Final

Socioeconomics, Population, and Housing Technical Report

Shasta Lake Water Resources Investigation, California

Prepared by:

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Attachments

None.

Abbreviations and Acronyms

CFR Code of Federal Regulations

CVP Central Valley Project

Delta Sacramento-San Joaquin Delta

NA not applicable

NEPA National Environmental Policy Act

SLWRI Shasta Lake Water Resources Investigation

SWP State Water Project

Chapter 1 Affected Environment

This chapter describes the affected environment related to socioeconomics for the dam and reservoir modifications proposed under the Shasta Lake Water Resources Investigation (SLWRI). In this context, "socioeconomics" refers to the socioeconomic, population, and housing characteristics of the primary and extended study areas. Topics discussed include current and historic population and housing data, employment and labor force trends, prominent business and industry types, and government and finance.

The area surrounding Shasta Dam and downstream along the Sacramento River, including Shasta and Tehama counties, is generally characterized by a few established urban areas surrounded by primarily rural land uses. Both counties include a primary urban area and a limited number of (two or three) other, much smaller towns and cities. Redding serves as the primary center for development and economic activity in Shasta County; Red Bluff, although much smaller than Redding, plays that role in Tehama County. Land uses transition from low-density rural residential uses along the urban fringe to large tracts of Federally managed land farther out, including the Shasta-Trinity National Forest to the north and Lassen National Forest to the east. As a result, total population and housing numbers in the two counties tend to be comparatively small. Additionally, area residents tend to be demographically similar, with Caucasians making up a large, though decreasing, majority of residents.

Environmental Setting

Several features contribute to the socioeconomic setting of an area: population and housing characteristics, trends in employment and the labor force, the makeup of businesses and local industries, and government and finance characteristics. Collectively, these characteristics (described below) provide a comprehensive view into the existing socioeconomic condition of an area.

Population and Housing

Population, housing, and demographic characteristics represent important pieces of a community's character. Historic and current data characterizing the population, housing, and demographics of potentially affected communities within the study areas are described below. Because of the often wide-ranging, interdependent nature of socioeconomic resources, the following discussion of population and housing characteristics within the primary study area uses the county as the standard geographic level of analysis, rather than differentiating between resources at Shasta Lake and in its vicinity and resources in the upper

Sacramento River area. Using this approach provides a more accurate depiction of existing socioeconomic resources.

Primary Study Area

Population The area surrounding Shasta Dam comprises generally smaller cities and towns with two larger, primary urban areas in each of the two counties (Shasta and Tehama). Almost 39 percent of the population in Shasta County and more than 65 percent in Tehama County lived in unincorporated areas in 2010 (Table 1-1). By comparison, only 17.2 percent of the population in the entire state of California lived in unincorporated areas in 2010. Because of the area's limited urbanization, residents in Shasta and Tehama counties live a more rural lifestyle than residents in many other areas of California. In total, the populations of Shasta and Tehama counties make up less than 1 percent of the total population in California.

The cities of Redding and Red Bluff are the 2 largest urban areas in the primary study area. Redding, with 91,561 residents in 2010, is the most populous city in the region, with almost 9 times the population of Anderson, the second largest city in Shasta County (Table 1-1). Red Bluff is the second largest city in the region and the largest city in Tehama County, with 13,825 residents in 2010. Like Redding, Red Bluff serves as the primary urban center of Tehama County. The remaining cities in the primary study area – Anderson, the city of Shasta Lake, and Tehama – all contained fewer than 11,000 residents in 2010.

Although Shasta and Tehama counties are still comparatively small, both counties have grown substantially in the last 15–20 years. Since 1990, the population of Shasta County has increased by more than 25 percent (Table 1-1). During that time, the populations of Redding and Anderson (both located along the Sacramento River) increased by 37.8 percent and 30.4 percent, respectively. A similar situation has been observed in Tehama County, where the total population has grown by more than 27 percent since 1990. Most of this new growth has occurred in the unincorporated areas of Tehama County, rather than in existing cities. The percentage of the population in the unincorporated area has decreased in Shasta County, but the reverse trend has been observed in Tehama County (Table 1-1).

Shasta and Tehama counties are expected to continue this growth trend, with substantial growth in Tehama County. The State of California projects that Shasta County's population will increase by 26.7 percent by 2050 to approximately 233,500 residents (DOF 2012). This increase is less than expected at the state level (32.0 percent) (Table 1-1). Tehama County is expected to have a larger population increase than the state, where the population is expected to increase by 44.1 percent between 2010 and 2050.

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Table 1-1. Population Numbers and Projections for Shasta and Tehama Counties and California

		Histo	oric/Current	Trends	Projections				
Location	1990	1995	2000	2010	Percent Change 1990–2010	2020	2030	2050	Percent Change 2010–2050
Shasta County	147,036	159,400	163,256	184,247	25.3	196,087	210,997	233,524	26.7
Redding	66,462	76,900	80,865	91,561	37.8	**	**	**	NA
Anderson	8,299	8,725	9,022	10,826	30.4	**	**	**	NA
City of Shasta Lake	*	8,975	9,008	10,294	14.7*	**	**	**	NA
Unincorporated (%)	49.2	40.7	39.4	38.8	-10.4	**	**	**	NA
Tehama County	49,625	54,200	56,039	63,100	27.2	68,769	75,522	90,918	44.1
Red Bluff	12,363	13,150	13,147	13,825	11.8	**	**	**	NA
Tehama	401	430	432	426	6.2	**	**	**	NA
Unincorporated (%)	62.5	63.2	63.7	65.6	3.1	**	**	**	NA
State of California	29,758,213	31,617,000	33,871,648	38,648,090	29.9	40,817,839	44,574,756	51,013,984	32.0
Unincorporated (%)	20.7	19.6	18.7	17.2	-3.5	**	**	**	NA

Sources: DOF 2007a, 2010, 2012

Kev:

NA = not applicable

^{* =} Not incorporated, percent change calculated from 1995 totals

^{** =} Data unavailable

Housing As would be expected, provision of housing in the primary study area generally coincides with the population trends discussed above. Shasta County (77,857 units in 2010) maintains almost 3 times more housing units than Tehama County (27,729 units) (Table 1-2). Of the cities in the region, Redding provides the largest supply of housing, with more than 38,000 housing units. Redding's units represent roughly half the total housing units in Shasta County. Red Bluff provides the second largest housing stock in the area, with more than 6,000 units. Within Redding and Anderson, the increase in housing units between 1990 and 2010 was substantially greater than the percentage increase at the state level (21.5 percent). Redding observed the greatest increase in housing units since 1990 (4.9 percent).

In addition to housing unit data, Table 1-2 also lists useful descriptors that characterize housing in the area: the percentage of single-family dwellings, vacancy rates, and average household size. Overall, single-family dwelling units are the predominant housing type in the primary study area. Single-family uses composed more than 60 percent of the housing units in all the jurisdictions listed in Table 1-2. All of the localities listed in the table (with the exception of Red Bluff) currently have more single-family housing units as a percentage of the total housing stock than observed at the state level in 2010 (64.4 percent). Vacancy rates were generally higher than the state average (5.9 percent), with the exception of Redding (5.0 percent) and Anderson (5.8 percent). Tehama County registered the highest vacancy rate in the primary study area, with 10.9 percent of all housing units vacant. The average household size in jurisdictions of the primary study area ranged from as low as 2.33 persons per household (Tehama) to as high as 2.64 persons per household (Anderson) (Table 1-2). All of these totals were lower than the average persons per household at the state level (2.96 persons).

Using the projected populations for Shasta and Tehama counties in the previous section and the average household sizes included in Table 1-2, the future demand for housing in the primary study area can be estimated (assuming a constant average household size). With 233,524 residents by 2050 (approximately 49,300 new residents), Shasta County will require approximately 19,560 new housing units. During that same time, Tehama County will need an additional 11,100 new units to house the county's 27,818 new residents.

Table 1-2. Housing Totals and Characteristics for Shasta and Tehama Counties, 1990–2010

			Trends			Characteristics (2010)			
Location	1990	1995	2000	2010	Percent Change, 1990–2010	Single Family (%)	Vacancy (%)	Average Persons per Household	
Shasta County	60,552	68,091	68,810	77,857	28.6	70.4	7.8	2.52	
Redding	27,238	32,164	33,802	38,386	40.9	68.4	5.0	2.44	
Anderson	3,234	3,435	3,581	4,299	32.9	68.1	5.8	2.64	
City of Shasta Lake		3,603	3,767	4,276	18.7*	80.4	9.1	2.63	
Tehama County	20,403	22,7120	23,547	27,729	35.9	62.6	10.9	2.51	
Red Bluff	5,062	5,358	5,567	6,142	21.3	62.3	8.2	2.36	
Tehama	176	183	196	200	13.6	88.0	8.5	2.33	
State of California	11,182,513	11,758,521	12,214,550	13,591,866	21.5	64.4	5.9	2.96	

Sources: DOF 2007a, 2010, 2012

Key:
* = Not incorporated, percent change calculated from 1995 totals

Age, Ethnicity, and Income/Poverty In addition to population and housing trends, the demographic profile is useful in characterizing a given area and identifying potential issues. This section of the document reviews three key demographic parameters within the primary study area: age, race and ethnicity, and income and poverty.

Age From the most recent data for age distribution, a shift in the makeup of residents, consistent with both statewide and national trends, can be observed in the primary study area. As shown in Table 1-3, the population of Shasta and Tehama counties aged between 2000 and 2010. In both counties, the number of 45- to 64-year-olds increased by at least 26 percent and the number of senior citizens (65 years old and older) increased by at least 12 percent. This trend was also observed for the state as a whole (with an increase of 33.7 percent of 45- to 64-year-olds and an increase of 18.1 percent of senior citizens) and can be attributed to the aging of the so-called "baby boomers." Over the 10-year period, the rate of increase in the number of people between 20 and 44 years old in Shasta County (1.3 percent) was equal to the rate of increase in the state (1.3 percent) and the rate of increase in Tehama County was substantially larger (5.0 percent) than the rate of the state as a whole. Interestingly, the number of young people (under 19 years of age) in Shasta County decreased by 6.7 percent while the numbers for the same age group in the state as a whole increased by 2.1 percent. The number of young people increased in Tehama County (by 5.4 percent) between 2000 and 2010.

Race/Ethnicity The racial and ethnic makeup of the primary study area (Table 1-3) depicts a historically white population that is slowly diversifying. In 2010, the white population still represented the large majority (more than 90 percent) of the populations of Shasta and Tehama counties, but substantial increases were observed in many minority groups (U.S. Census Bureau 2010a). For example, between 2000 and 2010, Shasta County saw overall increases in the black or African American, American Indian, and Asian or Pacific Islander groups, with population increases of 26.4 percent, 9.3 percent, and 37.0 percent, respectively (Table 1-3). These increases compared to a 5.4 percent increase in the county's white population. Similarly, Tehama County's minority populations increased between 2000 and 2010. The largest increases were observed in Tehama County's Hispanic population, with an increase of approximately 56.8 percent. The population of individuals identifying themselves as multiracial also increased substantially (42.3 percent) between 2000 and 2010. Trends observed in the 2 counties generally coincide with statewide trends, where Hispanic, Asian-Pacific Islander, and American Indian populations all grew by more than approximately 12 percent over the 10-year period.

Table 1-3. Age, Ethnicity, Income, and Poverty Trends in Shasta and Tehama Counties and California

		Shasta County	Tehama County	State of California
	19 years or below (% change), 2000–2010	-6.7	5.4	2.1
Age	20 to 44 years (% change), 2000–2010	1.3	5.0	1.3
Age	45 to 64 years (% change), 2000–2010	26.7	34.6	33.7
	65 years+ (% change), 2000–2010	20.5	12.9	18.1
	White, 2010	153,726	51,721	21,453,934
	White, 2000–2010 (% change)	5.4	8.8	6.4
	Black or African American, 2010	1,548	406	2,299,072
	Black or African American, 2000–2010 (% change)	26.4	27.7	1.6
	American Indian, including Alaskan Natives, 2010	4,950	1,644	362,801
Race/Ethnicity	American Indian, incl. Alaskan Natives, 2000–2010 (% change)	9.3	41.3	8.8
	Asian or Pacific Islander, 2010	4,662	732	5,005,393
	Asian or Pacific Islander, 2000–2010 (% change)	37.0	47.9	31.2
	Two or more races (total), 2010	7,846	2,702	1,815,384
	Two or more races (total), 2000–2010 (% change)	38.6	42.3	12.9
	Hispanic Origin (any race), 2010	14,878	13,906	14,013,719
	Hispanic Origin (any race), 2000–2010 (% change)	65.3	56.8	27.8
	Median Household Income, 2000	\$34,335	\$31,206	\$47,493
	Median Household Income, 2010	\$42,931	\$39,392	\$59,641
	% Change, 2000–2010	25.0	26.2	25.5
	% of Individuals Below Poverty Level, 2000	15.4	17.3	14.2
Income/Poverty	% of Individuals Below Poverty Level, 2010	17.7	19.5	15.5
	% Change, 2000–2010	2.3	2.2	1.3
	% of Children (< 18) Below Poverty Level, 2000	21.0	24.0	19.0
	% of Children (< 18) Below Poverty Level, 2010	23.4	27.9	21.6
	% Change, 2000–2010	2.4	3.9	2.6

Sources: U.S. Census Bureau 2002a, 2002b, 2002c, , 2010a, 2011a

Income/Poverty Overall, jurisdictions within the primary study area have underperformed when compared to the state averages for income levels and poverty rates. Median household incomes in Shasta and Tehama counties were sizably lower than the state average in 2000 and 2010, although Shasta County experienced a substantial increase in incomes during the 10-year period (Table 1-3). Shasta County's and Tehama County's 2010 median household incomes of \$42,931 and \$39,392, respectively, averaged between \$17,000 and \$20,000 less than the state's 2010 average. The increase in median household income between 2000 and 2010 was slightly less in Shasta County than the state average (25.0 percent and 25.5 percent, respectively). Between 2000 and 2010, the increase in median household income in Tehama County was greater than the state average, with an increase of more than 26 percent.

Overall poverty rates and child poverty rates have also been higher in the primary study area than in the state as a whole. In both 2000 and 2010, poverty rates in Shasta and Tehama counties were generally higher than the state average (Table 1-3). Child poverty rates were more than 20 percent in both counties in 2000 and these rates increased during the 10-year period.

Extended Study Area

The extended study area is separated into two subareas: (1) the lower Sacramento River and Sacramento-San Joaquin Delta (Delta); and (2) the Central Valley Project (CVP)/State Water Project (SWP) service areas. The first subarea is composed primarily of a nine-county area extending from southern Tehama County, just south of the project area, to San Joaquin County, located in the southern Delta. Because of the broad expanse of the CVP and SWP service areas (Figure 1-1), in terms of socioeconomic effects the second subarea is generally synonymous with the entire state of California. Either the CVP or SWP serves, to some degree, residents in 36 of California's 58 counties. These 36 counties accounted for almost 91 percent (39 million residents) of California's population in 2010. Therefore, in the analysis below, the socioeconomic data for the state is used to characterize the CVP/SWP service area. Each subarea is discussed separately below.

Lower Sacramento River and Delta Socioeconomic resources for the lower Sacramento River and Delta area can generally be characterized by a nine-county area that covers the majority of the northern portion of the Central Valley, as shown in Table 1-4. This nine-county area includes Butte, Colusa, Contra Costa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties.



Figure 1-1. Central Valley Project and State Water Project Service Areas

Table 1-4. 2006 Population and Housing Data and Projections for Counties of the Lower Sacramento River and Delta

					County					Nine-	State of
	Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo	County Area	State of California
Total Population, 2010	221,768	22,206	1,073,055	29,434	1,445,327	694,293	427,837	99,154	202,953	4,226,027	38,648,090
2020 Projected Population	244,417	24,521	1,161,014	30,611	1,557,547	795,632	446,513	108,054	223,181	4,591,490	40,817,839
2030 Projected Population	276,009	28,112	1,263,049	33,318	1,731,060	935,709	490,381	131,390	250,420	5,139,448	44,574,756
2050 Projected Population	344,579	35,043	1,496,207	39,475	2,091,452	1,288,854	574,705	199,590	296,183	6,294,088	51,013,984
Percent Change, 2010–2050	55.4	57.8	39.4	34.1	44.7	85.6	34.3	101.3	45.9	47.5	32.0
Total Housing Units, 2010	96,623	7,780	400,268	10,892	556,208	229,827	153,280	33,722	74,224	1,562,824	13,591,866
Percent Single- family	65.0	77.9	74.5	72.0	70.5	77.5	76.2	77.3	64.7	72.7	64.4
Vacancy	6.4	9.8	3.0	8.0	4.4	3.9	4.0	4.5	3.5	5.3	4.8
Average Persons/ household	2.48	3.06	2.73	2.90	2.67	3.07	2.81	3.03	2.61	2.82	2.96

Sources: DOF 2010, 2012

Population Roughly 4 million people live in the 9-county area (Table 1-4). This population represents approximately 11 percent of the total state population (approximately 39 million residents). Sacramento County and Contra Costa County are the 2 largest counties in the area, with approximately 1.4 million and 1.0 million residents, respectively, in 2010 (DOF 2010). These 2 counties are substantially larger than the third largest county, San Joaquin County (694,293 residents). The smallest county in the area was Colusa County, with only 22,206 residents in 2010.

In addition to current population estimates, Table 1-4 shows population projections for each of the nine counties in the lower Sacramento River and Delta area and for the area as a whole. All of the 9-county area is expected to grow at a faster rate than the state of California (32.0 percent increase) between 2010 and 2050. Population increases of at least 34 percent are expected in all 9 counties in the area over that time. Sutter and San Joaquin counties are expected

to experience the highest growth rates between now and 2050, with increases of approximately 101 percent and 86 percent, respectively (DOF 2012). The populations of Butte and Colusa counties are also expected to more than double over that time (Table 1-4). In total, the population of the 9-county area is expected to increase by approximately 47.5 percent. This high rate of growth is expected to alter the existing character of many of these counties by making them more urban (i.e., with higher density housing and increased demand for public services).

Housing Housing characteristics in the nine-county area that makes up the lower Sacramento River and Delta are generally similar to those at the state level, with some variation. In 2010, the 9-county area contained approximately 1.6 million housing units (Table 1-4). As with the population numbers, this total represents approximately 11 percent of the state's housing stock (approximately 14 million houses). Overall, single-family housing makes up a larger proportion of the total housing stock in the 9-county area (72.7 percent) than recorded at the state level (64.4 percent) in 2010 (DOF 2010). No county in the area registered a lower percentage of single-family housing than the state as a whole. The county with the lowest proportion of single-family units is Butte County, with 65 percent of its total housing stock being single-family units (Table 1-4).

The vacancy rate in the nine-county area in 2010 was higher (5.3 percent) than the rate observed at the state level (4.8 percent). The vacancy rate in the majority of counties (six of nine) within the lower Sacramento River and Delta area was substantially lower than the vacancy rate in the state as a whole (DOF 2010). Only Butte County (6.4 percent), Glenn County (8.0 percent), and Colusa County (9.8 percent) had higher vacancy rates than the state. Contra Costa County had the lowest vacancy rate in the area, with 3.0 percent of housing units vacant in 2010 (Table 1-4).

Average household size in the lower Sacramento River and Delta area is generally lower than that observed at the state level. In total, an average of 2.82 persons lived in the households of the nine-county area in 2010 (Table 1-4). This is less than the average of 2.96 persons for the entire state (DOF 2010). Households in Butte County (2.48 persons) were the smallest, on average, in the nine-county area, while Colusa and San Joaquin counties had the largest household size (3.07 persons) in 2010.

Race/Ethnicity Racial and ethnic characteristics in the nine-county area are presented in Table 1-5. Overall, the majority of people in the area are white (57.4 percent), but the proportion of population identified as white varies substantially between counties in the area. The white population of Glenn County (71.1 percent) in 2010 was the highest proportion of any county in the area, while Sacramento and San Joaquin counties had the lowest proportion of white residents (51.0 percent) (U.S. Census Bureau 2010b). These proportions were less than the state level in 2010 (57.6 percent). In all of the counties of the lower Sacramento River and Delta, the Hispanic population represented the

second largest population, ranging from 14.1 percent in Butte County to 55.1 percent in Colusa County (Table 1-5). These percentages compared to the 37.6 percent of the state population identified as Hispanic. San Joaquin (7.6 percent), Contra Costa (9.3 percent), Sacramento (10.4 percent), and Solano (14.7 percent) counties all registered a higher percentage of African-Americans than the state as a whole (6.2 percent). Overall, 9.0 percent of the population of the nine-county area was African-American in 2010 (U.S. Census Bureau 2010b). The Asian–Pacific Islander populations in Colusa County (1.6 percent) and Glenn County (2.7 percent) were substantially lower than the state's population of Asian-Pacific Islanders (13.4 percent). No other sizeable variations in minority populations were observed between the state and county levels.

Table 1-5. Ethnicity, Income, and Poverty Data for Counties of the Lower Sacramento River and Delta

					County					Nine-	01-1
	Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo	County Area	State of California
Race/Ethnicity (2010)											
White, %	81.9	64.7	58.6	71.1	57.8	51.0	51.0	61.0	63.2	57.4	57.6
Black/African American, %	1.6	0.9	9.3	0.8	10.4	7.6	14.7	2.0	2.6	8.9	6.2
American Indian (incl. Alaskan Natives), %	2.0	2.0	0.6	2.2	1.0	1.1	0.8	1.4	1.1	1.0	1.0
Asian or Pacific Islander, %	4.3	1.6	14.9	2.7	15.3	14.9	15.5	14.7	13.4	14.3	13.4
2 or more races (total), %	4.7	3.6	5.9	3.6	6.6	6.4	7.6	5.6	5.8	6.3	4.9
Hispanic Origin (any race), %	14.1	55.1	24.4	37.4	21.6	38.9	24.0	28.8	30.3	25.9	37.6
					Income/Pover	ty					
Median Household Income, 2010	\$42,068	\$47,880	\$76,186	\$44,733	\$54,134	\$52,269	\$66,794	\$49,551	\$56,311	*	\$59,641
% of Individuals Below Poverty Level, 2010	20.3	13.8	10.3	18.2	16.6	17.7	12.1	15.3	19.9	*	15.5
% of Children (<18) Below Poverty Level, 2010	23.7	21.1	13.6	21.7	23.6	24.0	17.5	22.1	19.3	*	21.6

Sources: U.S. Census Bureau, 2010b, 2011b

Key:

Income/Poverty Generally, household income and poverty characteristics for the lower Sacramento River and Delta area are similar to those for the state as a

^{* =} No data available

whole. As shown in Table 1-5, the median household income of the majority of counties within the 9-county area is similar to or higher than the statewide median household income (\$59,641). Contra Costa County registered the highest median household income in the 9-county area, nearly \$76,200, while Butte County recorded the lowest median household income, approximately \$42,000 (U.S. Census Bureau 2011b).

Similar to household income, poverty levels for both individuals and children in the counties of the lower Sacramento River and Delta were similar to the statewide poverty levels. Sacramento (16.6 percent), San Joaquin (17.7 percent), Glenn (18.2 percent), Yolo (19.9 percent), and Butte (20.3 percent) counties had higher overall poverty rates than California as a whole (15.5 percent) in 2010 (Table 1-5). The remaining counties in the area registered lower poverty rates, with Contra Costa County (10.3 percent) maintaining the lowest poverty rates in the area (U.S. Census Bureau 2011b). Child poverty rates in Butte, Sacramento, San Joaquin, and Sutter counties were greater than the state while Colusa, Contra Costa, Solano, and Yolo counties were lower than the rates in the state as a whole. Child poverty rates in Glenn County were approximately the same as the state rates.

CVP/SWP Service Areas In 2010, 38,648,090 people lived in the state of California. Approximately 80 percent of the state's population resides in the incorporated areas of its 58 counties (DOF 2010). In the CVP and SWP service areas, as in the state as a whole, most of the population is concentrated within urban areas. The CVP and SWP service areas include such prominent municipal and industrial water contractors as the Contra Costa Water District, Santa Clara Valley Water District, Alameda County Water District, and water districts that serve portions of the Sacramento and Stockton metropolitan areas. Outside of these fast-growing population centers, most of the CVP and SWP service areas are rural, with irrigated agriculture being the predominant land use and driver of the local and regional economies.

As California's population has continued to grow at a notable pace, water and power supplies have become increasingly scarce and expensive. As a result, existing supplies have become more valuable. This trend is expected to continue. The state's population has increased by almost 30 percent since 1990 and is projected to increase by approximately 32 percent to more than 51 million people by 2050 (Table 1-1). This substantial population increase will result in a sizeable increase in water and energy demand across the state. With this population growth, continued diversification of the state would be expected. The proportion of the statewide population made up of minority groups has been steadily increasing. As shown in Table 1-3, the population of individuals in California identifying themselves as Asian-Pacific Islander or multiracial experienced double-digit population growth between 2000 and 2010, while the population of those identifying themselves as Black or African American experienced the least amount of growth (U.S. Census Bureau 2002b, 2010a). Hispanics are the largest minority population in California, and many

members of this ethnic group work on farms that receive some or all of their water from the CVP and SWP. In general, rural agricultural counties typically have smaller minority populations than the urban counties.

Poverty levels for both individuals and children in California increased slightly between 2000 and 2010. The percentage of people below the poverty level is expected to follow national and statewide economic trends. Generally, poverty rates tend to be higher in the state's rural counties than in the urban counties. Despite these overall urban and rural differences, each of the state's major urban areas has pockets of low-income neighborhoods with high poverty rates.

Employment and Labor Force

The U.S. experienced a recession that began in late 2007 and became apparent beginning in 2008. Changes to the California and U.S. economies attributable to the recession resulted in increases in unemployment rates statewide. California's unemployment rate has been generally 2.0 percent greater than the nation's since April 2009, with the difference reaching a high of 3.4 percent in December 2010. Declines in construction spending and related losses in financial sectors are main contributing factors behind the state's long-term unemployment rates (EDD 2012a).

Trends in employment and the labor force represent key considerations within rural communities like those in the primary study area. Because of the prevalence of numerous resource-dependent businesses in most rural areas, many rural communities often struggle to adapt to the challenges of an increasingly global marketplace. As the role of natural resource-based industries and agriculture diminishes, employment opportunities in rural areas become more difficult to obtain as the economy transitions. At the same time, agriculture and its related support activities remain comparatively strong and provide employment opportunities in the remainder of the CVP and SWP service areas.

This section describes the employment and labor force characteristics in the study areas that could be affected by the project. As in the "Population and Housing" section above, the analysis of the primary study area focuses primarily on Shasta and Tehama counties. Individual cities within the two counties are discussed where data are available. The analysis of the extended study area speaks more generally about employment and labor force conditions in the broader area.

Primary Study Area

Employment and labor force indicators provide useful insight into the economy of an area. Because of the role of Shasta Dam in the surrounding area and the entire state of California, developing a clear understanding of the workforce conditions in the primary study area helps to identify potential impacts associated with each project alternative. To that end, the following sections describe recent employment trends in the primary study area.

Shasta and Tehama Counties Because of the cyclical nature of the area's natural resource—related industries and other factors, Shasta and Tehama counties were characterized by substantially higher unemployment rates during the 1990s (Shasta County 2004). Unemployment rates in both counties have continued to increase and have exceeded state rates since 2007. From 2007 through 2010, unemployment rates in the two counties ranged between 1.8 percent and 3.3 percent above the statewide rate. The two counties recorded similar unemployment rates (varying between 0.1 and 0.7 percent) since 2007. In 2010, Tehama County registered a 15.6 percent unemployment rate, while unemployment in Shasta County totaled 15.7 percent of the population.

Table 1-6 displays the total labor force within each jurisdiction between 2007 and 2010. As a result of its larger population, Shasta County maintained a labor force of 84,400 people in 2010, or more than 3 times that of Tehama County. Between 2007 and 2010, the total labor force in Shasta County increased by approximately 1,700 individuals, with slight variation from year to year. During that time, the labor force of Tehama County generally remained around 25,000 individuals.

Table 1-6. Labor Force and Employment Totals for Shasta and Tehama Counties, 2007–2010

	2	007	2	2008		009	2010	
Location	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment
Shasta County	82,700	76,500 (7.2%)	82,700	74,400 (9.2%)	84,000	71,700 (13.9%)	84,400	71,200 (15.6%)
Tehama County	24,900	23,100 (7.5%)	25,190	22,880 (10.0%)	25,370	21,830 (14.6%)	25,560	21,570 (15.7%)
State of California	17,921,000	16,960,700 (5.4%)	18,203,100	16,890,000 (7.2%)	18,208,300	16,144,500 (11.3%)	18,316,400	16,051,500 (12.4%)

Source: EDD 2010a

Note:

Unemployment rate in parentheses.

Nearby Cities Table 1-7 presents the total labor force and employment from 2007 through 2010 in the cities in the primary study area. Beginning in 2007, the labor force increased slightly in some years; however, the cities of Anderson and Shasta Lake also had years with no growth at all.

Unemployment rates in the cities of Shasta and Tehama counties between 2007 and 2010 generally exceeded those recorded at the county level. The cities of Anderson and Shasta Lake consistently maintained comparatively high unemployment rates, topping out at 19.6 percent in both 2009 and 2010. Red Bluff also registered relatively high rates, with more than 16.3 percent unemployment in both years. However, Redding represents an exception to the high unemployment rates recorded in other nearby cities. Redding maintained a

lower unemployment rate than both Shasta and Tehama counties between 2007 and 2010. Unemployment in the city stayed at or below 13.8 percent throughout that time period, remaining generally similar to the statewide unemployment rate.

Table 1-7. Labor Force and Employment Totals for Cities in the Primary Study Area, 2007–2010

	2	007	2	2008		009	2	2010	
Location	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment	
Shasta County									
Redding	41,800	39,000 (6.7%)	41,600	38,000 (8.7%)	42,000	36,600 (12.9%)	42,100	36,300 (13.8%)	
Anderson	4,400	4,000 (9.1%)	4,400	3,900 (11.4%)	4,600	3,700 (19.6%)	4,600	3,700 (19.6%)	
City of Shasta Lake	4,400	3,900 (11.4%)	4,400	3,800 (13.6%)	4,600	3,700 (19.6%)	4,600	37,000 (19.6%)	
Tehama Cou	inty								
Red Bluff	6,020	5,510 (8.5%)	6,110	5,450 (10.8%)	6,210	5,200 (16.3%)	6,280	5,140 (18.2%)	
Tehama	**	**	**	**	**	**	**	**	
State of California	17,921,000	16,960,700 (5.4%)	18,203,100	16,890,000 (7.2%)	18,208,300	16,144,500 (11.3%)	18,316,400	16,051,500 (12.4%)	

Source: EDD 2010a

Note:

Unemployment rate in parentheses.

Key

Extended Study Area

Employment and labor in the extended study area generally follow the trends observed in the primary study area. Most counties' employment and labor characteristics have been similar to those for the state as a whole, and a few counties experienced higher unemployment levels in 2010. More detailed information on each subarea is provided below.

Lower Sacramento River and Delta Overall, employment and labor trends in the nine counties of the lower Sacramento River and Delta are generally consistent with statewide trends. The area maintains a labor force of more than 1.9 million people, representing approximately 10 percent of the labor force of the state of California (18.3 million). In 2010, Sacramento County maintained the largest labor force of the 9 counties, with more than 682,000 people (Table 1-8). Colusa County, with only 12,000 people, maintained the smallest labor force.

^{** =} no data available

Table 1-8. Employment and Labor Force Data for Counties of the Lower Sacramento River and Delta, 2010

	County										State of
	Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo	County Area	California
Employment	89,200	9,570	465,100	10,870	595,200	248,900	188,800	34,600	85,800	1,728,040	16,051,500
Labor Force	103,600	12,000	523,300	12,930	682,000	300,800	214,600	43,000	98,300	1,990,530	18,316,400
Unemployment Rate	13.9	20.2	11.1	15.9	12.7	17.3	12.0	19.5	12.7	13.2	12.4

Sources: EDD 2010a, 2010b

In the 9-county area in 2010, approximately 13.2 percent of the labor force was classified as unemployed (Table 1-8). This unemployment rate compared to a statewide total of 12.4 percent for the same period. Although the total unemployment rate was only 0.8 percent greater than the state's unemployment rate, unemployment within the counties of the lower Sacramento River and Delta varied substantially. Five counties – Butte, San Joaquin, Glenn, Sutter, and Colusa – registered higher unemployment rates than the state as a whole in 2010, with rates of 13.9, 17.3, 15.9, 19.5, and 20.2 percent, respectively (EDD 2010b). As shown in Table 1-8, the three counties with the highest unemployment rates (Colusa, Glenn, and Sutter) also maintained the three smallest labor forces within the area. Sacramento and Yolo counties had both had unemployment rates (12.7 percent) similar to the state's unemployment rate of 12.4 percent. Solano and Contra Costa counties registered unemployment rates below state levels, with Contra Costa County registering the lowest unemployment rate (11.1 percent) in 2010.

Generally, the counties with the highest unemployment rates in 2010 were characterized by greater dependence on the agricultural industry and a reduced industrial diversity (see the "Business and Industry" section below for more information). Frequently, unemployment rates tend to be higher in rural areas than in urban areas and farm workers commonly have seasonal and temporary jobs.

CVP/SWP Service Areas Employment and labor force trends observed in the CVP and SWP service areas are generally synonymous with the trends observed at the state level because of the expanse of the CVP and SWP service areas. In the discussions of the primary and extended study areas, trends at the state level have been discussed at length. Therefore, this section provides a brief summary of statewide trends in employment and the labor force. As illustrated in Table 1-7, California's total labor force increased consistently from year to year between 2007 and 2010. Between 2007 and 2008, the labor force increased by approximately 282,100 individuals, which was the largest annual increase over the 4-year period. Between 2009 and 2010, the labor force increased by

approximately 108,100 individuals. This California's total labor force exceeded 18.3 million in 2010.

Although increases in the state's total labor force were relatively consistent, the state's unemployment rate fluctuated between 2007 and 2010. The state's unemployment rate was 5.4 percent in 2007 and has increased steadily over the next 4 years to 12.4 percent. This increase in the unemployment rate at the state level coincided with similar national employment trends.

Overall, unemployment rates generally tend to be lower in urban areas than in rural areas of the state; however, high unemployment rates are often also found in low-income neighborhoods of major urban centers.

Business and Industry

California's economy is a robust, dynamic mix of industries that addresses the wide range of needs created by the large population of the state. The long-term industry employment projections for California reflect job gains across all industry sectors. Over the 10-year projection period, employment is expected to rebound as the economy recovers from prior recessionary job losses. Total nonfarm employment is projected to add more than 2.3 million jobs by 2020. Seventy percent of all projected nonfarm job growth is concentrated in four industry sectors: professional and business services; educational services (private), health care, and social assistance; leisure and hospitality; and retail trade (EDD 2012b).

The transportation, warehousing, and utilities; wholesale trade; construction; and manufacturing industries all experienced a slowdown in job growth between 2007 and 2010. The manufacturing sector lost more than 140,000 jobs, or 10 percent of its workforce, in 2008 and 2009. Many of those job losses were caused by recessionary factors. However, as the demand for products rises with the economic recovery, it is anticipated that employment in these industries will grow over the next 10 years (EDD 2012b).

Established industries near the project study areas display a similar mix of prominent business types, but also contain some variation between the two counties of the primary study area. Understanding geographic variations and prominent industry types in the study areas allows for the identification of important influences on the local and regional economy.

This section describes the industrial makeup and major employers in the study areas that could be affected by the project. The analysis of the primary study area focuses on Shasta and Tehama counties, because of the limited economic data available for their constituent cities. Because employees often travel substantial distances to their place of work, aggregating data at the county level effectively captures the economic activities of a region. As in other sections, the analysis of the extended study area speaks more generally about business and industry characteristics of the broader region.

Primary Study Area

Because of the area's limited urban development and substantial amount of open space, the economy in the area near Shasta Dam has historically been dependent on natural resources for its livelihood. As a result of the increased urbanization occurring throughout California in the last decade and changes in the global marketplace, the economic focus in many communities has been shifting. Based on state economic projections for the next 5–10 years, the trend is expected to continue, with service-related industries replacing resource-related industries as the drivers of the regional and state economy. Although statewide trends are expected to influence economic activities in communities near Shasta Dam, the influence will not be as substantial as observed in other areas.

There are two useful ways to characterize the business and industry activities of a given area: industrial makeup and major employers. A description of industrial makeup provides an aggregate depiction of the types of industries that are established in an area, while identifying major employers illustrates which types of businesses are most successful and represent major employment opportunities for the people of the area. Each of these topics is addressed below for Shasta and Tehama counties.

Industrial Makeup Economic activities in the primary study area coincide in many ways with the industrial composition of the state as a whole, but they do vary in some respects. As shown in Table 1-9, education and health services and then governmental services made up the top two industrial sectors (in terms of employment) at both the local and state levels in 2010. In Shasta and Tehama counties, employees in the education and health services, which includes teachers and health workers, and government employees accounted for more than 40 percent of the total workforce.

Table 1-9. Industrial Makeup in Shasta and Tehama Counties, 2010

Industry Croup	Percentage of Total Employees (rank in parentheses)						
Industry Group	Shasta County	Tehama County	State of California				
Educational and Health Services	25.6 (1)	21.9 (1)	21.0 (1)				
Government	17.7 (2)	18.5 (2)	14.7 (2)				
Retail Trade	14.2 (3)	12.9 (3)	11.0 (4)				
Professional and Business Services	9.7 (4)	7.0 (6)	12.5 (3)				
Leisure and Hospitality	8.1 (5)	9.3 (4)	9.6 (6)				
Manufacturing	5.9 (7)	7.6 (5)	10.0 (5)				
Total Farm Employment (% of total workforce)	2,050 (3.1)	1,875 (8.3)	379,300 (2.3)				

Source: U.S. Census Bureau 2011a

Similarly, retail trade, which includes general merchandise stores, food and beverage stores, and other miscellaneous stores and retailers, also ranks in the top five industries in both counties and California generally. In all 3 jurisdictions, educational and health services provide more than 11 percent of employment. Leisure and hospitality, including accommodations, restaurants, and the like, registers in the top 5 industries in Shasta and Tehama counties (Table 1-9). In Tehama County, more than 9 percent of the workforce is employed in this industry.

There are a number of similarities in the industrial makeup of the 2 counties and the state, but there are also some differences. For example, manufacturing plays an important role in Tehama County (7.6 percent) and the state of California (10.0 percent) as a whole, but a comparatively small role in Shasta County (Table 1-9). Professional and business services registers as the third largest industry at the state level (12.5 percent), but represents a smaller portion of employment in Shasta County (9.7 percent) and Tehama County (7.0 percent). Additionally, as shown at the bottom of Table 1-9, farm employment makes up a sizeable portion of the total workforce in Tehama County (8.3 percent), but accounts for a comparatively small portion of Shasta County (3.1 percent) and the state's total workforce (2.3 percent).

Projections of future growth depict slightly different economic trends in Shasta and Tehama counties than at the state level. As shown in Table 1-10, the state's construction industry is expected to grow by 26 percent by 2020 (compared to 2010 levels) and the wholesale trade industry is expected to grow by more than 25 percent in that time. The construction industry represents the fifth largest growth industry in Tehama County (9.4 percent); however, it does not rank in the top growth industries in Shasta County. The wholesale trade industry also represents the fourth and third growth industries in Shasta County and Tehama

County, respectively, but growth rates are expected to be less than the state's rate.

Table 1-10. Projected Growth Industries in Shasta and Tehama Counties

Shasta County ¹	Tehama County ¹	State of California ²
Government (23.5%)	Professional and Business Services (36.5%)	Construction (26.2%)
Educational and Health Services (20.4%)	Government (26.6%)	Wholesale Trade (25.8%)
Transportation, Warehousing, Utilities (15.8%)	Wholesale Trade (21.9%)	Educational and Health Services (25.6%)
Wholesale Trade (11.8%)	Educational and Health Services (17.9%)	Leisure and Hospitality (25.5%)
Retail Trade (10.8%)	Construction (9.4%)	Professional and Business Services (23.3%)
Professional and Business Services (9.8%)	Transportation, Warehousing, Utilities (8.0%)	Retail Trade (22.0%) Transportation, Warehousing, Utilities (22.0%)

Sources: EDD 2009a, 2009b, 2012c

Notes:

Projected change in parentheses

Government and education and health services represent the first and second largest growth industries in Shasta County. Professional and business services and government represent the first and second largest growth industries in Tehama County, while education and health services represent the fourth largest growth industry in the county. Transportation, warehousing, and utilities industries are expected to grow by more than 8 percent in both Shasta and Tehama counties and more than 22 percent in the state as a whole. In both Shasta County and the state, the retail trade industry is expected to grow by more than 10 percent and 22 percent, respectively, but it is not in the top growth industries of Tehama County (Table 1-10). The leisure and hospitality–related industries are expected to grow substantially in the state (25.5 percent). Although growth in leisure and hospitality is also expected to occur in Shasta and Tehama counties (7.2 percent in both counties), leisure and hospitality is not identified in the top growth industries for these counties.

Major Employers Established businesses, along with new businesses that locate in the area, will play an important role in the expansion of the local economy projected by the State. Table 1-11 displays a number of the major employers in the primary study area. This list of employers includes a range of

¹ Growth projections for Shasta and Tehama counties and California from 2008 to 2018.

² Growth projections for California from 2010 to 2020.

businesses with a payroll of over 500 people. Three of the 10 businesses provide health care to local residents and 2 of these employ more than 1,000 people. Other employers with a payroll of more than 500 people include a wholesale nursery; insurance, pest management, and fuel management companies; a college; and a manufacturer of industrial materials (mill work). One company, a wholesale distributor, is identified as employing more than 1,000 people.

Table 1-11. Major Employers in Shasta and Tehama Counties, 2012

Employer	Location	Industry	Size Category
Lassen Canyon Nursery	Shasta County	Nursery, Wholesale	Over 1,000
Mercy Medical Center	Shasta County	Hospital	Over 1,000
Mercy Medical Center– Redding	Shasta County	Hospital	Over 1,000
Walmart	Tehama and Shasta Counties	Distribution Centers (Wholesale)	Over 1,000
Blue Shield	Shasta County	Insurance	Over 500
Clark Pest Control	Shasta County	Pest Control	Over 500
Oakdale Heights Management	Shasta County	Fuel Management	Over 500
Shasta College	Shasta County	Universities & Colleges	Over 500
Shasta Regional Medical Center	Shasta County	Hospital	Over 500
Sierra Pacific Industries	Tehama County	Millwork (Manufacturers)	Over 500

Sources: EDD 2013a, 2013b

Extended Study Area

As would be expected from areas as large as the two subareas of the extended study area, the business and industrial makeup of the two subareas represent a sizeable range of industry types. While this is true, unique characteristics and components can be identified in both subareas. Trends in business and industry for each are discussed below.

Lower Sacramento River and Delta Business and industry in the counties of the lower Sacramento River and Delta portion of the extended study area is composed primarily of five industries: government; educational and health services; professional and business services; retail trade; and leisure and hospitality. These industries consistently rank in the top five industries of the nine counties of the lower Sacramento River and Delta portion of the extended study area (Table 1-12). The education and health services industry was the leading industry in all but two counties (Colusa and Sacramento counties). Government workers represent the leading or second-ranked industry (in terms of employment) in seven of the nine counties. Retail trade and leisure and hospitality are other common industries in the nine-county area. Retail trade

ranks in the top three industries in five of the nine counties and the leisure and hospitality industry is another common industry in the nine-county area. In only Contra Costa, Glenn, and San Joaquin counties did the leisure and hospitality industry not rank as one of the top five industries. Agriculture ranked as a top industry in only Colusa County (Table 1-12). Manufacturing ranked as a top-5 industry in 4 of the 9 counties, but consistently made up 10 percent or less of all employees in the county. This overall industrial makeup is similar to that observed at the state level, shown in Table 1-10.

Table 1-12. Top Five Industries (Employees by Industry) in Counties of the Lower Sacramento River and Delta, 2010

County								
Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo
Educational & Health Services (29.1%)	Agriculture (21.2%)	Educational & Health Services (21.9%)	Educational & Health Services (23.2%)	Government (23.4%)	Educational & Health Services (21.6%)	Educational & Health Services (22.8%)	Educational & Health Services (20.7%)	Educational & Health Services (32.9%)
Government (19.1%)	Educational & Health Services (16.9%)	Professional & Business Services (15.0%)	Government (20.6%)	Educational & Health Services (22.2%)	Government (16.0%)	Government (20.3%)	Government (16.8%)	Government (30.4%)
Retail Trade (13.3%)	Government (15.9%)	Government (14.5%)	Agriculture (15.5%)	Retail Trade (11.5%)	Retail Trade (11.9%)	Retail Trade, (11.6%)	Retail Trade (15.5%)	Professional & Business Services (10.6%)
Leisure & Hospitality (10.5%)	Leisure & Hospitality (9.5%)	Retail Trade (10.7%)	Retail Trade (9.1%)	Professional & Business Services (11.4%)	Manufacturing (10.3%)	Leisure & Hospitality (9.7%)	Agriculture (10.4%)	Retail Trade (9.7%)
Professional & Business Services (10.3%)	Manufacturing (9.4%)	Finance and Insurance (9.7%)	Manufacturing (8.1%)	Leisure & Hospitality (8.9%)	Professional & Business Services (9.0%)	Maufacturing (9.2%)	Leisure & Hospitality (8.0%)	Leisure & Hospitality (8.5%)

Source: U.S. Census Bureau 2011b

Note

Percent of total employees in parentheses.

CVP/SWP Service Areas Business and industry trends for the CVP and SWP service areas are assumed to be equal to those at the state level because of the expanse of these service areas. In discussions of the primary and extended study areas above, state-level information has frequently been used as baseline information for comparison. Therefore, this section provides a brief summary of the industrial makeup of the state of California.

The education and health service industry represents the largest industry, measured by total employees, in California. This industry provided almost 19 percent of the jobs in 2010. As in the lower Sacramento River and Delta

portions of the extended area, government employees comprise the second largest industry in the state and the retail trade, professional and business services, and leisure and hospitality industries all play a significant role in the state's economy (Table 1-10). Manufacturing (ranked fifth) rounded out the state's top six industries in 2010. Four of these industries – educational and health services, retail trade, professional and business services, and leisure and hospitality – are all expected to be growth industries in the state (Table 1-11). As stated above, transportation, warehousing, and utilities; wholesale trade; construction; and manufacturing are also expected to be growth industries in the state.

In 2010, the agricultural industry provided approximately 379,300 jobs (2.3 percent) to California residents. Recently, agriculture-related jobs have declined over time in California relative to other types of jobs, as agricultural areas have been converted to urban land uses. However, the agricultural industry and that portion of the service industry that serves agricultural enterprises still represent a major source of employment within the service areas of the CVP's agricultural water contractors. Construction, retail, and other types of service industry businesses also provide notable job opportunities.

Government and Finance

In rural areas, such as those near Shasta Dam, local governments provide a wide range of services. Using a mix of funding sources, local officials allocate financial resources for diverse activities, including the provision of police and public safety, development review, and educational services within their jurisdictions. The two largest sources of revenue for most local jurisdictions are property taxes and funding from the Federal and State governments. These two sources provide a relatively stable revenue base for funding local programs. Public health and safety and social services of various forms represent the two biggest expenditures at the local level. These programs serve as a safety net for the local population and are frequently the most visible local programs.

This section provides background information on recent trends in the study areas. The discussion of the local governments in the primary study area focuses on Shasta and Tehama counties, because of the limited economic data available for their constituent cities. In many cases, cities and towns work with and share funding with their appropriate county governments. Consequently, county data provide an adequate amount of detail for the area. The analysis of the extended study area speaks more generally about local governments and their finances.

A total of 58 county governments and 478 incorporated cities operate within California's borders. Each of these counties and cities must develop mechanisms for successfully funding the numerous programs mentioned above. Individual jurisdictions face different challenges depending upon their population makeup and special needs. Local governments in urban areas often address substantially different issues than their rural counterparts. Within the project's study areas, rural jurisdictions (both counties and cities) predominate.

Primary Study Area

Shasta and Tehama counties are the critical local governments in the primary study area. As discussed above, these counties contain almost 184,000 people and 63,100 people, respectively. Each county maintains one primary urban center – Redding in Shasta County and Red Bluff in Tehama County – with a limited number of small cities and towns and large amounts of rural land surrounding it. Because the two counties are largely rural jurisdictions, total revenues and expenditures in both counties are relatively low when compared to other jurisdictions in the state. Similarly, expenditures in each jurisdiction are tailored to rural needs more than might be seen in other California jurisdictions.

Shasta County As 1 of the larger counties in the northern Central Valley (although still predominantly rural), Shasta County provides a wide range of services to its almost 184,000 residents. To meet residents' needs, Shasta County employs a number of funding mechanisms, including property taxes, Federal and State funding, permit fees, and other sources (Table 1-13).

Through these various means, Shasta County accumulated more than \$326.8 million in total revenues in the 2009–2010 fiscal year. This total represented an increase of 4.2 percent over 2007–2008 fiscal year revenues (\$313.2 million). In that 3-year period, Shasta County's total revenues steadily increased each year. In the 2009–2010 fiscal year, the largest source of revenue was Federal and State funding, with more than \$195.5 million. Property taxes represented another largest revenue source for Shasta County, at more than \$39.2 million. Revenues from other taxes decreased substantially as a result of the expiration of the sales tax on gas established under Assembly Bill 2928 and the sales and use tax established under Proposition 172 (Table 1-13).

Revenues generated by Shasta County are used for a range of governmental activities. Expenditures increased from \$302.8 million in the 2007-2008 fiscal year to \$319.7 million in the 2008-2009 fiscal year. Expenditures decreased substantially in the 2009-2010 fiscal year to \$309.6 million as a result of decreased spending on transportation-related projects. Table 1-13 displays the total expenditures for Shasta County in several categories. Welfare, social services, and other public assistance has consistently been the largest expenditure for Shasta County (more than \$94.1 million in 2010), but remained relatively constant between 2007 and 2010. Police, fire, and other public safety activities represented the second largest expenditure category with more than \$79.7 million in the 2009-2010 fiscal year. Public health and medical expenses by Shasta County decreased from \$54.0 million in the 2007-2008 fiscal year to \$50.2 million in the 2009-2010 fiscal year (Table 1-13). Overall, total expenditures were less than total revenues in the 2007-2008 and 2009-2010 fiscal years and total expenditures exceeded total revenues in the 2008-2009 fiscal year (Table 1-13).

Table 1-13. Revenues and Expenditures in Shasta County – Selected Years, 2007–2010

	Revenues and Expenditures (\$)		
	2007–2008	2008–2009	2009–2010
Revenues			
Property Taxes	37,220,753	36,500,000	39,289,632
Other Taxes	26,241,822	24,319,631	8,058,346
Licenses, Permits, Fines, Forfeitures, Etc.	13,042,326	9,124,996	9,947,984
Federal, State, Other	177,600,834	168,364,818	195,502,701
Charges for Other Services	18,119,305	18,660,914	18,804,323
Total Miscellaneous Revenue	5,745,962	7,746,234	4,572,393
All Other Financing Sources	35,3024,69	48,018,344	50,663,360
Total Revenue	313,273,471	313,570,336	326,838,739
Expenditures			
Legislative and Administrative, Finance, and Counsel	52,700,253	59,538,465	53,081,487
Capital Projects	2,190,007	1,554,900	5,557,696
Police Protection, Corrections, Fire, Etc.	79,777,591	77,945,091	79,752,968
Transportation, Airport, Etc.	23,230,342	29,082,383	20,821,075
Public Health, Medical Care, Etc.	54,013,214	52,565,588	50,276,031
Welfare, Social Services, and Other Public Assistance	88,680,070	92,780,628	94,111,145
Total Education	1,769,668	1,519,566	1,404,193
Total Recreation Facilities	246,240	336,902	206,798
Costs Associated with Long-Term Debt (Principal and Interest)	281,271	4,384,869	4,403,904
Total Expenditures	302,888,656	319,708,403	309,615,298

Sources: Shasta County 2010, 2011a

Tehama County Because of its smaller size, Tehama County's total revenues are substantially less than those of Shasta County (\$112.3 million in the 2009-2010 fiscal year, compared to \$309.6 million in Shasta County), but Tehama County experienced an overall decrease in revenue growth between 2007 and 2010. In that 3-year period, Tehama County's total revenue decreased from \$119.5 million in the 2007-2008 fiscal year to \$112.3 million in the 2009-2010 fiscal year, a 5.9 percent decrease (Table 1-14). Federal and State funding sources made up the largest revenue source in the 2009-2010 fiscal year, with more than \$60.8 million directed to Tehama County. As seen in Shasta County, property taxes represent another significant revenue source (\$11.1 million in the 2009-2010 fiscal year).

As shown in Table 1-14, expenditures in Tehama County consistently decreased from \$119.3 million in the 2007-2008 fiscal year to \$115.1 million in the 2009-2010 fiscal year, a 3.3 percent decrease (Table 1-14). The top 2 expenditures in Tehama County in the 2009-2010 fiscal year were welfare and social service programs (\$38.0 million) and police, fire, and other public safety programs (\$39.2 million). Spending on these programs and services and on public health

and medical care stayed relatively constant over the 3-year period; costs for recreation facilities increased, and costs for legislative and administration services, transportation, education, and long-term debt decreased. Total expenditures were less than total revenues in the 2007-2008 and 2008-2009 fiscal years but exceeded total revenues in the 2009-2010 fiscal year.

Table 1-14. Revenues and Expenditures in Tehama County – Selected Years, 2007–2010

	Revenues and Expenditures (\$)		
	2007–2008	2008–2009	2009–2010
Revenues			
Property Taxes	11,242,604	11,926,296	11,168,646
Other Taxes	10,866,483	10,117,708	9,616,021
Licenses, Permits, Fines, Forfeitures, Etc.	6,416,739	5,582,963	4,837,382
Federal, State, Other	66,250,338	63,756,606	60,800,918
Charges for Other Services	9,584,768	8,887,405	11,255,754
All Other Financing Sources	15,139,823	16,783,896	14,677,058
Total Revenue	119,500,756	117,054,874	112,355,779
Expenditures			
Legislative and Administrative, Finance, and Counsel	11,749,170	9,499,314	8,394,648
Police Protection, Corrections, Fire, Etc.	37,301,513	38,831,321	39,023,179
Transportation	14,531,455	11,336,957	11,366,314
Public Health, Medical Care, Etc.	15,719,072	16,534,164	16,746,876
Welfare, Social Services, and Other Public Assistance	36,666,298	38,595,415	38,036,675
Total Education	629,736	705,431	660,541
Total Recreation Facilities	217,948	230,836	239,426
Costs Associated with Long-Term Debt (Principal and Interest)	2,217,464	963,899	681,531
Total Expenditures	119,035,656	116,697,337	115,149,190

Sources: Tehama County 2010, 2011

Extended Study Area

Government and finance in the extended study area is managed by the 9 counties in the lower Sacramento River and Delta portion of the extended study area and by the 58 California counties and their constituent cities and towns, as described below.

Lower Sacramento River and Delta The lower Sacramento River and Delta portion of the extended study area comprise nine primary counties – Butte, Colusa, Contra Costa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties. A total of 55 cities and towns and a range of special districts are

located within these 9 counties. This collection of governmental entities provides valuable public services to the lower Sacramento River and Delta area - education, fire protection, employment development, emergency services, and crime prevention and control. These agencies and special districts rely primarily on tax revenue disbursed by State government, local sales and property taxes and fees, and the disbursement of Federal funds. With the passage of Propositions 13 and 165 in the 1970s and 1980s, the providers of services at the local level have come to depend heavily on existing tax structures and rates that generate revenue from economic activity and property values, as opposed to relying upon tax increases or new types of taxes and fees. This greater reliance on existing tax structures and rates, and a productive economic base, makes relatively reliable and affordable CVP and SWP water and power even more valuable; its availability and affordability helps foster local business activity and thus indirectly helps sustain the fiscal health of local service providers. Similarly, flood protection provided by Shasta Dam also helps protect and sustain the appraised value of property within the dam's floodplain, again helping to protect the fiscal health of local service providers.

Total revenues and expenditures vary substantially between the nine counties of the lower Sacramento River and Delta portions of the extended study area because of the relative sizes of the counties and the services they provide. Revenues include payments received through taxes, licenses and permits, grants from other governments, charges for services, and others. Expenditures include payments made by a jurisdiction to buy goods, pay its employees, and provide services to its residents. Glenn County had the smallest total of revenues and expenditures, each at \$82.2 million for 2009-2010, while Sacramento County had the greatest total of revenues and expenditures at \$2.4 billion and \$2.5 billion, respectively, for 2009-2010 (Glenn County 2009; Sacramento County 2009).

CVP/SWP Service Areas The State of California represents the most appropriate level of detail for the CVP and SWP service areas because of the expanse of the service areas and the interdependent nature of government and finance provision. Therefore, this section provides a brief summary of the government and finance characteristics of the state as a whole.

California currently ranks as the seventh largest economy in the world and provides goods and services to more than 38 million people. As a result, State government manages a large annual volume of revenues and expenditures. The State of California's adopted 2012-2013 budget includes a total of approximately \$132.9 billion in revenues and transfers and \$142.4 billion in total expenditures (State of California 2012). Many of the State's expenditures represent grants and other funding made available to local jurisdictions throughout California. These funds may be used for a variety of services, such as health and human services, environmental protection, and resource management.

Regulatory Framework

The assessment of socioeconomic resources is guided primarily by Federal laws and policies. State and local laws and policies typically promote economic development and diversity, environmental justice, public health and safety, housing, and other concerns of the residents within their jurisdictions. As noted below, National Environmental Policy Act (NEPA) documents must include an assessment of potential conflicts with state and local plans and policies.

Federal

The major Federal laws and regulations guiding the assessment of socioeconomic resources are summarized below.

National Environmental Policy Act

Section 102 of NEPA requires Federal agencies to "insure the integrated use of the natural and social sciences" in planning and decision making (42 U.S. Code Section 4332).

Section 1502.16(c) of NEPA requires Federal agencies to identify potential conflicts between a proposed action and related plans and policies of Federal, state, and local agencies and Indian tribes. This requirement helps Federal agencies identify potential conflicts that may cause adverse effects on the social and economic environment of a study area because many agency and tribal plans and policies are designed to protect the people residing within their jurisdictions and/or the local economy they depend upon for their economic livelihoods.

Council on Environmental Quality

The Council on Environmental Quality's "Regulations for Implementing the Procedural Provisions of NEPA" (40 Code of Federal Regulations (CFR) 1500–1508) provide guidance related to social and economic impact assessment by noting that the "human environment" assessed under NEPA is to be "interpreted comprehensively" to include "the natural and physical environment and the relationship of people with that environment" (40 CFR 1508.14). Furthermore, these regulations require agencies to assess "aesthetic, historic, cultural, economic, social, or health" effects, whether direct, indirect, or cumulative (40 CFR 1508.8). Some Federal agencies, including the U.S. Bureau of Land Management and U.S. Forest Service, have developed socioeconomics-related handbooks and instructional memoranda to help the preparers of environmental impact statements comply with NEPA with respect to socioeconomics resources.

Executive Order 12898 - Environmental Justice

In 1994, President Bill Clinton issued Executive Order 12898 regarding environmental justice. This order requires Federal agencies to "identify and address" disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and

low-income populations in the United States. The Council on Environmental Quality issued guidance in 1997 to help Federal agencies incorporate environmental justice concerns into their NEPA procedures. Environmental justice issues are specifically addressed in Chapter 24, "Environmental Justice," of the Environmental Impact Statement.

State

Most state and local governments have plans and policies intended to protect and expand the local and regional economies affecting the communities and residents within their jurisdictions. Some state and local plans and policies are also intended to promote public health and safety while minimizing conflicts between new development projects of all types; their associated traffic, air, and noise impacts; and the social environment within which local residents live and work. State plans and policies also frequently address other social and economic impact topics, including fiscal conditions and related public services that affect local residents' quality of life.

The California Environmental Protection Agency adopted its own environmental justice policy in 2004. Pursuant to Sections 71110-71113 of the California Public Resources Code, the agency has developed this policy (or strategy) to provide guidance to its resource boards, departments, and offices. It is intended to help achieve the State's goal of "achieving fair treatment of people of all races, cultures and incomes with respect to the development, adoption, implementation and enforcement of environmental laws and policies."

Regional and Local

Each of California's counties, including Shasta and Tehama counties, as well as some State agencies, have plans, ordinances, and other policies designed to protect and improve a wide range of socioeconomic conditions. These socioeconomic conditions include housing, employment opportunities for minorities and low-income populations and others, economic diversification, and business activity in general.

Shasta County

Shasta County General Plan Two primary elements of the *Shasta County General Plan* (Shasta County 2004) address socioeconomic resources: Housing and Economic Development. The Housing Element of the *Shasta County General Plan* (Shasta County 2011b) establishes several goals and policies related to ensuring adequate housing provision, especially affordable housing, in the county. Shasta County's housing policies and programs are grouped into six primary categories, each supporting an identified goal. These categories and the goal associated with each are listed below.

Housing Supply

- **Goal** - To establish and implement policies and programs that will:

- contribute to the provision of an adequate supply and diversity
 of safe, healthy, and affordable housing for all income levels to
 meet the needs of residents in the unincorporated areas of
 Shasta County.
- satisfy the requirements of the Regional Housing Needs
 Allocation Plan for Shasta County for the 2003–2008 Housing
 Element period, specifically to realize the construction of new
 units as follows: Very Low Income 300 units; Low Income –
 255 units; Moderate Income 1,035 units; and Above
 Moderate Income 810 units.

Conserve and Improve Existing Affordable Housing

Goal – To conserve, improve, and expand the inventory of existing affordable housing stock in the incorporated areas of the County, specifically to realize the conservation and/or rehabilitation of the following units: Rehabilitation (150): 60 units – Very Low Income; 55 units – Low Income; 25 units – Moderate Income; and 10 units – Above Moderate Income; Conservation (150): 90 units – Very Low Income; 53 units – Low Income; and 7 units – Moderate Income.

• Housing Development Constraints

Goal – To continue to remove all County constraints, as is practical
and legal, which have the potential to hinder or impede the
development of affordable housing projects.

• Special Needs

Goal – To continue to work collectively with local agencies to enhance and expand the outreach programs designed to provide accessible and affordable housing, including supportive services, for those persons with special needs including the elderly, large families, single mothers, children, developmentally and physically disabled persons, the mentally ill, farmworkers, and the homeless.

Energy Conservation

 Goal – To explore, implement, and promote energy conservation practices in all eligible existing and new housing projects.

Fair Housing

Goal – To continue to utilize all feasible means to promote, expand, and ensure equal access to available, safe, decent, affordable housing opportunities in the unincorporated area without bias or prejudice for any reason for all economic segments of the County.

The Economic Development Element of the *Shasta County General Plan* (Shasta County 2004) establishes the following two overall objectives for economic development:

- **ED-1** Economic development plans, programs, and policies shall contribute to a stable and healthy economy in Shasta County, which includes provision of a land development pattern, planning process, and regulatory atmosphere conducive to maintaining employment opportunities for County residents and fostering new economic development.
- **ED-2** Seek economic diversity that increases the variety, type and scale of business, industrial, and manufacturing activities.

To support these objectives, Shasta County has established three primary policies for implementation. These policies emphasize the reuse and revitalization of existing development and full use of existing infrastructure for new business opportunities. To attract business to Shasta County, a number of incentive programs are employed, including community development block grants, economic assistance through a county redevelopment agency, and business development and retention assistance through an economic development corporation. Additionally, a 50-square-mile State-defined enterprise zone (one of only 39 in the state) has been designated in portions of the cities of Redding, Shasta Lake, and Anderson, and unincorporated Shasta County. Enterprise zones are generally designated in locations characterized by high poverty rates. Businesses locating within these areas may receive State-supported incentives such as sales and use tax credits, hiring assistance tax credits, and special business expense deductions (Shasta County 2004).

Tehama County

In the *Tehama County General Plan*, updated in 2009 (Tehama County 2009), Tehama County set out three "fundamental concepts" that relate to population growth and demographic shifts: (1) accommodating growth, but not limiting growth or accepting uncontrolled growth; (2) locating major growth along the Interstate 5 transportation corridor; and (3) organizing growth according to a range of community types. These concepts emphasize where Tehama County expects to locate new growth and how they plan to accommodate it. Specifically, the Interstate 5 corridor plays a significant role for the placement of new development, and Tehama County attempts to provide a range of housing types for the diversity of needs created within the community. This emphasis on housing diversity may become more crucial as aging residents' housing preferences change.

The following housing-related goals in the general plan are relevant to the project:

- Goal HE-3: Adequate Sites Ensure the provision of adequate sites and facilities to support future housing needs.
- Goal HE-5: Housing Conservation Work to improve, maintain and conserve the County's existing housing stock.
- Goal HE-6: Addressing Constraints Address and wherever possible remove, governmental constraints to the maintenance, improvement, or development of housing to meet the needs of County residents.
- Goal HE-7: Fair Housing/Equal Opportunity Promote equal housing opportunities for all persons without discrimination regardless of age, race, sex, marital status, ethnic background, household composition, sources of income, or other arbitrary factors.

Relevant economic development–related goals contained in the general plan are as follows:

- Goal ED-3 Expand the economic base while maintaining a healthy and diverse local economy that meets the present and future employment, shopping, recreational, public safety, and service needs of Tehama County residents.
- Goal ED-4 Work toward providing adequate infrastructure to support commercial, industrial, and recreational development within Tehama County including clean up of contaminated industrial sites.
- **Goal ED-7** Protect and enhance environmentally sensitive lands and natural resources while, at the same time, promoting business expansion, retention, and recruitment.

Shasta and Tehama counties function as the primary agencies responsible for implementing policies and programs aimed at addressing employment and labor force issues within the project's primary study area.

Shasta Lake Water Resources Investigation Socioeconomic Resources Appendix—Socioeconomics, Population, and Housing Technical Report
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Chapter 2 References







