DOCKETED	
Docket Number:	01-AFC-19C
Project Title:	SMUD Cosumnes Power Plant - Compliance
TN #:	244287-19
Document Title:	Socioeconomics
Description:	N/A
Filer:	Patty Paul
Organization:	Ch2mhill/Carrier
Submitter Role:	Applicant Consultant
Submission Date:	8/1/2022 3:19:28 PM
Docketed Date:	8/1/2022

8.8 Socioeconomics

8.8.1 Introduction

This section discusses the environmental setting, consequences, regional and local impacts, and mitigation measures associated with the socioeconomic aspects of the CPP. Section 8.8.2 summarizes the LORS pertaining to socioeconomics, including the project's conformance to them. Section 8.8.3 describes the environment that may be affected by CPP construction and operation. Section 8.8.4 identifies environmental consequences from development of the power plant, and Section 8.8.5 discusses cumulative impacts. Section 8.8.6 discusses environmental justice. Mitigation measures are discussed in Section 8.8.7. Section 8.8.8 presents the agencies involved and provides agency contacts. Section 8.8.9 presents the required permits and permitting schedule. Section 8.8.10 provides references used to prepare this section.

8.8.2 Laws, Ordinances, Regulations, and Standards

A summary of the LORS, including the project's conformance to them, is presented in Table 8.8-1.

TABLE 8.8-1
Laws, Ordinances, Regulations, and Standards Applicable to CPP Socioeconomics

LORS	Purpose	Applicability	AFC Conformance Section
Federal			
Civil Rights Act of 1964	Prohibits discrimination on the basis of race, color, or national origin.	Applies to all federal agencies and agencies receiving federal funds.	Section 8.8.5
Executive Order 12898	Avoids disproportionate impacts to minority and low-income community members.	Applies only to federal agencies. Does not apply to agencies receiving federal funds.	Section 8.8.3.1
State			
Government Code Sections 65996-65997	Establishes that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities.	The District is exempt due to its ownership and non-profit status.	Section 8.8.6
Education Code Section 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities.	The District is exempt due to its ownership and non-profit status.	Section 8.8.6

8.8.2.1 Federal

Civil Rights Act of 1964, Public Law 88-352, 78 Stat. 241 (codified as amended in various sections of 42 U.S.C.) Title VI of the Civil Rights Act prohibits discrimination on the basis of

race, color, or national origin in all by all federal agencies or activities receiving federal financial assistance.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires USEPA and other federal agencies to identify and address whether adverse human health or environmental effects are likely to fall disproportionately on minority and/or low-income community members. This applies only to federal agencies, not agencies receiving federal funds.

8.8.2.2 State

Government Code Sections 65996 and 65997, provide the exclusive methods of considering and mitigating impacts on school facilities that might occur as a result of the development of real property.

Education Code Section 17620, listed in Government Code Section 65997 as an approved mitigation method, allows school districts to levy a fee or other requirement against any construction within the boundaries of the school district for the purpose of funding construction of school facilities.

8.8.2.3 Local

None.

8.8.2.4 Codes

None.

8.8.3 Affected Environment

The CPP project is located in southeastern Sacramento County, approximately 25 miles southeast of the city of Sacramento. Other population centers in the vicinity of the project site include the cities of Galt and Elk Grove in Sacramento County, along with the cities of Lodi and Stockton in San Joaquin County. These two counties are considered to be the Region of Influence for the socioeconomics section. Socioeconomic issues relevant to the affected environment include population, housing, employment, economic base and fiscal resources, public services, utilities, and schools.

The CPP site, and the majority of the proposed gasline corridors are located within unincorporated areas of Sacramento County. Land use in the vicinity is agricultural and open space.

8.8.3.1 Population

Sacramento and San Joaquin counties are located in the northern Central Valley of California. Incorporated cities in Sacramento include Citrus Heights, Elk Grove, Folsom, Galt, Isleton, and Sacramento. Incorporated cities in San Joaquin County include Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy. Table 8.8-2 shows historic population estimates and future population projections for Sacramento and San Joaquin counties, along with the state of California. Average annual growth rates are shown in Table 8.8-3. Both Sacramento and San Joaquin counties are projected to have higher population growth rates relative to the state as a whole.

TABLE 8.8-2
Historic Estimated and Future Projected Populations of Sacramento County, San Joaquin County, and California

	1990	1995	2000	2005	2010	2020
Sacramento County	1,049,010	1,117,748	1,212,527	1,327,435	1,436,286	1,651,765
San Joaquin County	483,817	524,611	579,712	647,294	725,868	884,375
California	29,942,397	32,062,912	34,653,395	37,372,444	39,957,616	45,448,627

Source: CDOF, 1998.

TABLE 8.8-3
Historic Estimated and Future Projected Population Growth Rates for Sacramento County, San Joaquin County, and California

	1990 –1995	1995-2000	2000-2005	2005-2010	2010-2020
Sacramento County	1.28%	1.64%	1.81%	1.59%	1.41%
San Joaquin County	1.63%	2.01%	2.21%	2.33%	1.99%
California	1.38%	1.57%	1.52%	1.35%	1.30%

Source: CDOF, 1998.

Historically, both counties have had a Caucasian majority, with Hispanic being the next largest racial or ethnic group (see Figure 8.8-1). Table 8.8-4 shows estimates of the percentage breakdown of the total population of Sacramento and San Joaquin counties and the state of California for the years 1990 and 2000, along with projections for the year 2010. All three areas demonstrate a decline over time in the percentage of the population categorized as Caucasian, and increases in the percentage of individuals classified as Hispanic.

TABLE 8.8-4
Percentage Racial Breakdown of Historic and Projected Future Populations of Sacramento County, San Joaquin County, and California

	Caucasian	Hispanic	Asian & Pacific Islander	African- American	American-Indian
Sacramento County					
1990	69	12	9	9	1
2000	64	13	12	10	1
2010	58	15	15	11	1
San Joaquin County					
1990	59	24	12	5	1
2000	53	26	15	5	1
2010	49	28	17	5	1
California					
1990	57	26	9	7	1
2000	50	31	12	7	1
2010	45	35	13	6	1

Source: CDOF, 1998.

8.8.3.2 Housing

Table 8.8-5 shows estimates of housing units for Sacramento and San Joaquin counties as well as for the state of California, broken down by housing type. Sacramento County has

468,000 housing units with a vacancy rate of 6.1 percent, while San Joaquin County has 190,000 housing units with a 5 percent vacancy rate. The vacancy rate of both counties is below the state average of 7.4 percent; however both counties year-2000 vacancy rates were at or above the federal housing standard of 5 percent. In 1999, Sacramento County had 7,743 housing authorizations with a valuation of $1.3 billion. Of these 1999 housing authorizations, approximately 70 percent were single-family and 30 percent for multi-family housing units. San Joaquin County reported 4,046 housing authorization in 1999 with a valuation of approximately $600 million. Ninety-nine percent of the San Joaquin authorizations were for single-family units (CDOF, 1991-2000). Within the two-county region there are approximately 12,500 hotel/motel rooms. During 2000, the Sacramento area had an average occupancy rate of 67 percent, while the Stockton area average occupancy rate was 69 percent (Donohue, 2001).

TABLE 8.8-5
Housing Estimates for Sacramento County, San Joaquin County, and California for the Year 2000

		Single Family		Multiple Family			
	Total	Detached	Attached	2 to 4	5 Plus	Mobile Homes	Vacancy Rate
Sacramento County	468,000	292,000	30,000	33,000	98,000	15,000	6.1
San Joaquin County	190,000	128,000	10,000	14,000	29,000	9,000	5.0
California	12,243,000	6,854,000	841,000	1,013,000	2,950,000	585,000	7.4

Source: CDOF, 1991-2000.

8.8.3.3 Economy and Employment

Table 8.8-6 shows the non-farm employment estimates for 1997 and 1999 by major industry groups for the two-county region. Employment shares have remained relatively constant over this time period with services, state and local government, and retail trade being the dominant industry groups, in that order. Over this time period, construction and mining has seen the largest annual growth rate of 15 percent, while federal government has been the only industry group to show a decline in employment levels, most likely as a result of the closing of military bases.

As shown in Table 8.8-7, future employment projections show an overall increase in region employment of 116,000 jobs between 1997 and 2004, corresponding to a 2.3 percent annual average growth rate. Continuing the historic pattern seen in Table 8.8-7, only federal jobs are expected to decrease, while most other industry groups are expected to experience annual job growth in the range of 2 percent to 3.5 percent. Services, state and local government, and retail trade are still projected to be the three largest employers by industry group. The decrease in federal employment is likely the result of the closing of McClellan Air Force Base. Income distribution in the vicinity of CPP is shown on Figure 8.8-2.

TABLE 8.8-6
Sacramento and San Joaquin County Employment by Industry for 1997 and 1999

	1997		1999		1997 to 1999		
	Number of Employees	Employment Share	Number of Employees	Employment Share	Absolute Employment Change	Percentage Change	Annual Average Percentage Change
Total Farm	20,600	3%	21,600	3%	1,000	5%	2%
Construction & Mining	31,200	5%	41,200	6%	10,000	32%	15%
Manufacturing	56,500	8%	58,400	8%	1,900	3%	2%
Transportation & Public Utilities	31,800	5%	35,100	5%	3,300	10%	5%
Wholesale Trade	29,100	4%	30,900	4%	1,800	6%	3%
Retail Trade	114,700	17%	119,900	16%	5,200	5%	2%
Finance, Insurance & Real Estate	44,900	7%	51,800	7%	6,900	15%	7%
Services	179,900	26%	198,000	27%	18,100	10%	5%
Federal Government	21,700	3%	17,300	2%	(4,400)	-20%	-11%
State & Local Government	158,900	23%	171,300	23%	12,400	8%	4%
Total All Industries	**689,300**		**745,500**		**56,200**	**8%**	**4%**

Source: California Employment Development Department (CEDD), 2001a, 2001b.

TABLE 8.8-7
Combined Non-Farm Employment Estimates and Projections for Sacramento and San Joaquin Counties

	1997	2004	Absolute Employment Change	Percentage Change	Annual Percentage Change
Construction & Mining	31,300	37,900	6,600	21%	2.8%
Manufacturing	56,500	63,900	7,400	13%	1.8%
Transportation & Public Utilities	31,800	39,700	7,900	25%	3.2%
Wholesale Trade	29,100	32,500	3,400	12%	1.6%
Retail Trade	114,700	132,300	17,600	15%	2.1%
Finance, Insurance & Real Estate	44,900	56,200	11,300	25%	3.3%
Services	179,900	227,500	47,600	26%	3.4%
Federal Government	21,700	18,200	(3,500)	-16%	-2.5%
State & Local Government	158,900	176,900	18,000	11%	1.5%
Total Non-Farm Employment	668,800	785,100	116,300	17%	2.3%

Source: CEDD, 2001c, 2001d.

Table 8.8-8 shows historic and projected future employment opportunities within the two-county region for specific trades that are likely to be employed in the construction of the power plant. Annual growth rates for specific trades range from a high of 5.3 percent for

mechanical engineers to a low of 1.8 percent for plumbers, pipefitters, and steamfitters. In general, most trades are projected to experience annual job growth rates in the range of 2.5 percent to 3 percent.

TABLE 8.8-8
Historic and Projected Future Occupational Employment for the Combined Sacramento and San Joaquin County Region

Occupational Title	Annual Averages		Absolute Change	Percentage Change	Annual Average Percentage Change
	1997	2004			
Carpenters	4,210	5,100	890	21.1%	2.8%
Masons and Related Workers	1,660	1,960	300	18.1%	2.4%
Painters and Related Workers	1,470	1,790	320	21.8%	2.9%
Metal Workers, Precision	2,310	2,690	380	16.5%	2.2%
Electricians and Related Workers	2,600	3,160	560	21.5%	2.8%
Welders and Cutters	1,310	1,570	260	19.8%	2.6%
Excavating and Loading Machine Operators	370	490	120	32.4%	4.1%
Grader, Bulldozer, and Scraper Operators	350	450	100	28.6%	3.7%
Industrial Truck and Tractor Operators	2,590	3,060	470	18.1%	2.4%
Operating Engineers	600	700	100	16.7%	2.2%
Helpers, Laborers, and Material Movers, Hand, Exclude Agriculture and Forestry Laborers	24,890	29,950	5,060	20.3%	2.7%
Plumbers, Pipefitters, and Steamfitters	1,680	1,910	230	13.7%	1.8%
Administrative Services Managers	2,410	2,810	400	16.6%	2.2%
Mechanical Engineers	530	760	230	43.4%	5.3%
Electrical and Electronic Engineers	1,880	2,560	680	36.2%	4.5%
Engineering and Related Technicians and Technologists	6,380	7,500	1,120	17.6%	2.3%
All Other Plant and System Operators	630	750	120	19.0%	2.5%

Source: CEDD, 2001e.

Table 8.8-9 presents the unemployment rates for California along with Sacramento and San Joaquin counties and their relative rank among all counties in the state for selected years. Relative to the state of California, Sacramento County has historically had somewhat lower that average unemployment while San Joaquin has historically had higher than average unemployment. The California Economic Development Department, which tabulates the unemployment data for California counties, does not publish projections for unemployment rates.

TABLE 8.8-9
Historic Unemployment Rates And State Rankings For Sacramento County, San Joaquin County, and California

	1990		1995		2000	
	Rate	Rank	Rate	Rank	Rate	Rank
Sacramento County	4.50%	12	6.80%	14	4.20%	16
San Joaquin County	9.70%	40	12.30%	39	8.80%	43
California	5.80%		7.80%		4.90%	

Source: CEDD, 2001f.

8.8.3.4 Fiscal Resources

Sacramento County has taxing authority for the property associated with the proposed project. However, the majority of the project's infrastructure will be within Sacramento County and the District's boundaries and would, therefore, not be assessed property taxes. Table 8.8-10 shows revenue collections for Sacramento County broken out by revenue source for selected years. The total adopted revenue for the 00/01 year is $1.8 billion. The majority of the 00/01 funding comes from Aid-Other Government Agencies. Over the previous three years, the county's total funding has increased at an average annual rate of 12 percent.

Table 8.8-10 also shows the breakdown of Sacramento County expenditures by function for fiscal years 98/99 and 00/01 along with the average annual compounded growth rate over that 2-year period. Total financing requirement approached $2 billion in the adopted FY 00/01 budget. Public assistance and Public Protection are the two largest function categories in the fiscal year 00/01 budget, and have both seen average annual compounded growth rates of around 7 percent. Financing requirements for Public Ways and Facilities experienced the largest average annual compounded growth rate at 38 percent over this 2-year period.

Sacramento County has a Sales and Use Tax rate of 7.5 percent. This includes the total Statewide Base Sales Use Tax rate of 7 percent plus 0.5 percent to the Sacramento Transportation Authority. Of the 7 percent Statewide Base Tax, 4.75 percent goes to the State General Fund, 0.5 percent to the State Local Revenue Fund, 0.5 percent to the State Local Public Safety Fund, and the remaining 1.25 percent goes to the local county or city (i.e., at the place of sale).

8.8.3.5 Education

The project site is within the Galt Joint Union High School District (HSD) and the Arcohe Union Elementary School District. Table 8.8-11 shows the enrollment data by grade for both school districts along with historic trends. The Galt Joint Union HSD has seen an annual average compounded growth rate in student enrollment of 6.3 percent from the 92/93 school year to 98/99. Enrollment in 00/01 is 1,874 students, which is in excess of the district's stated capacity of 1,517. Over the next 5 years enrollment is project to increase to 2,398, which would continue the district's over-capacity situation. Arcohe Union Elementary School District has experienced a small historic annual growth rate from the 92/93 school year to the 98/99 school year. The school projects a slight increase in enrollment for the next school year up to 550 students. Currently the school is over-capacity (Wilson, 2001).

TABLE 8.8-10
Sacramento County Budget for Selected Years (Millions)

	1998-99 (Actual)	1999-00 (Actual)	2000-01 (Adopted)	Average Annual Growth 98/99 to 00/01
Revenues				
Current Secured Property Tax	102.6	110.3	120.5	6%
Current Unsecured Property Tax	6.3	6.3	6.7	2%
Supplemental Property Tax	2.4	3.6	3.3	11%
Taxes (Other than Current Property)	118.5	149.2	183.4	16%
Licenses and Permits	30.3	29.3	30.6	0%
Fines, Forfeitures, and Penalties	19.4	35.9	20.1	1%
Use of Money and Property	38.2	28.4	27.9	-10%
Aid-Other Government Agencies	974.7	1,105.10	1,121.80	5%
Charges for Current Services	80.8	79.5	77.3	-1%
Miscellaneous Revenues	77.7	73.2	70.5	-3%
Other Financing Sources	2.3	2	12.2	74%
Total Revenues	1,453.40	1,622.90	1,834.40	8%
Expenditures				
General	96.6	105.9	153.3	17%
Public Protection	461.6	512.2	566.6	7%
Public Ways & Facilities	54.5	51.6	143.6	38%
Health & Sanitation	263	318.1	387.2	14%
Public Assistance	501.8	543.3	606.3	7%
Education	9.1	9.9	13.4	14%
Recreational & Cultural	16.3	18.7	25.9	17%
Debt Service	22.5	19.8	19.4	-5%
Total Specific Financing Uses	1,425.50	1,579.50	1,915.70	10%
Appropriations for Contingencies	0	0	6.8	
Provisions for Reserves	7.7	21.8	21.1	40%
Total Financing Requirements	1,433.20	1,601.20	1,943.60	11%

Source: County of Sacramento, 2001.

TABLE 8.8-11
School Enrollment Data for Local School Districts

	Arcohe Union Elementary District		Galt Union High District	
Grade	**2000/2001[b]**	**Historic Trend 92/93 to 98/99[a]**	**2000/2001[c]**	**Historic Trend 92/93 to 98/99[a]**
Kindergarten	52	-1.7%	-	-
Grade 1	50	3.8%	-	-
Grade 2	50	2.4%	-	-
Grade 3	67	0.9%	-	-
Grade 4	69	-1.0%	-	-
Grade 5	64	-6.8%	-	-
Grade 6	65	-1.3%	-	-
Grade 7	42	-1.8%	-	-
Grade 8	61	6.4%	-	-
Grade 9	-	-	527	6.4%
Grade 10	-	-	512	4.4%
Grade 11	-	-	486	6.3%
Grade 12	-	-	349	7.9%
Ungraded	21	N/A	N/A	N/A
Total	**541**	**0.1%**	**1874**	**6.3%**

[a] Education Data Partnership, 2001
[b] Goehring, 2001
[c] La Plante, 2001

8.8.3.6 Public Services and Facilities

8.8.3.6.1 Law Enforcement

The CPP is within the jurisdiction of the Sacramento County Sheriff's Department, South Field Services. The zone serving the CPP is staffed with one officer in a patrol car 24-hours a day, 7 days a week. The area is also served by a Problem Oriented Police (POP) officer whose responsibility is to provide proactive service and deal with specific local issues. This POP officer works 40 hours a week and is not responsible for responding to service calls. A response time to a service call at the site cannot be estimated since it would depend on the officer's location at the time of the call. For emergencies or calls regarding crimes in progress, officers from other jurisdictions that may be closer are called to provide a quicker response or as backup to the department's lone officer (Drummond, 2001).

8.8.3.6.2 Fire Protection

The CPP site is within the jurisdiction of the Herald Fire District. The district has one full-time firefighter and is staffed with 20 to 25 volunteers. Station 88 at 11620 Clay Station Road in Herald is closest to the project site and is equipped with one fire engine, two grass trucks, and one rescue vehicle. The estimated response time to the project site is less than 10 minutes. The next closest station, Fire Station 87, is located at 12746 Ivy Road. Its

estimated response time is approximately 15 minutes (Hendrickson, 2001). Station 88 is equipped with eight vehicles, two fire engines, one watertender, two grass trucks, one squad vehicle, one rescue vehicle and one pick-up truck. Chief Hendrickson said that an ambulance from the Galt Fire District is dispatched simultaneously for calls involving a medical emergency.

The Galt Fire District has three ambulances that would service the CPP site, two of which operate 24 hours, 7 days a week. Average response time to the site would be between 10 and 20 minutes depending on the availability of the closest unit (Templeton, 2001).

8.8.3.6.3 Emergency Response

Chief Hendrickson of the Herald Fire Department said that the Herald Fire District would respond to calls at the site involving hazardous materials. However, for a Level 2 or above situation the district would also call in the City of Sacramento Hazardous Materials Team. The city of Sacramento's closest station is Station 7, north of Elk Grove. Estimated response time to the site from this station is 30 minutes (Adams, 2001).

8.8.3.6.4 Hospitals

The hospitals nearest the project site include Kaiser Permanente Hospital and Methodist Hospital in south Sacramento, Lodi Memorial Hospital in Lodi, as well as Dameron Hospital and St. Joseph's Immediate Care in Stockton. All five have emergency room facilities. The major trauma center that serves the project side is the UC Davis Medical Center in Sacramento (David, 2001). The District has an arrangement with UCD Medical Center to life-flight emergency victims to its facility for treatment.

8.8.3.7 Utilities

The CPP is within the electricity service area of the District. Currently there is no natural gas supply line to the project site. However, as described in Section 5: Gas Supply, adequate natural gas will be supplied to fuel both phases of the project. Domestic water supply for existing facilities at the project site are provided by an onsite treatment facility using Folsom – South Canal water as a supply source. Domestic wastewater for the CPP site will be treated with a package treatment system and leachfield for sanitary waste.

8.8.4 Environmental Consequences

This section assesses the potential environmental impacts of the project and linears.

8.8.4.1 Potential Environmental Impacts

Local environmental impacts were determined by comparing project demands during construction and operation with the socioeconomic resources of the project area (i.e., Sacramento and San Joaquin counties). A proposed power generating facility could impact employment, population, housing, public services and utilities, and/or schools. Impacts could be local and/or regional, though most impacts would tend to be more regional than local. It is anticipated that the project will not have any significant adverse impacts on the socioeconomic environment, but it will have some significant benefits to the local community.

8.8.4.2 Significance Criteria

The criteria used to determine the significance of project-related socioeconomic impacts are as suggested in the CEQA Checklist. Project-related impacts are determined to be significant if they:

- Induce substantial growth or concentration of population
- Displace a large number of people or existing housing
- Result in substantial adverse environmental impacts associated with the provision of utility services
- Result in substantial adverse physical impacts associated with the provision of public services
- Disrupt or divide the physical arrangement of an established community

Other impacts may be significant if they cause substantial change in community interaction patterns, social organization, social structures, or social institutions; substantial conflict with community attitudes, values, or perceptions; or substantial inequities in the distribution of project cost and benefit.

8.8.4.3 Construction Impacts

Actual construction will occur over approximately 44 months, from winter 2002 to summer 2006. Phase 1 is anticipated to take 24 months to complete and Phase 2 is expected to be completed in 18 months with a 2- to 3-month idle period between phases. Personnel requirements will be minimal during the mobilization and site grading period (i.e., during the first 3 months of the construction period) and during the startup and testing period of each phase (i.e., during the last 3 months of the construction period).

8.8.4.3.1 Construction Workforce

The primary trades in demand will include boilermakers, carpenters, electricians, iron-workers, laborers, millwrights, operators, and pipefitters. Table 8.8-12 provides estimates of the construction personnel requirements for Phase 1 of the project. Construction estimates for Phase 2, along with cumulative totals, are presented in Table 8.8-13. The construction personnel requirements will be approximately 8,984 person-months, or 749 person-years. Total construction personnel requirements will peak at approximately 381 workers during months 12 (Phase 1) and 35 (Phase 2) of the construction period. For the plant construction, the peak workforce is 328 workers in months 12 (Phase 1) and 35 (Phase 2).

TABLE 8.8.12
CPP Construction Workforce Requirements, Phase 1

Discipline/Project Component	Months After Notice-to-Proceed																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
Plant																									
Insulation Workers	0	0	0	0	0	0	0	0	0	0	0	6	10	14	20	20	20	24	24	24	24	18	6	0	210
Boilermakers	0	0	0	0	0	0	0	5	20	36	42	42	42	42	36	36	36	25	25	15	15	5	0	0	422
Bricklayers/Masons	0	0	0	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0	0	0	37
Carpenters	0	2	7	10	10	10	12	14	14	10	8	8	8	6	5	5	5	4	4	4	4	1	0	0	151
Electricians	0	2	4	5	10	12	14	20	39	56	58	65	65	52	44	44	44	31	31	21	21	14	4	4	660
Ironworkers	0	2	3	5	10	10	18	18	25	30	30	30	25	8	3	3	3	3	3	3	3	1	0	0	236
Laborers	2	3	9	9	9	9	10	15	15	13	11	11	11	10	7	7	7	7	7	15	15	11	3	2	218
Millwrights	0	0	0	0	0	0	0	0	0	4	13	19	24	24	22	22	22	16	16	8	8	2	1	0	201
Operating Engineers	4	4	6	6	6	6	6	10	12	12	12	12	12	10	7	7	7	5	5	4	4	2	1	1	161
Painters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	3	3	3	2	2	33
Pipefitters	0	0	2	3	6	6	12	49	63	79	86	86	74	74	52	52	52	34	34	25	25	10	4	4	832
Sheetmetal Workers	0	0	0	0	0	0	0	0	0	3	6	8	6	3	0	0	0	0	0	0	0	0	0	0	26
Surveyors	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	42
Teamsters	2	2	3	2	2	3	3	4	4	5	5	5	4	3	3	3	3	3	3	2	2	1	1	1	69
Total Manual Staff	10	17	36	44	58	61	80	139	196	252	275	296	285	250	207	207	207	160	160	127	127	68	22	14	3298
Total Contractor Staff	3	6	11	15	17	17	26	30	31	32	32	32	32	32	30	30	30	24	24	18	18	12	6	4	512
Total Site Staff	**13**	**23**	**47**	**59**	**75**	**78**	**106**	**169**	**227**	**284**	**307**	**328**	**317**	**282**	**237**	**237**	**237**	**184**	**184**	**145**	**145**	**80**	**28**	**18**	**3810**
Linear Facilities																									
Surveyors	4	4	4	4	2	2	2	2	2	2	2	2													32
Foremen/Supervisors	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					80
Equipment Operators	12	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	12					348
Laborers	14	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	14					478
Teamsters		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4						72
Total Linear Staff	**34**	**55**	**55**	**55**	**53**	**53**	**53**	**53**	**53**	**53**	**53**	**53**	**51**	**51**	**51**	**51**	**51**	**51**	**51**	**30**					**1010**
Project Total	**47**	**78**	**102**	**114**	**128**	**131**	**159**	**222**	**280**	**337**	**360**	**381**	**368**	**333**	**288**	**288**	**288**	**235**	**235**	**175**	**145**	**80**	**28**	**18**	**4820**

TABLE 8.8-13
CPP Construction Workforce Requirements, Phase 2

Discipline/Project Component	Months After Notice-to-Proceed																		Total Phase 2	Total Phase 1	Total Both Phases
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44			
Plant																					
Insulation Workers	0	0	0	0	0	0	0	0	6	10	14	20	20	20	24	24	24	18	180	210	390
Boilermakers	0	0	0	0	5	20	36	42	42	42	42	36	36	36	25	25	15	5	407	422	829
Bricklayers/Masons	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	0	36	37	73
Carpenters	10	10	10	12	14	14	10	8	8	8	6	5	5	5	4	4	4	1	138	151	289
Electricians	5	10	12	14	20	39	56	58	65	65	52	44	44	44	31	31	21	14	625	660	1285
Ironworkers	5	10	10	18	18	25	30	30	30	25	8	3	3	3	3	3	3	1	228	236	464
Laborers	9	9	9	10	15	15	13	11	11	11	10	7	7	7	7	7	15	11	184	218	402
Millwrights	0	0	0	0	0	0	4	13	19	24	24	22	22	22	16	16	8	2	192	201	393
Operating Engineers	6	6	6	6	10	12	12	12	12	12	10	7	7	7	5	5	4	2	141	161	302
Painters	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	3	3	26	33	59
Pipefitters	3	6	6	12	49	63	79	86	86	74	74	52	52	52	34	34	25	10	797	832	1,629
Sheetmetal Workers	0	0	0	0	0	0	3	6	8	6	3	0	0	0	0	0	0	0	26	26	52
Surveyors	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	34	42	76
Teamsters	2	2	3	3	4	4	5	5	5	4	3	3	3	3	3	3	2	1	58	69	127
Total Manual Staff	44	58	61	80	139	196	252	275	296	285	250	207	207	207	160	160	127	68	3,072	3,298	6,370
Total Contractor Staff	15	17	17	26	30	31	32	32	32	32	32	30	30	30	24	24	18	12	464	512	976
Total Site Staff	**59**	**75**	**78**	**106**	**169**	**227**	**284**	**307**	**328**	**317**	**282**	**237**	**237**	**237**	**184**	**184**	**145**	**80**	**3,536**	**3,810**	**7,346**
Linear Facilities																					
Surveyors					2	2	2	2	2	2	2	2							16	32	48
Foremen/Supervisors					4	4	4	4	4	4	4	4	4	4	4	4			48	80	128
Equipment Operators					18	18	18	18	18	18	18	18	18	18	18	18			216	348	564
Laborers					25	25	25	25	25	25	25	25	25	25	25	25			300	478	778
Teamsters					4	4	4	4	4	4	4	4	4	4	4	4			48	72	120
Total Linear facilities					**53**	**53**	**53**	**53**	**53**	**53**	**53**	**53**	**51**	**51**	**51**	**51**			**628**	**1,010**	**1,638**
Project total	**59**	**75**	**78**	**106**	**222**	**280**	**337**	**360**	**381**	**370**	**335**	**290**	**288**	**288**	**235**	**235**	**145**	**80**	**4,164**	**4,820**	**8,984**

Available skilled labor in the two-county region was evaluated by surveying local labor unions (Murphy, 2001) and CEDD data. Table 8.8-8 suggests the anticipated growth in labor workforce in Sacramento and San Joaquin counties will be adequate to fulfill CPP's labor requirements for construction, and local labor union representatives say that the Sacramento area would be able to meet the construction labor requirement for the project. It is expected that most of the construction labor force will be drawn from the local area and will commute daily less than 1 hour each way to reach the job site. Almost all of the workforce will commute 60 miles or less.

8.8.4.3.2 Population Impacts

It is anticipated that the construction of the CPP will not have a significant impact on the region's population since there is an adequate labor pool within commuting distance. It is anticipated that the majority of the construction workforce will draw from labor pools in the Sacramento and Stockton areas with the remainder coming from the northern Bay Area cities and suburbs.

8.8.4.3.3 Housing Impacts

The construction workforce will likely commute to the project site daily. Any laborers who choose to commute to the project site on a work-week basis would be accommodated by the 12,000 hotel and motel rooms in the San Joaquin and Sacramento County region.

8.8.4.3.4 Impacts to the Local Economy and Employment

Construction of CPP will provide about $60 million in total construction payroll over both phases, at an average salary of $38 an hour (excluding benefits). Along with the construction payroll, it is anticipated that between $16 and $20 million will be spent within the Sacramento and San Joaquin County economies on material and supplies.

Construction activity would result in secondary economic impacts (indirect and induced impacts) within Sacramento and San Joaquin Counties. Secondary employment effects would include indirect and induced employment due to the purchase of goods and services by firms involved with construction, and induced employment due to construction workers spending their income within the county. In addition to these secondary employment impacts, there are indirect and induced income effects arising from construction.

Indirect and induced impacts were estimated using an IMPLAN Input-Output model of the two-county (Sacramento and San Joaquin)region. IMPLAN is an economic modeling software. The estimated indirect and induced employment within the two-county region would be 38 and 555 jobs, respectively. These additional jobs result from the $5.6 million in local construction expenditures as well as the $42 million in spending by local construction workers. The $42 million represents the disposable portion of the construction payroll (here assumed to be 70% of $60 million). Assuming an average direct construction employment of 381, the employment multiplier associated with the construction phase of the project is approximately 2.6 (i.e., (381 + 38 + 555)/381). This project construction phase employment multiplier is based on a Type SAM model.

Indirect and induced income impacts were estimated at $1,015,280 and $14,819,710, respectively. Assuming a total local construction expenditure (payroll, materials and supplies) of $65.6 million ($60 million in payroll + $5.6 million in materials and supplies),

the project construction phase income multiplier based on a Type SAM model is approximately 1.2 (i.e., ($65,600,000 + $1,015,280 + $14,819,710)/$65,600,000).

Assuming that local construction expenditures are $4.5 million instead of $5.6 million results in indirect and induced employment estimates within the two-county region of 30 and 553 jobs, respectively. Based on the same average construction employment of 381, the construction phase employment multiplier is approximately 2.5.

Indirect and induced income impacts based on the total construction expenditure of $64.5 million ($60 million in payroll + $4.5 million in materials and supplies) were estimated at $815,850 and $14,776,930 , respectively. Based on these estimates, the construction phase income multiplier was estimated at 1.2.

8.8.4.3.5 Fiscal Impacts

The CPP initial capital cost of the plant is estimated to be $595 million. The estimated value of materials and supplies that will be purchased locally during construction is between $16 million and $20 million. The local sales tax expected to be generated during construction is $1.2 million to $1.5 million (i.e., 7.5 percent of local sales). Of that amount in expected sales tax receipts, the state will receive 5.75 percent or $920,000 to $1.15 million; the place of sale (city or county) will receive 1.25 percent or $200,000 to $250,000. The sales tax revenue realized during construction would have a positive benefit to Sacramento County; however, because of its small size relative to the county's annual revenue generation capacity, the impact would not be significant.

8.8.4.3.6 Impacts on Education

As mentioned in Section 8.8.3.9, both the Galt Joint Union HSD and the Arcohe Union Elementary District are currently in a condition of over-capacity. However, the construction of the CPP will not result in significant population changes or housing impacts to the region and, therefore, would not create significant impacts to the region's educational resources.

8.8.4.3.7 Impacts on Public Services and Facilities

Project construction will not make significant demands on public services or facilities. However, the construction phases of CPP could have minor impacts on police, fire, emergency response, or medical resources of the area. Such impacts could include potential responses to emergency calls, routine site visits, and site plan approval from the fire department. However, these impacts are not considered significant, and existing resources are adequate to sustain them (Drummond, 2001; Hendrickson, 2001; Templeton, 2001; Adams, 2001).

8.8.4.3.8 Impacts on Utilities

The construction and operation of the CPP will not make significant adverse demands on local domestic water supplies, or local wastewater, natural gas, or electricity systems. The proposed project will use the existing infrastructure for domestic water and wastewater during construction and will not have significant adverse affects on these resources.

8.8.4.4 Operational Impacts

8.8.4.4.1 Operational Workforce

The proposed CPP facility is expected to begin full commercial operation in the first quarter of 2005 for Phase 1. Full operation of both phases is expected to employ up to 20 full-time

employees. Anticipated job classifications are shown in Table 8.8-14. The entire permanent workforce is expected to commute from within the region of influence.

TABLE 8.8-14
Typical Plant Operation Workforce

Department	Personnel	Shift	Work days
Operations	8 Operating Technicians, 2 Relief Operators	Rotating 12-hour shifts, 2 operators per shift, 2 relief operators	7 days a week
Maintenance	5 Maintenance Technicians (2 Mechanical, 3 Instrumentation & Electrical)	Standard 8-hour days	5 days a week (Maintenance technicians will also work unscheduled days and hours as required [weekends])
Administration	5 Administrators (1 Plant Manager, 1 Plant Engineer, 1 Plant Administrator, Office Manager, O&M Manager)	Standard 8-hour days	5 days a week with additional coverage as required

8.8.4.4.2 Population Impacts

Plant employees will be drawn from the local region. Because of the low number of full-time employees anticipated during the operation of the CPP, relative to the total population of Sacramento County, there will not be a significant impact to the region's population attributable to the project.

8.8.4.4.3 Housing Impacts

The 20-person operations staff is not anticipated to significantly increase the demand for housing in the region; therefore, there is no significant impact to the region's housing resources attributable to the project.

8.8.4.4.4 Impacts to the Local Economy and Employment

Operation of CPP will have long-term beneficial impacts on the economy and employment of the two-county region of Sacramento and San Joaquin counties. The annual operations and maintenance budget is estimated to range from $8 million to $10 million. Of that amount, approximately $5 million is anticipated to be spent locally. The operations payroll is projected to be approximately $1.25 million, assuming an average annual salary of $62,500.

The operation of the proposed project would result in indirect and induced economic impacts that would occur within the two-county region of influence. These indirect and induced impacts represent permanent increases in the region of influence's economic variables. The indirect and induced impacts would result from annual expenditures on payroll as well as those on operations and maintenance (O&M).

Estimated indirect and induced employment within the two-county region would be 25 and 18 permanent jobs, respectively. These additional 43 jobs result from the $6.25 million ($1.25 million in payroll, and the $5 million in O&M and materials) in annual operational budget. The operational phase employment multiplier is estimated at 3.2 (i.e., (20 + 25 + 18)/20) and is based on a Type SAM multiplier.

Indirect and induced income impacts are estimated at $1,026,893 and $488,055, respectively. The income multiplier associated with the operational phase of the project is approximately 1.2 and is based on a Type SAM model.

8.8.4.4.5 Fiscal Impacts

The annual operations and maintenance budget is expected to be $8 million to $10 million; approximately $5 million will be spent locally. Based on these assumptions, estimated annual sales taxes will be approximately $375,000. Of this amount, the place of sale (assumed to be Sacramento County) will receive $63,000 in sales tax revenue. The anticipated increase in sales tax revenue from the operation of the CPP would be beneficial but not significant because it would constitute such a small percent of total revenues for Sacramento County.

Since the District is a municipal entity, it does not pay property taxes, so Sacramento County would not derive any additional funds from property taxes.

8.8.4.4.6 Impacts to Education

As mentioned in section 8.8.3.9 both the Galt Joint Union HSD and the Arcohe Union Elementary District are over-capacity. However, the construction of the CPP will not result in significant population changes or housing impacts to the region and, therefore, there are no anticipated significant impacts to the region's educational resources.

While no significant impacts to education resources are anticipated, school districts meeting certain requirements can assess one-time development fees on commercial/industrial and residential development that occurs within their district boundaries as a mitigation according to Section 65996 of the California Government. Galt Joint Union HSD generally charges this development fee at a rate of $0.33 per square foot of building area (Seibel, 2001). The CPP is expected to have approximately 40,000 square feet of building area; therefore, the development fee would be approximately $8,500. However, the District has an exemption from the development fee requirement through their status as a publicly owned nonprofit institution.

8.8.4.4.7 Impacts on Public Services and Facilities

Project operation will not make significant demands on public services or facilities. However, the operation phase of CPP could have minor impacts on police, fire, hazardous materials handling, or medical resources in the area. Such impacts could include potential responses to emergency calls, routine site visits, and site plan approval from the fire department. However, these impacts are not considered significant, and existing resources are adequate to sustain them (Drummond, 2001; Hendrickson, 2001; Templeton, 2001; Adams, 2001).

8.8.4.4.8 Impacts on Utilities

The construction and operation of the CPP will not make significant adverse demands on local domestic water supplies, or local wastewater, natural gas, or electricity systems. The proposed project will utilize the existing infrastructure for domestic water and wastewater and will not have significant adverse affects on these resources.

8.8.5 Cumulative Impacts

No adverse cumulative socioeconomic impacts are anticipated from either the construction or operation of the CPP.

8.8.6 Environmental Justice

President Clinton's Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," was signed on February 11, 1994. The purpose of this executive order is to identify and address whether environmental impacts are likely to fall disproportionately on minority and/or low-income members of the community.

The federal guidelines set forth a two-step screening process:

- Whether the potentially affected community includes minority and /or low-income populations
- Whether the environmental impacts are likely to fall disproportionately on minority and/or low-income members of the community.

According to the USEPA guidelines, a minority population exists if minorities comprise 50 percent or more of the affected area's general population. Because the guidelines do not give a percentage of the population as a threshold to determine the existence of a low-income population, the 50 percent rule required for minority populations was used here. In the vicinity of the CPP site defined by the area within a 6-mile radius, approximately 10 percent of the population are low-income, while 14 percent of the population was classified as minority. As specified in the USEPA Guidelines (guidelines) for use in an environmental justice analysis (USEPA, 1996), the most recent U.S Census data are used in the screening analysis. The minority figure is based on 2000 U.S. Census data. Income data from the 2000 Census is not yet available; therefore, the low-income figure is based on the most recent data available, the 1990 U.S. Census data. Figures 8.8-1 and 8.8-2 show respectively the geographic distribution of minority and low-income residents within a 6-mile radius of the CPP.

Based on these data there is not a minority or low-income population in the affected area; therefore, there cannot be a disproportionately high and adverse effect to low-income or minority populations.

8.8.7 Mitigation Measures

Because of the high levels of unemployment in San Joaquin County, the applicant will provide local hiring preferences to qualified individuals living within the Region of Influence. The applicant will also provide a preference for local procurement of materials and supplies within the region, unless:

- To do so will violate federal and/or state statutes
- The materials and/or supplies are not available
- Qualified employees for specific jobs or positions are not available
- There is a reasonable basis to hire someone for a specific position from outside the local area

8.8.8 Involved Agencies and Agency Contacts

Table 8.8-15 provides a list of agencies and contact persons.

TABLE 8.8.15
Agencies and Agency Contacts for CPP Socioeconomics

Agency	Contact	Phone Number
Arcohe Union Elementary School District	John Wilson	(209) 748-2313
California Hotel and Motel Association	Michelle Donohue	(906) 444-7580
City of Sacramento, Hazardous Materials Administration	Forrest Adams	(916) 264-5352
Galt Fire District	Jim Templeton	(209) 745-1001
Galt Joint Union High School District	Bill La Plante	(916) 745-0249
Herald Fire Department	Glen Hendrickson	(209) 748-2322
Hospital Council of Northern and Central California	Robert David	(916) 552-7564
Sacramento Building and Trades Council	Jim Murphy	(916) 924-0424
Sacramento County Sheriff's Department	Dan Drummond	(916) 874-5017

8.8.9 Permits and Permitting Schedule

No permits are required for this section.

8.8.10 References

United States Environmental Protection Agency (USEPA). 1996. Guidance for Incorporating Environmental Justice Concerns in USEPA's NEPA Compliance Analyses. July 12.

Adams, Forrest. 2001. City of Sacramento Fire Department. Personal communication. May 23.

David, Robert P. 2001. Regional Vice President, Hospital Council of Northern and Central California. Personal communication. May 17.

Donohue, Michelle. 2001. California Hotel and Motel Association. Personal communication. May 17.

Drummond, Dan. 2001. Chief Deputy, Sacramento County Sheriff's Department. Personal communication. May 18.

Goehring, Cherie. 2001. Arcohe Union Elementary School District. Personal communication. May 15.

Hendrickson, Glen. 2001. Fire Chief, Herald Fire Department. Personal communications. May 17 and May 23.

La Plante, Bill. 2001. Superintendent, Galt Joint Union High School District. Personal communication. May 15.

Murphy, Jim. 2001. Sacramento Building and Trades Council. Personal communication. June 6.

Seibel, Debbie. 2001. Galt Joint Union High School District. Personal communication. May 16.

Spear, John. 2001. District 2 Office, State Board of Equalization. Personal communication. May 17.

Templeton, Jim. 2001. Galt Fire Department. Personal communication. May 23.

Wilson, John. 2001. Superintendent, Arcohe Union Elementary School District. Personal communication. May 23.

California Department of Finance (CDOF). 1998. County Population Projections with Race/Ethnic Detail. Sacramento, California.
Available: http://www.dof.ca.gov/html/demograph/pl.xls. Viewed in December.

CDOF. 2000. City/County Population and Housing Estimates, 1991-2000, with 1990 Census Counts. Sacramento, California. Available:
http://www.dof.ca.gov/html/demograph/e-5.xls Viewed in May.

CDOF. 2001. (housing starts) California County Profiles.
Available: http://www.dof.ca.gov/HTML/FS_DATA/profiles/pf_home.htm.
Viewed May 15.

California Employment Development Department (CEDD). 2001a. Labor Market Information. Sacramento, CA. Historical Industry Trends. Sacramento County.
Available: http://www.calmis.ca.gov/htmlfile/county/sacto.htm. Viewed May 9.

CEDD. 2001b. Labor Market Information. Sacramento, CA. Historical Industry Trends. San Joaquin County Available: http://www.calmis.ca.gov/htmlfile/county/sjoaquin.htm.
Viewed May 9.

CEDD. 2001c. Labor Market Information. Sacramento, CA. Employment Projections by Industry, 1997-2004. Sacramento County.
Available: http://www.calmis.ca.gov/file/indproj/sanjotb2.htm. Viewed May 9.

CEDD. 2001d. Labor Market Information. Sacramento CA. Employment Projections by Industry, 1997-2004. San Joaquin County.
Available: http://www.calmis.ca.gov/file/indproj/sanjotb2.htm. Viewed May 9.

CEDD. 2001e. Labor Market Information. Sacramento, CA. Employment Projections by Occupation. Available: http://www.calmis.cahwnet.gov/htmlfile/subject/OCCproj.htm.
Viewed May 11.

CEDD. 2001f. (unemployment) Labor Market Information. Sacramento, CA. Monthly Labor Force Data for Counties (Report 400C).
Available: http://www.calmis.ca.gov/htmlfile/subject/lftable.htm. Viewed May 9.

County of Sacramento. 2001. Office of Budget and Debt Management. Available: http://www.co.sacramento.ca.us./budget/final-00-01/pdf/Section B.pdf. Viewed June 10.

Education Data Partnership. 2001. Available: http://www.ed-data.k12.ca.us/welcome.htm. Viewed May 15.

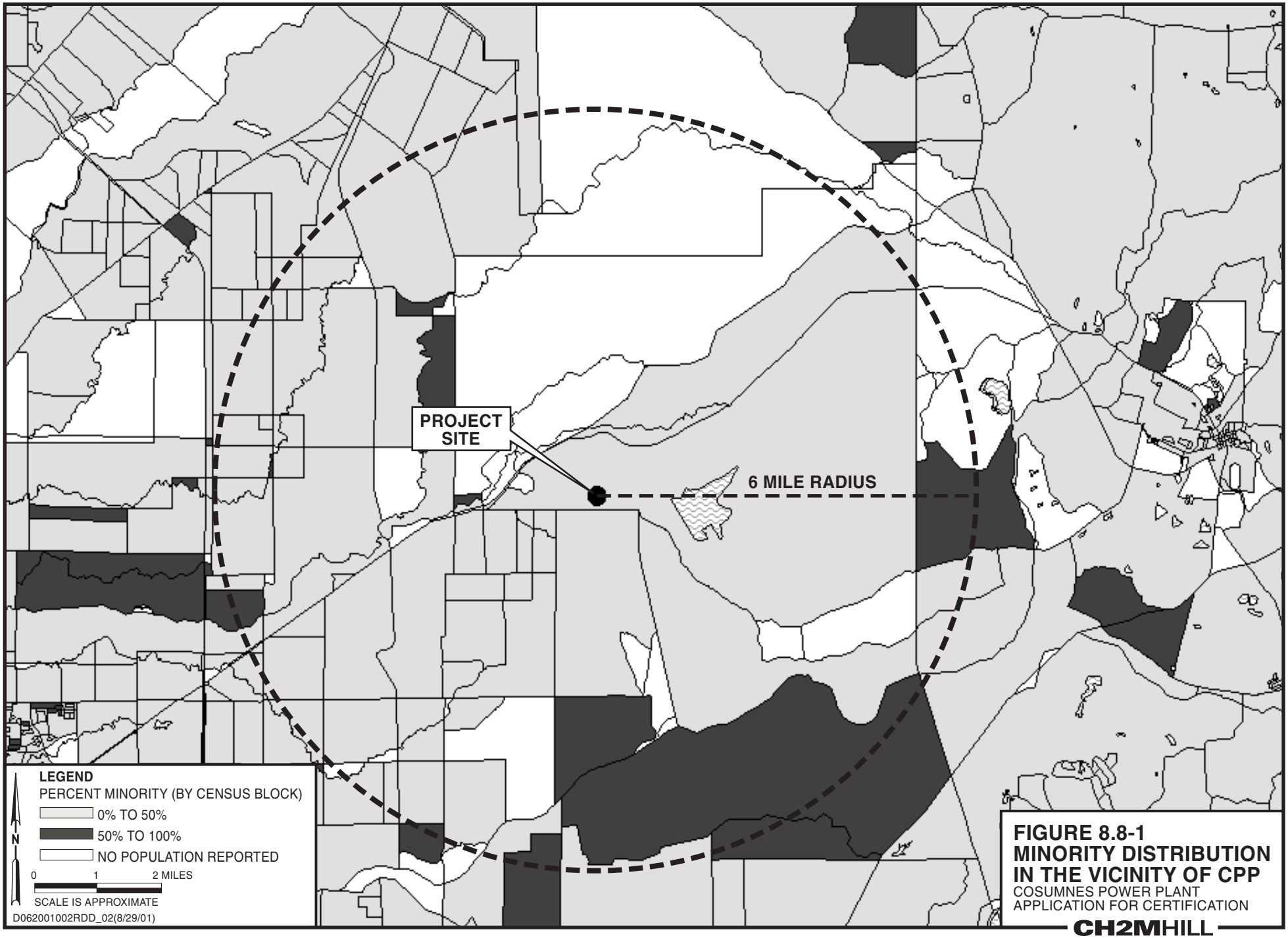

FIGURE 8.8-1
MINORITY DISTRIBUTION IN THE VICINITY OF CPP
COSUMNES POWER PLANT
APPLICATION FOR CERTIFICATION

CH2MHILL

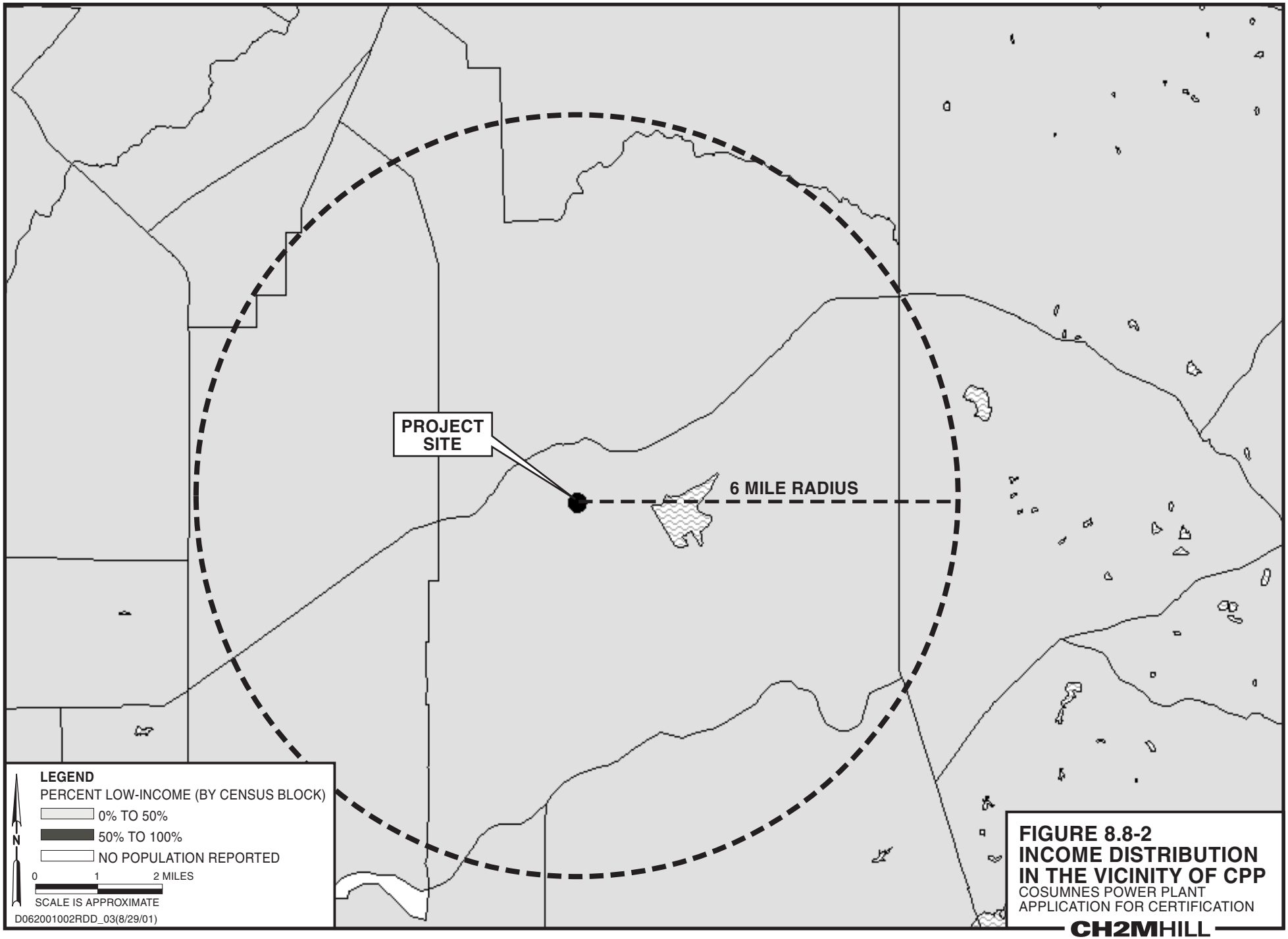

FIGURE 8.8-2
INCOME DISTRIBUTION IN THE VICINITY OF CPP
COSUMNES POWER PLANT
APPLICATION FOR CERTIFICATION

CH2MHILL