC receives Federal funds it is subject to this Executive Order and the analysis in this section uses the Federal guidelines to analyze potential environmental justice impacts.

Federal guidelines include a two-step screening process to determine whether a project could result in disproportionate impacts on low-income and minority populations. The first step is to evaluate whether the potentially affected community or area includes minority and low-income populations; if it contains these population groups, the second step is to determine whether the environmental impacts fall disproportionately on minority and low-income members of the community. The CEC uses 50 percent concentration of minorities as a threshold to indicate whether there is a potential issue in a given area.

The Amended Project is in census tract 101, an area of Imperial County where the population of Hispanic/Latino people constitutes about 55 percent of the total population. Nearby communities also have high concentrations (57 to 82 percent) of Hispanic/Latino and nonwhite populations. In addition to high concentrations of minority populations, the three closest communities have median incomes that are much lower than the average for the County as a whole. Therefore, based on the first step of the screening process described above, the Amended Project potentially could affect low-income and minority populations.

In the context of developing a power plant, key potential environmental justice issues would be potential air emissions or water discharges that could adversely and disproportionately affect the health of these populations. Other issues of concern could include noise, traffic, or visual resources impacts. However, because of the Project design and because of the rural and lightly populated nature of the Project area (the ranger residence at the Wildlife Refuge is the only residence within one mile of the Project site, the next nearest residence is approximately two miles east of the site, and the nearest residential community is Calipatria, six miles from the site), no significant impacts are expected on minority or low-income populations. Thus, there would also be no disproportionate impacts on low-income and minority populations and no significant environmental justice impacts.

#### **5.11.5 Cumulative Impacts**

The Amended Project and other projects in the area would provide needed jobs, as well as additional property and sales tax revenues to local government. While multiple projects could increase the demands on local services and infrastructure, the economic stimulus from these projects also would generate

revenues to fund the increases in demand. The Project's long-term increase in socioeconomic impacts would be small because of its very small increase in population, but the increases to the local economic base (tax revenues and jobs) would be significant and longer-lasting. The Project would not cause or contribute substantially to adverse cumulative socioeconomic impacts.

### 5.11.6 Mitigation Measures

Socioeconomics mitigation measures are embodied in the CEC's Conditions of Certification (COC) for the original SSU6 project.

### 5.11.7 Conditions of Certification

Following is the Socioeconomics COC included in the Commission's Final Decision for the original SSU6 project. The Applicant proposes no changes to this COC for the Amended Project.

**SOCIO-1** The project owner shall negotiate in good faith a one-time payment to the statutory school facility development fee as required at the time of filing for the in-lieu building permit with the Imperial County Planning/Building Department.

**Verification:** The project owner shall provide proof of payment of the statutory development fee in the next Monthly Compliance Report following the payment.

### 5.11.8 References

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## 5.11 Socioeconomics

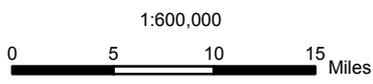
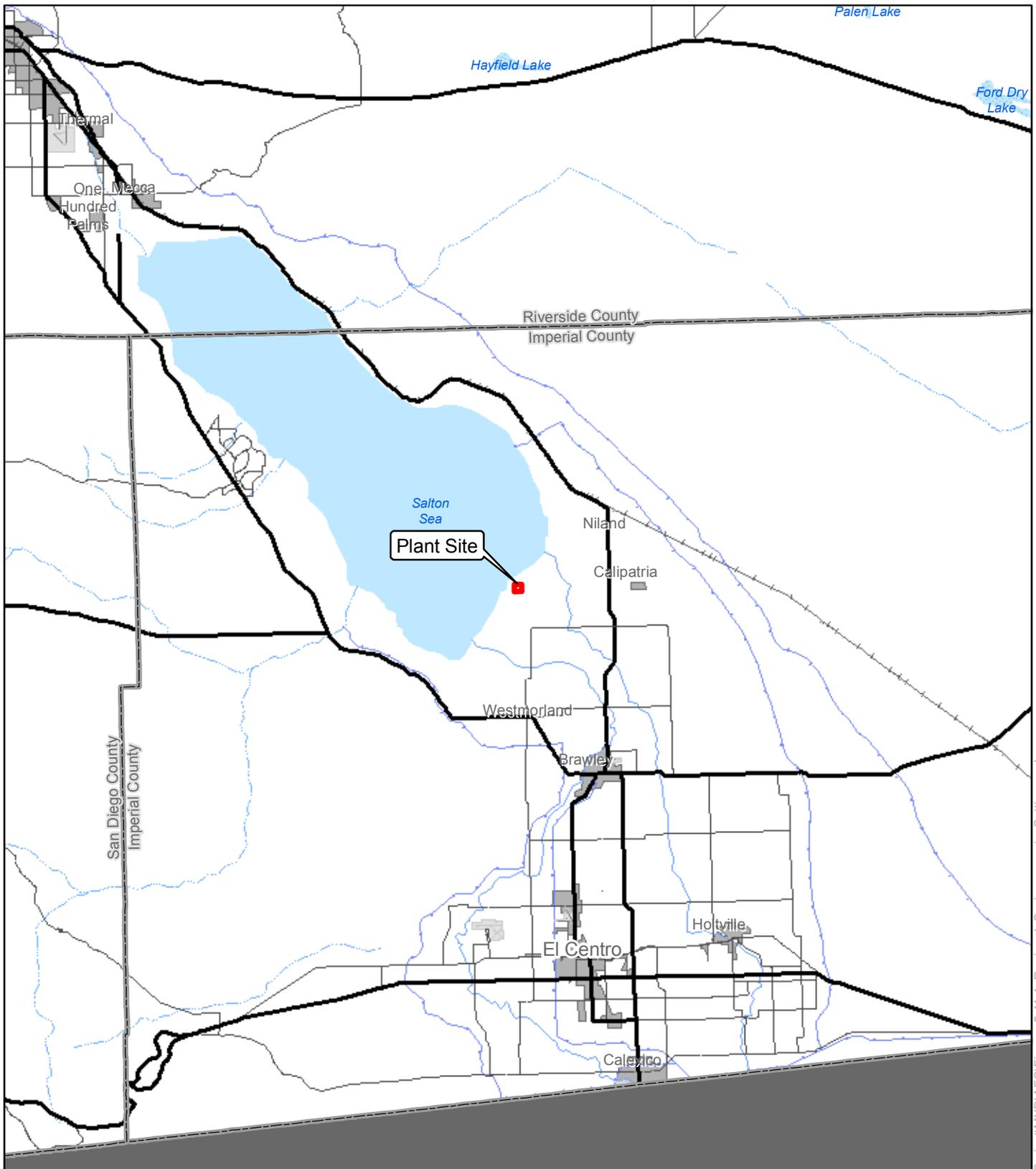
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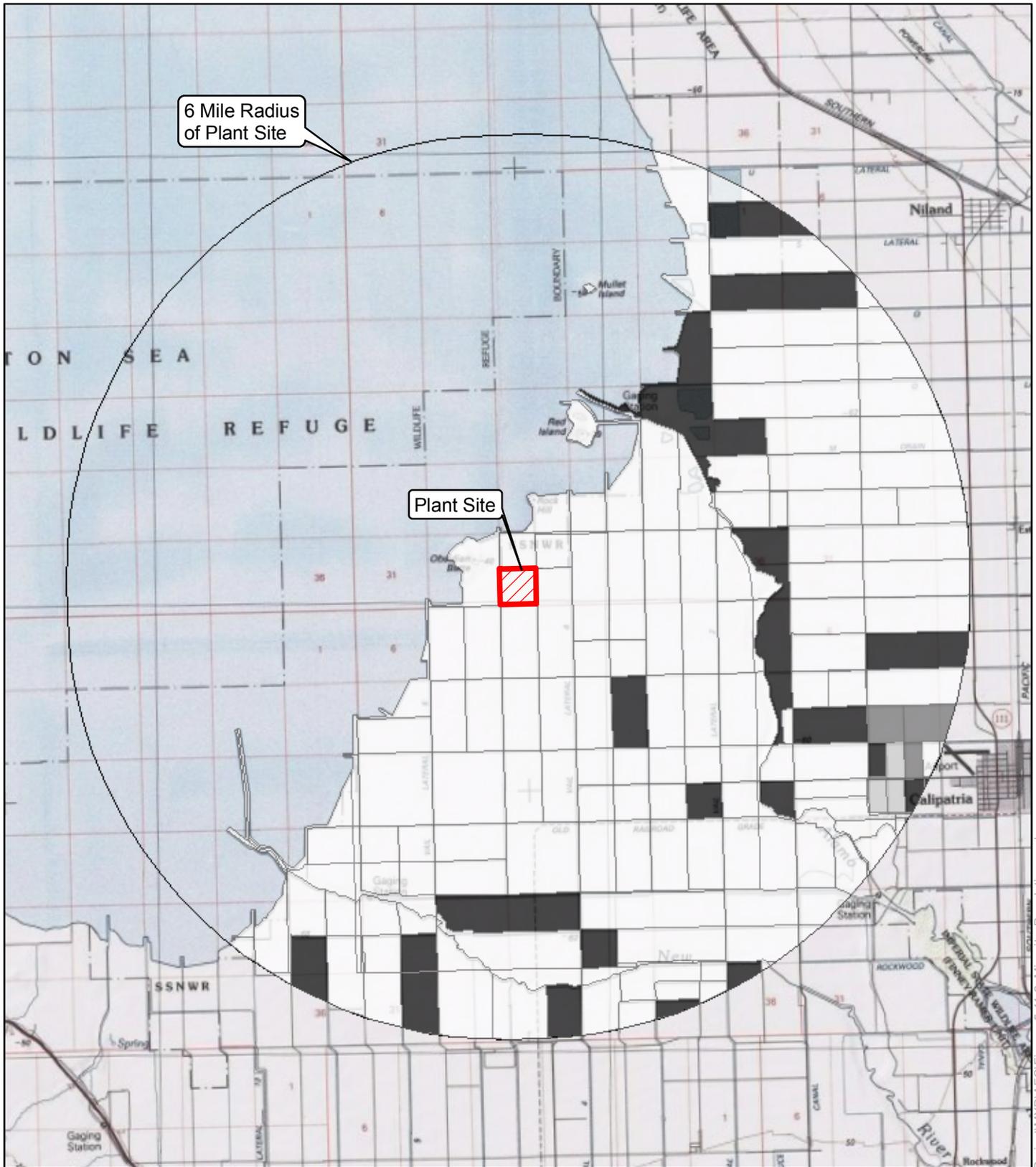
**Amended SSU6 Project  
Figure 5.11-1  
Regional Socioeconomic  
Setting**



**AECOM**

Project: 12676-001  
Date: February 2009

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6 Mile Radius of Plant Site

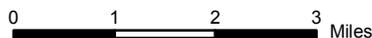
Plant Site

**Legend**

-  Plant Site
- Percentage Minority Population**
-  0 - 25%
-  26 - 50%
-  51 - 75%
-  76 - 100%



1:120,000



Source: 2000 U.S. Census Bureau

**Amended SSU6 Project**

**Figure 5.11-2  
Minority Population  
by Census Block**



**AECOM**

Project: 12676-001  
Date: February 2009