3.12 Socioeconomics

3.12.1 Introduction

This section describes the potential socioeconomic effects that would be expected to occur as a result of implementation of the proposed Project and alternatives. The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts for a range of Project alternatives, and recommends measures to reduce or avoid adverse impacts anticipated from Project construction and operation.

Scoping Issues Addressed

During the scoping period for the EIR/EIS (August-October 2007), a series of scoping meetings were conducted with the public and government agencies, and written comments were received by agencies and the public that identified issues and concerns. The following socioeconomic issues were raised during the public scoping period and are addressed in this section:

- The use of helicopters may cause towers to fall and damage property or injure residents.
- The proposed Project would impact property owners by having an effect on property values.
- The Project would cause property values in Chino Hills to substantially decrease for area homes, thereby having a significant effect on the City.
- The Project would negatively impact the quality of life for residents of Chino Hills because it would place 500-kV transmission lines and towers in a corridor that is too small for such infrastructure.

Summary and Comparison of Alternatives

Table 3.12-1 on the following page presents some key socioeconomic factors for each alternative, including a summary of the expected socioeconomic effects of the proposed Project and alternatives. It is important to note that the "Environmental Issues" indicated in Table 3.12-1 are not impact statements, but rather selected information items that provide a comparison between the alternatives. Project effects are discussed in Sections 3.12.5 through 3.12.11.

3.12.2 Affected Environment

3.12.2.1 Regional Setting

For the purposes of this analysis, the Study Area for Socioeconomics has been divided into three regions: North Region, Central Region, and South Region. The particular boundaries for each of these regions are described below. The regional setting for the proposed Project and alternatives includes parts of Kern County (unincorporated), the Angeles National Forest (ANF), Los Angeles County (incorporated and unincorporated), and San Bernardino County (incorporated and unincorporated). The Project is also located within one-half mile of Riverside County (at Mira Loma Substation) and Orange County (along the proposed ROW for Segment 8A). The vast majority of incorporated cities located within the Project Regions are situated in the South Region. Two cities (Palmdale and Lancaster) are located in the North Region, there are no cities in the Central Region (which encompasses the ANF), and thirty-two cities are located in the South Region.

Table 3.12-1. Summary Comparison of Environmental Issues - Socioeconomics

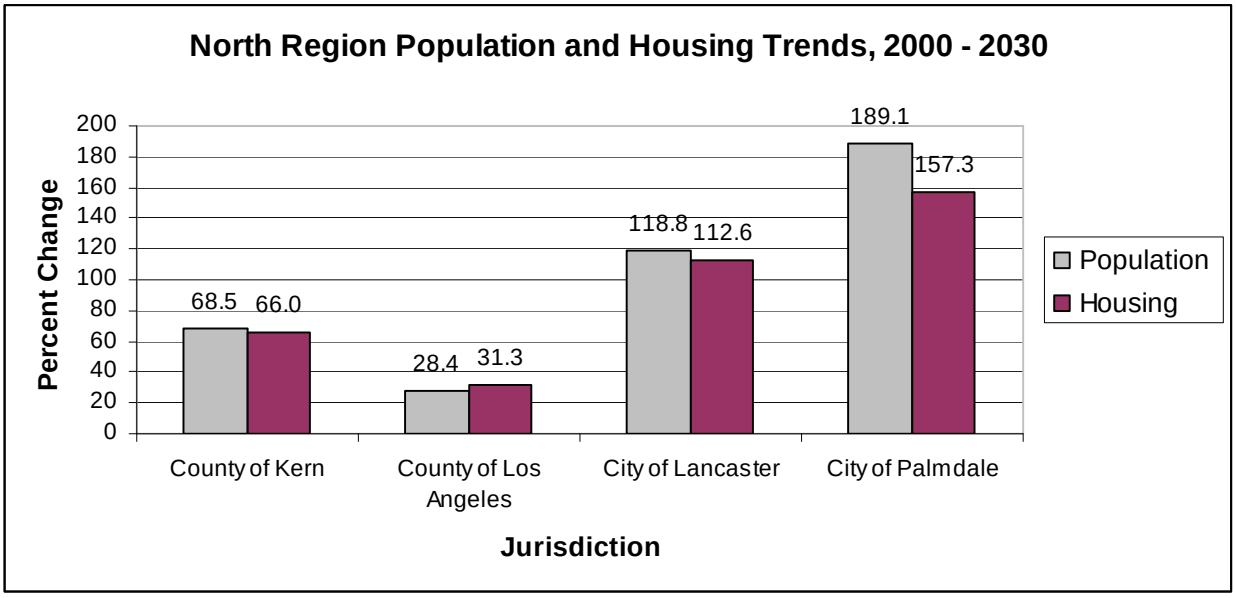
Environmental Issues	Alternative 1 (No Project/Action)	Alternative 2 (SCE's Proposed Project)	Alternative 3 (West Lancaster)	Alternative 4 (Chino Hills)	Alternative 5 (Partial Underground)	Alternative 6 (Max. Helicopter in ANF)	Alternative 7 (66-kV Subtransmission)
Operation and maintenance activities would affect property values along the Project alignment. (Impact S-1)	Potentially would occur in the future due to construction of other T/Ls to meet the purpose and need of the Project.	Would be expected to occur in the North and South Regions.	Same as Alternative 2.	Slightly less than the proposed Project; Routes 4A to 4D would avoid homes along 16 miles of Segment 8A through the Cities of Chino Hills, Chino, and Ontario.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.
Construction activities would cause a temporary decrease in revenues for agricultural landowners. (Impact S-2)	Potentially would occur in the future due to construction of other T/Ls to meet the purpose and need of the Project.	Would be expected to occur in agricultural areas of the North Region.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.
Project activities would affect public agency revenue. (Impact S-3)	Public revenue would not benefit from Project implementation.	Long-term public revenue affect would be positive due to property taxes and fees paid for Project operation; temporary decrease in Forest Service revenue from Adventure Pass sales during construction.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.

North Region

The North Region extends from the Windhub Substation (MP 0.0 of the proposed Project's Segment 10) to the Vincent Substation (Milepost 17.8 of the proposed Project's Segment 5). The North Region includes the proposed Project's Segments 4, 5 and 10 and traverses parts of southern Kern County and northern Los Angeles County, as well as the incorporated cities of Lancaster and Palmdale.

The following section provides a description of population, housing, and labor characteristics in the North Region. Figure 3.12-1, below, provides a comparison of population and housing trends in the North Region, as projected from the year 2000 to the year 2030.

Figure 3.12-1



Demographic Characteristics: North Region

Table 3.12-2 presents current and forecasted population and percent change from 2000 through 2030 for the jurisdictions within the North Region Project Area. Kern County ranks as the thirteenth most populated county in California and in 2006 had the sixth largest numeric population increase in the state (Department of Finance, 2006). Kern County has recently experienced rapid population growth beginning just before 2000 and is projected to continue growing faster than the state as a whole. As indicated in Table 3.12-2, Kern County had a population of 661,645 in 2000 and the Kern Council of Governments (Kern COG) forecasts a 68.5 percent population increase to 1,114,878 by 2030.

The County of Los Angeles ranks as the highest populated county in the state, accounting for 27.6 percent of the state's overall population. Los Angeles County experienced the highest numeric population increase in the state in recent years and fourth largest in the nation from 2000 to 2006 (U.S. Census Bureau, 2007). The population in Los Angeles County at the time of the 2000 Census was 9,519,338 and is projected to grow to 12,221,799 by 2030 (27.6 percent increase). The City of Lancaster had a population of 118,718 (Table 3.12-2) in the 2000 Census, and accounts for 1.2 percent of the total Los Angeles County population. The City is projected to grow at a staggering rate even by regional standards such that in 2030, the City of Lancaster's population is projected to increase 118.8 percent to 259,696. The City of

Palmdale is also undergoing expansive population growth and is projected to surpass the City of Lancaster in rate of growth and total population size.

Table 3.12-2. North Region: Population Characteristics, 2000-2030

Jurisdiction	2000	2010	2020	2030	2000-2030 Change (%)
County of Kern	661,645	808,808	950,112	1,114,878	453,233 (68.5%)
County of Los Angeles	9,519,338	10,718,007	11,501,884	12,221,799	2,702,461 (28.4%)
City of Lancaster	118,718	168,032	215,468	259,696	140,978 (118.8%)
City of Palmdale	116,670	176,506	259,712	337,314	220,644 (189.1%)

Sources: SCAG, 2004; U.S. Census Bureau, 2000.

Housing Characteristics: North Region

Housing data for North Region jurisdictions is presented below in Table 3.12-3. As shown, the forecasted housing increases for Kern and Los Angeles Counties and the Cities of Lancaster and Palmdale correspond fairly closely to projected population increases. As indicated in Table 3.12-3, the Cities of Lancaster and Palmdale have a predicted high housing growth rate between the years 2000 and 2030.

Table 3.12-3. North Region: Housing Characteristics, 2000-2030

Jurisdiction	Housing Units, 2000	Vacancy Rate, 2000 (%)	Forecasted Housing Units, 2010	Forecasted Housing Units, 2020	Forecasted Housing Units, 2030	2000-2030 Change (%)
County of Kern	231,567	22,912 (9.9%)	278,899	327,625	384,441	152,874 (66.0%)
County of Los Angeles	3,137,047	137,135 (4.4%)	3,404,016	3,763,875	4,120,270	983,223 (31.3%)
City of Lancaster	38,289	3,473 (9.0%)	51,418	66,591	81,403	43,114 (112.6%)
City of Palmdale	34,447	2,792 (8.1%)	48,628	68,847	88,623	54,176 (157.3%)

Sources: SCAG, 2004; U.S. Census Bureau, 2000.

Labor Characteristics: North Region

Table 3.12-4 provides employment data for the North Region jurisdictions based on the California Labor Market Division. The region as a whole has more than 5,000,000 workers and overall unemployment rates vary considerably from county to county. Kern County historically has had high unemployment and the unemployment rate in 2006 was 7.6 percent. In comparison, Los Angeles County only had a 4.7 percent unemployment rate in 2006. The City of Lancaster also has experienced high unemployment (6.8 percent in 2006), while the City of Palmdale has a workforce similar in size to the City of Lancaster, with similar unemployment rates of 5.8 percent for Palmdale in 2006.

Table 3.12-4. North Region: Labor Force Characteristics, 2006

Jurisdiction	Total Labor Force	Total Employment	Unemployment (Rate, %)
County of Kern	338,400	312,800	25,600 (7.6%)
County of Los Angeles	4,860,600	4,613,600	229,000 (4.7%)
City of Lancaster	54,400	50,700	3,700 (6.8%)
City of Palmdale	54,400	51,200	3,200 (5.9%)

Source: EDD, 2006

Table 3.12-5 provides major industry sector data for the North Region. These data indicate that despite some pockets of high unemployment, the region as a whole has a large and growing workforce. The construction workforce is most relevant to this analysis and in 2000 there were more than 360,000 construction workers in the region. The construction workforce in Kern County consisted of 13,300 workers in 2002 and is forecasted to increase 34.6 percent to 17,900 participants in 2012. In 2002 Los

Angeles County had a construction workforce of 134,500 that is forecasted to increase to 149,700 by 2012.

Table 3.12-5. North Region: Major Industry Sector Characteristics by County, 2002-2012

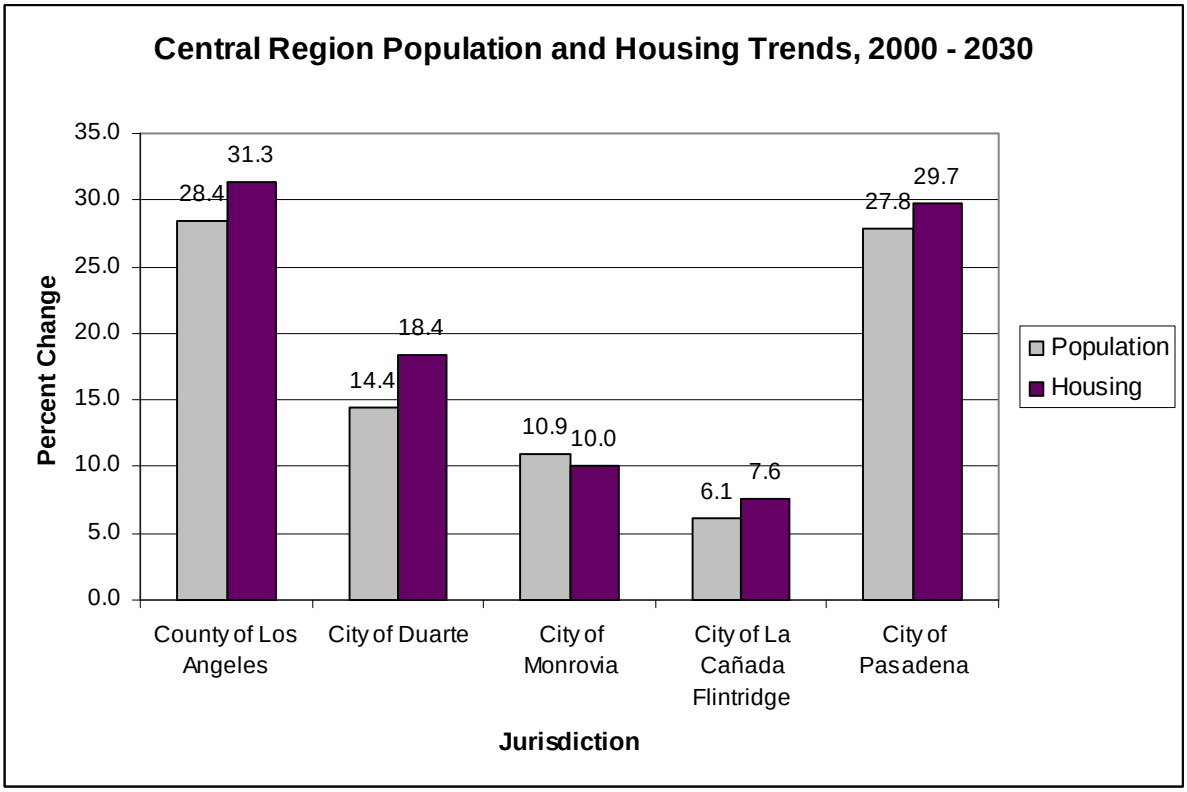
Sector	Annual Employment, 2002 (% of Total Employment)	Forecasted Annual Employment, 2012 (% of Total Employment)	2002-2012 Change (%)
Kern County			
Construction	13,300 (6.5%)	17,900 (7.5%)	4,600 (34.6%)
Education and Health Service	20,700 (10.1%)	26,300 (11.0%)	5,600 (27.1%)
Financial Activities	8,000 (3.9%)	9,600 (4.0%)	1,600 (20.0%)
Government	55,200 (26.9%)	60,200 (25.1%)	5,000 (9.1%)
Information	2,500 (1.2%)	3,100 (1.3%)	600 (24.0%)
Leisure and Hospitality	17,600 (8.6%)	21,700 (9.0%)	4,100 (23.3%)
Manufacturing	11,600 (5.7%)	13,900 (5.8%)	2,300 (19.8%)
Natural Resources and Mining	7,900 (3.9%)	8,500 (3.5%)	600 (7.6%)
Professional and Business Services	22,400 (10.9%)	24,600 (10.3%)	2,200 (9.8%)
Trade, Transportation, and Utilities	39,000 (19.0%)	46,300 (19.3%)	7,300 (18.7%)
Other Services	6,900 (3.4%)	7,900 (3.3%)	1,000 (14.5%)
Total Number of Positions	205,100 (100.0%)	240,000 (100.0%)	34,900 (17.0%)
Los Angeles County			
Construction	134,500 (3.3%)	149,700 (3.3%)	15,200 (11.3%)
Education and Health Service	450,400 (11.2%)	563,400 (12.6%)	113,000 (25.1%)
Financial Activities	232,600 (5.8%)	265,300 (5.9%)	32,700 (14.1%)
Government	606,100 (15.1%)	659,100 (14.7%)	53,000 (8.7%)
Information	207,300 (5.1%)	229,700 (5.1%)	22,400 (10.8%)
Leisure and Hospitality	354,200 (8.8%)	421,800 (9.4%)	67,600 (19.1%)
Manufacturing	534,800 (13.3%)	470,400 (10.5%)	[64,400] (-12.0%)
Natural Resources and Mining	3,700 (0.1%)	3,300 (0.1%)	[400] (-10.8%)
Professional and Business Services	575,000 (14.3%)	680,300 (15.2%)	105,300 (18.3%)
Trade, Transportation, and Utilities	782,700 (19.4%)	884,100 (19.7%)	101,400 (13.0%)
Other Services	145,600 (3.6%)	158,400 (3.6%)	12,800 (8.8%)
Total Number of Positions	4,026,800 (100.0%)	4,485,500 (100.0%)	458,700 (11.4%)

Source: EDD, 2003.

Central Region

The Central Region is located between the Vincent Substation and the southern boundary of the ANF. The majority of the Central Region falls within the jurisdictional boundaries of the ANF. The Gould Substation is located outside of the ANF's jurisdictional boundaries, but is included as part of the Central Region. The Central Region also includes parts of unincorporated Los Angeles County as well as the following cities: Duarte, Monrovia, La Cañada Flintridge, and Pasadena. The following section provides a description of population, housing, and labor characteristics in the Central Region. Figure 3.12-2, below, provides a comparison of population and housing trends in the Central Region, as projected from the year 2000 to the year 2030.

Figure 3.12-2



Demographic Characteristics: Central Region

As previously discussed in the North Region environmental setting, the County of Los Angeles is characterized by a large population and high population growth rate. Among the incorporated cities included within the Central Region, the predicted rate of population change ranges from a low of 6.1 percent in the City of La Cañada Flintridge to a high of 27.8 percent in the City of Pasadena. Please see Table 3.12-6, below, for further details regarding demographic characteristics in the Central Region.

Table 3.12-6. Central Region: Population Characteristics, 2000-2030

Jurisdiction	2000	2010	2020	2030	2000-2030 Change (%)
County of Los Angeles	9,519,338	10,718,007	11,501,884	12,221,799	2,702,461 (28.4%)
City of Duarte	21,486	23,110	23,866	24,570	3,084 (14.4%)
City of Monrovia	37,091	39,037	40,126	41,145	4,054 (10.9%)
City of La Cañada Flintridge	20,318	21,340	21,340	21,562	1,244 (6.1%)
City of Pasadena	133,936	146,489	159,242	171,138	37,202 (27.8%)
City of San Gabriel					

Sources: SCAG, 2004; U.S. Census Bureau, 2000.

Housing Characteristics: Central Region

Housing data for Central Region jurisdictions appears in Table 3.12-7. As previously discussed in the North Region environmental setting, the County of Los Angeles is a region characterized with a large amount of housing and future housing growth rate. As shown, the forecasted housing increases for the Cities of Duarte and Pasadena have the predicted highest level of housing growth rate between the years 2000 and 2030.

Table 3.12-7. Central Region: Housing Characteristics, 2000-2030						
Jurisdiction	Housing Units, 2000	Vacancy Rate, 2000	Housing Units, 2010*	Housing Units, 2020*	Housing Units, 2030*	2000-2030 Change (%)
County of Los Angeles	3,137,047	137,135 (4.4%)	3,404,016	3,763,875	4,120,270	983,223 (31.3%)
City of Duarte	6,637	170 (2.6%)	7,057	7,458	7,861	1,224 (18.4%)
City of Monrovia	13,957	455 (3.3%)	13,755	14,354	14,961	1,364 (10.0%)
City of La Cañada Flintridge	6,828	171 (2.5%)	6,902	7,120	7,345	517 (7.6%)
City of Pasadena	51,842	2,287 (4.4%)	55,242	61,260	67,227	15,385 (29.7%)

Sources: SCAG, 2004; U.S. Census Bureau, 2000.

Labor Characteristics: Central Region

Table 3.12-8 provides employment data for the Central Region jurisdictions based on the California Labor Market Division. The region as a whole has more than 5,000,000 workers and overall citywide unemployment rates vary from 4.3 percent (City of Monrovia) to 1.9 percent (City of La Cañada Flintridge).

Table 3.12-8. Central Region: Labor Force Characteristics, 2006			
Jurisdiction	Total Labor Force	Total Employment	Unemployment (Rate, %)
County of Los Angeles	4,860,600	4,613,600	229,000 (4.7%)
City of Duarte	11,400	11,100	300 (2.6%)
City of Monrovia	20,700	19,800	900 (4.3%)
City of La Cañada Flintridge	10,600	10,400	200 (1.9%)
City of Pasadena	76,600	73,900	2,700 (3.5%)

Source: EDD, 2006

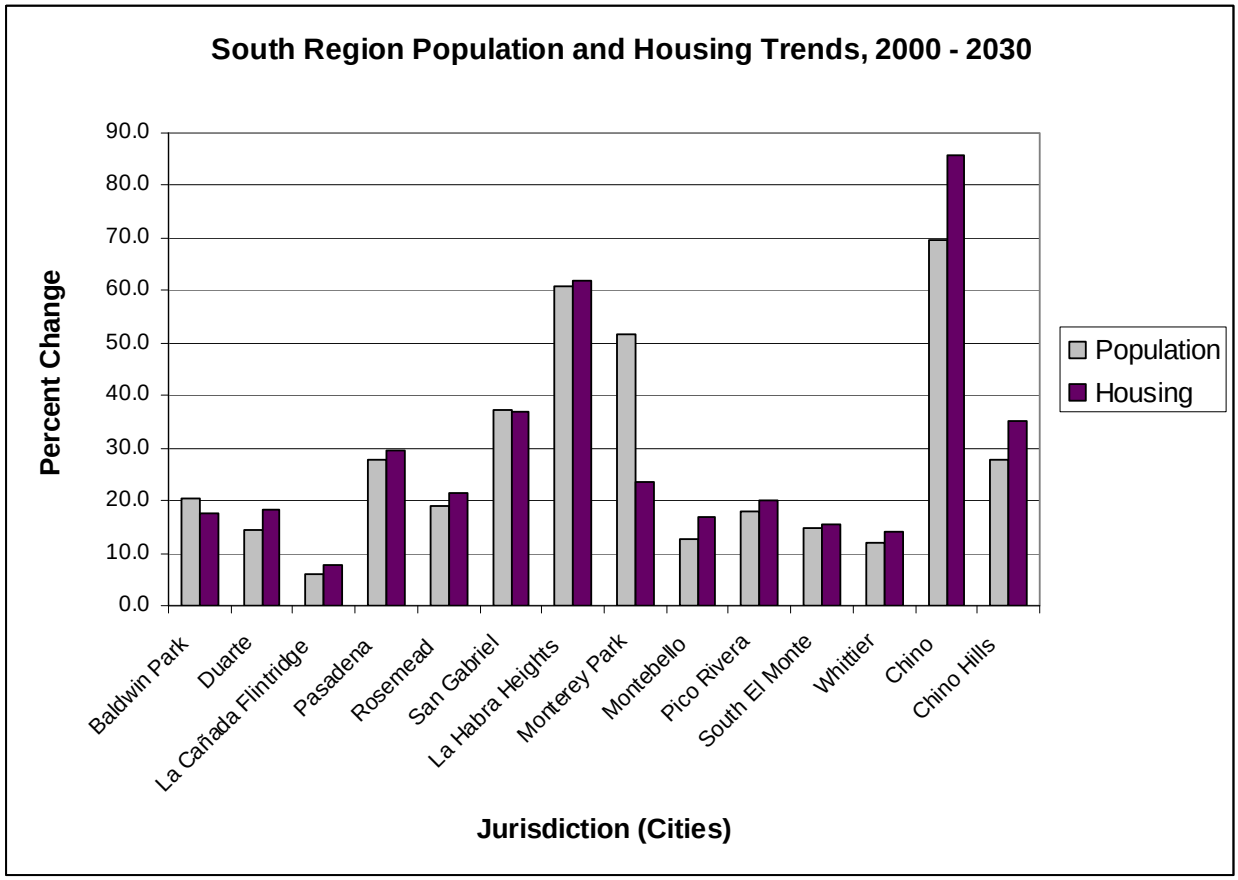
Please refer to Table 3.12-5 (North Region: Major Industry Sector Characteristics by County, 2002-2012), provided earlier, for a description of the major industry sector data for the Los Angeles County region. As noted earlier, existing construction and utilities related workforces in Los Angeles County are large and predicted to experience continued growth.

South Region

The South Region extends in a southeastern direction from the southern boundary of the ANF to the Mira Loma Substation in Ontario, encompassing the Gould, Goodrich, Mesa, Rio Hondo, and Chino Substations. The South Region includes lands within Los Angeles and San Bernardino Counties, as well as multiple incorporated cities and some unincorporated communities. The following section provides a description of population, housing, and labor characteristics in the South Region. Figure 3.12-3, below, provides a comparison of population and housing trends in the South Region, as projected from the year 2000 to the year 2030.

Population and housing trends for the Cities of Industry, Irwindale, and Ontario are not portrayed in Figure 3.12-3, but are provided in Tables 3.12-9 and 3.12-10.

Figure 3.12-3



Demographic Characteristics: South Region

The South Region is generally an area of high population and housing growth, as indicated in Table 3.12-9 (South Region: Population Characteristics, 2000-2030).

Table 3.12-9. South Region: Population Characteristics, 2000-2030

Jurisdiction	2000	2010	2020	2030	2000-2030 Change (%)
Los Angeles County					
Los Angeles County: total	9,519,338	10,718,007	11,501,884	12,221,799	2,702,461 (28.4%)
City of Baldwin Park	75,837	86,367	88,880	91,219	15,382 (20.3%)
City of Duarte	21,486	23,110	23,866	24,570	3,084 (14.4%)
City of Industry	777	799	799	799	22 (2.8%)
City of Irwindale	1,446	1,809	2,358	2,871	1,425 (98.5%)
City of La Cañada Flintridge	20,318	21,340	21,456	21,562	1,244 (6.1%)
City of Pasadena	133,936	146,489	159,242	171,138	37,202 (27.8%)
City of Rosemead	53,505	57,750	60,806	63,651	10,146 (19.0%)
City of San Gabriel	39,804	45,346	50,127	54,585	14,781 (37.1%)
Community of Altadena	42,610	n/a	n/a	n/a	n/a
Community of East Pasadena	6,045	n/a	n/a	n/a	n/a
Community of East San Gabriel	14,512	n/a	n/a	n/a	n/a
Community of South San Gabriel	7,595	n/a	n/a	n/a	n/a
City of La Habra Heights	5,712	6,631	7,950	9,181	3,469 (60.7%)
City of Monterey Park	60,051	70,072	80,917	91,027	30,976 (51.6%)
City of Montebello	62,150	66,020	68,102	70,046	7,896 (12.7%)
City of Pico Rivera	63,428	67,523	71,231	74,687	11,259 (17.8%)

Table 3.12-9. South Region: Population Characteristics, 2000-2030					
Jurisdiction	2000	2010	2020	2030	2000-2030 Change (%)
City of South El Monte	21,144	22,559	23,438	24,256	3,112 (14.7%)
City of Whittier	83,680	88,085	91,049	93,814	10,134 (12.1%)
Community of Avocado Heights	15,148	n/a	n/a	n/a	n/a
Community of Hacienda Heights	53,122	n/a	n/a	n/a	n/a
Community of Rowland Heights	48,553	n/a	n/a	n/a	n/a
San Bernardino County					
San Bernardino County: total	1,919,215	2,229,700	2,558,729	2,713,549	794,334 (41.3%)
City of Chino	67,168	82,319	98,703	113,977	46,809 (69.7%)
City of Chino Hills	66,787	78,307	81,916	85,284	18,497 (27.7%)
City of Ontario	158,007	180,059	244,977	305,509	147,502 (93.4%)

n/a: data not available
Sources: SCAG, 2004; U.S. Census Bureau, 2000.

As shown in Table 3.12-9, municipalities within the South Region are generally forecasted to experience high population growth. While population projections are not available for the unincorporated communities of Altadena, East Pasadena, East San Gabriel, South San Gabriel, Avocado Heights, Hacienda Heights, and Rowland Heights, these communities may be reasonably expected to undergo population growth based on County trends and their proximity to adjacent cities with forecasted high population growth.

The cities of Montebello and Whittier exhibit comparatively modest levels of growth in population and housing. Conversely, the City of Ontario, which has the largest current population of cities within the South Region, also displays a high forecasted population growth (93.4 percent). Variances shown in Table 3.12-9 include the City of Irwindale, which is expected to have the highest population growth, and the City of Industry, which is expected to have the lowest population growth rate of jurisdictions within the South Region. Population in the City of Irwindale is expected to grow by 98.5 percent by the year 2030, however, it should be noted that in comparison with other cities in the South Region, Irwindale has a very low existing population. In comparison, population in the City of Industry is expected to grow by 2.8 percent by the year 2030; however, this low rate of growth is due to the fact that the City of Industry was created to allow for industrial and commercial development with minimal residences. As such, this city is not comparable to other cities listed in Table 3.12-9 that are experiencing rapid growth of residential developments.

Housing Characteristics: South Region

Housing data for South Region jurisdictions is presented below, in Table 3.12-10. As previously discussed in the North Region environmental setting, the County of Los Angeles is characterized by a large amount of housing and future housing growth rate. Predictions for housing growth in San Bernardino County are more aggressive, as indicted in Table 3.12-10. As shown, the forecasted housing increases for the Cities of Chino and Ontario have the highest predicted levels of housing growth rate between the years 2000 and 2030.

Table 3.12-10. South Region: Housing Characteristics, 2000-2030						
Jurisdiction	Housing Units, 2000	Vacancy Rate, 2000	Forecasted Housing Units, 2010	Forecasted Housing Units, 2020	Forecasted Housing Units, 2030	2000-2030 Change (%)
Los Angeles County						
Los Angeles County: total	3,137,047	137,135 (4.4%)	3,404,016	3,763,875	4,120,270	983,223 (31.3%)
City of Baldwin Park	16,991	467 (2.7%)	18,673	19,324	19,994	3,003 (17.7%)
City of Duarte	6,637	170 (2.6%)	7,057	7,458	7,861	1,224 (18.4%)
City of Industry	121	0 (0%)	121	121	122	1 (0.1%)
City of Irwindale	365	13 (3.6%)	394	502	607	242 (66.3%)
City of La Cañada Flintridge	6,828	171 (2.5%)	6,902	7,120	7,345	517 (7.6%)
City of Pasadena	51,842	2,287 (4.4%)	55,242	61,260	67,227	15,385 (29.7%)
City of Rosemead	13,948	425 (3.0%)	14,519	15,746	16,967	3,019 (21.6%)
City of San Gabriel	12,592	317 (2.5%)	13,774	15,510	17,231	4,639 (36.8%)
Community of Altadena	15,245	470 (3.1%)	n/a	n/a	n/a	n/a
Community of East Pasadena	2,123	88 (4.1%)	n/a	n/a	n/a	n/a
Community of East San Gabriel	5,387	186 (3.5%)	n/a	n/a	n/a	n/a
Community of South San Gabriel	5,387	75 (1.4%)	n/a	n/a	n/a	n/a
City of La Habra Heights	1,890	72 (3.8%)	2,204	2,635	3,059	1,169 (61.9%)
City of Monterey Park	19,626	646 (3.3%)	20,177	22,214	24,236	4,610 (23.5%)
City of Montebello	18,833	580 (3.1%)	19,398	20,702	22,009	3,176 (16.9%)
City of Pico Rivera	16,468	334 (2.0%)	17,301	18,534	19,763	3,295 (20.0%)
City of South El Monte	4,620	97 (2.1%)	4,776	5,059	5,342	722 (15.6%)
City of Whittier	28,270	707 (2.5%)	29,311	10,776	32,250	3,980 (14.1%)
Community of Avocado Heights	3,833	8 (2.0%)	n/a	n/a	n/a	n/a
Community of Hacienda Heights	16,356	364 (2.2%)	n/a	n/a	n/a	n/a
Community of Rowland Heights	14,548	367 (2.5%)	n/a	n/a	n/a	n/a
San Bernardino County						
San Bernardino County: total	601,369	72,775 (12.1%)	618,782	756,640	897,739	367,241 (69.2%)
City of Chino	17,331	631 (3.6%)	20,818	26,451	32,202	14,871 (85.8%)
City of Chino Hills	20,158	374 (1.9%)	22,466	24,779	27,252	7,094 (35.2%)
City of Ontario	43,538	1,671 (3.8%)	48,749	69,473	90,417	46,879 (107.7%)

n/a: data not available

Sources: SCAG, 2004; U.S. Census Bureau, 2000.

Labor Characteristics: South Region

Table 3.12-11 provides labor force data for jurisdictions located within the South Region. As shown, the size of the area's labor force is consistent with the population size, and the unemployment setting similarly compares with the regional unemployment rate (4.7 percent for Los Angeles County and 4.9 percent for San Bernardino County). As shown in Table 3.12-11, labor force characteristics of the jurisdictions located in the South Region are comparatively similar in workforce size, with exception of the cities of Irwindale, and Industry. Similarly the jurisdictions have comparable unemployment rates.

Table 3.12-11. South Region: Labor Force Characteristics, 2006			
Jurisdiction	Total Labor Force	Total Employment	Unemployment (Rate, %)
Los Angeles County			
Los Angeles County: total	4,860,600	4,613,600	229,000 (4.7%)
City of Baldwin Park	32,800	30,800	2,000 (6.1%)
City of Duarte	11,400	11,100	300 (2.6%)
City of Industry	300	300	0 (0%)
City of Irwindale	700	700	0 (0%)

Table 3.12-11. South Region: Labor Force Characteristics, 2006			
Jurisdiction	Total Labor Force	Total Employment	Unemployment (Rate, %)
City of La Cañada Flintridge	10,600	10,400	200 (1.9%)
City of Pasadena	76,600	73,900	2,700 (3.5%)
City of Rosemead	24,900	23,900	1,000 (4.0%)
City of San Gabriel	20,700	19,900	800 (3.9%)
Community of Altadena	24,200	23,400	800 (3.3%)
Community of East Pasadena	3,300	3,200	100 (3.0%)
Community of East San Gabriel	8,200	8,000	200 (2.4%)
Community of South San Gabriel	3,800	3,600	200 (5.3%)
City of La Habra Heights	2,900	2,900	0 (0%)
City of Monterey Park	29,600	28,600	1,000 (3.4%)
City of Montebello	20,700	19,800	900 (4.3%)
City of Pico Rivera	29,000	27,700	1,300 (4.5%)
City of South El Monte	9,200	8,700	500 (5.4%)
City of Whittier	44,000	42,500	1,500 (3.4%)
Community of Avocado Heights	6,700	6,400	300 (4.5%)
Community of Hacienda Heights	27,400	26,500	900 (3.3%)
Community of Rowland Heights	25,500	24,700	800 (3.1%)
San Bernardino County			
San Bernardino County: total	669,028	636,246	32,782 (4.9%)
City of Chino	35,900	34,400	1,500 (4.2%)
City of Chino Hills	42,300	41,300	1,000 (2.4%)
City of Ontario	83,800	79,600	4,200 (5.0%)

Source: EDD, 2006

In addition to the labor force characteristics described above, Table 3.12-12 (below) provides major industry sector data for San Bernardino County. Please refer to Table 3.12-5 (North Region: Major Industry Sector Characteristics by County, 2002-2012), provided above in the North Region discussion, for a description of major industry sector employment data for Los Angeles County. The construction workforce is most relevant to this analysis and in 2002 there were 90,900 construction workers in San Bernardino County. The construction workforce in Los Angeles County consisted of 134,500 workers in 2002. As shown, San Bernardino County construction workforce is forecasted to increase 39.4 percent to 126,700 workers by the year 2012. In 2002 Los Angeles County had a construction workforce forecasted to increase to 149,700 workers by 2012. Therefore, cumulative available construction workforce in 2012 is expected to be approximately 276,400 workers.

Table 3.12-12. South Region: Major Industry Sector Characteristics by County, 2002-2012			
Sector	Annual Employment, 2002 (% of Total Employment)	Forecasted Annual Employment, 2012 (% of Total Employment)	2002-2012 Change (%)
San Bernardino County			
Construction	90,900 (8.5%)	126,700 (9.2%)	35,800 (39.4%)
Education and Health Service	112,400 (10.6%)	146,400 (10.6%)	34,000 (30.2%)
Financial Activities	39,500 (3.7%)	52,300 (3.8%)	12,800 (32.4%)
Government	212,700 (20.0%)	258,800 (18.7%)	46,100 (21.7%)
Information	14,100 (1.3%)	16,200 (1.2%)	2,100 (14.9%)
Leisure and Hospitality	107,200 (10.1%)	138,600 (10.0%)	31,400 (29.3%)
Manufacturing	115,400 (10.8%)	129,300 (9.4%)	13,900 (12.0%)
Natural Resources and Mining	1,200 (0.1%)	1,300 (0.1%)	100 (8.3%)
Professional and Business Services	106,800 (10.0%)	159,700 (11.6%)	52,900 (49.5%)

Table 3.12-12. South Region: Major Industry Sector Characteristics by County, 2002-2012			
Sector	Annual Employment, 2002 (% of Total Employment)	Forecasted Annual Employment, 2012 (% of Total Employment)	2002-2012 Change (%)
Trade, Transportation, and Utilities	225,400 (21.2%)	306,900 (22.2%)	81,500 (36.2%)
Other Services	38,100 (3.4%)	45,800 (3.3%)	7,700 (20.2%)
Total Number of Positions	1,063,700 (100.0%)	1,382,000 (100.0%)	318,300 (29.9%)

Source: EDD, 2003

3.12.2.2 Alternative 2: SCE's Proposed Project

North Region, Alternative 2

The North Region extends from the Windhub Substation (Milepost 0.0 of the proposed Project's Segment 10) to the Vincent Substation (Milepost 17.8 of the proposed Project's Segment 5) and includes the proposed Project's Segments 4, 5 and 10, as well as small portions of Segments 6 and 11. Table 3.12-13, shown below, indicates that the proposed route for Alternative 2 would cross through the following jurisdictions within the North Region: Kern County, Los Angeles County, the City of Lancaster, and the City of Palmdale.

Table 3.12-13. North Region, Alternative 2: Applicable Jurisdictions by Milepost		
Segment	Mileposts	Jurisdiction
Segment 10	0.0 – 16.8	Kern County
Segment 4	0.0 – 6.9	Kern County
	6.9 – 17.4	Los Angeles County
	17.4 – 19.6	City of Lancaster
Segment 5	0.0 – 3.5	City of Lancaster
	3.5 – 5.8	City of Palmdale
	5.8 – 7.4	Los Angeles County
	7.4 – 11.1	City of Palmdale
	11.1 – 17.8	Los Angeles County
Segment 11	0.0 – 1.5	Los Angeles County
Segment 6	0.0 – 1.4	Los Angeles County

Source: SCE, 2007

Demographic Characteristics: North Region, Alternative 2

Demographic characteristics for the jurisdictions which are traversed by the proposed route for Alternative 2, as described above, are presented in Section 3.12.2.1 (Regional Setting: North Region, Demographic Characteristics). Table 3.12-2 (North Region: Population Characteristics, 2000-2030) presents a description of population statistics and estimated growth rates within the North Region. This table indicates that expected population growth along the proposed route for Alternative 2 ranges from a low of 28.4 percent growth in the County of Los Angeles to a high of 189.1 percent growth in the City of Palmdale. The North Region as a whole is expected to experience aggressive population growth in the near future. The values presented for the North Region above are considered to be indicative of demographic characteristics along the proposed route for Alternative 2 (the proposed Project).

Housing Characteristics: North Region, Alternative 2

Please see Section 3.12.2.1 (Regional Setting: North Region, Housing Characteristics) for a discussion of housing characteristics along this portion of the proposed Project route. As indicated in Table 3.12-3 (North Region: Housing Characteristics, 2000-2030), the predicted rate of growth for available housing

generally corresponds with the predicted rate of population growth in this area, as described above. These values are considered to be indicative of housing characteristics along the proposed Project route.

Labor Characteristics: North Region, Alternative 2

Please see Section 3.12.2.1 (Regional Setting: North Region, Labor Characteristics) for a discussion of labor characteristics along this portion of the proposed Project route. As indicated in Table 3.12-4 (North Region: Labor Force Characteristics, 2006), the unemployment rate in the North Region ranges from a low of 4.7 percent in Los Angeles County to a high of 7.6 percent in Kern County. In addition, Table 3.12-5 (North Region: Major Industry Sector Characteristics by County, 2002-2012) provides a description of employment type in the Project area, including expected rate of change. These values are considered to be indicative of labor characteristics along the proposed Project route.

Central Region, Alternative 2

The Central Region is located between the Vincent Substation (Segment 6 MP 0.0/Segment 11 MP 0.0) and the southern boundary of the ANF (Segment 6 MP 26.9/Segment 11 MP 24.5). The majority of the Central Region falls within the jurisdictional boundaries of the ANF; this region includes all of the proposed Project's Segment 6 and approximately 70 percent of Segment 11. The Gould Substation is located outside of the ANF's jurisdictional boundaries, but is part of the Central Region. Table 3.12-14, shown below, indicates that the proposed route for Alternative 2 would cross through the following jurisdictions within the Central Region: Los Angeles County, USDA Forest Service (ANF), the City of Duarte, the City of Monrovia, the City of La Cañada Flintridge, and the City of Pasadena.

Table 3.12-14. Central Region: Applicable Jurisdictions by Milepost

Segment	Mileposts	Jurisdiction
Segment 6	0.0 – 1.4	Los Angeles County
	1.4 – 1.7	USDA Forest Service (ANF)
	1.7 – 2.8	Los Angeles County (out parcel)
	2.8 – 5.3	USDA Forest Service (ANF)
	5.3 – 5.7	Los Angeles County (out parcel)
	5.7 – 24.8	USDA Forest Service (ANF)
	24.8 – 25.8	City of Duarte / USDA Forest Service (ANF)
	25.8 – 26.9	City of Monrovia / USDA Forest Service (ANF)
Segment 11	0.0 – 1.5	Los Angeles County
	1.5 – 18.7	USDA Forest Service (ANF)
	18.7 – 19.1	City of La Cañada Flintridge
	19.1 – 19.3	City of Pasadena
	19.3 – 20.3	USDA Forest Service (ANF)
	20.3 – 20.8	Los Angeles County
	20.8 – 21.3	USDA Forest Service (ANF)
	21.3 – 21.8	Los Angeles County
	21.8 – 22.6	USDA Forest Service (ANF)
	22.6 – 23.0	Los Angeles County
	23.0 – 24.0	USDA Forest Service (ANF)
	24.0 – 24.3	City of Pasadena
	24.3 – 24.5	USDA Forest Service (ANF)

Source: SCE, 2007

Demographic Characteristics: Central Region, Alternative 2

Demographic characteristics for the Central Region jurisdictions which are traversed by the proposed route for Alternative 2 are presented in Section 3.12.2.1 (Regional Setting: Central Region, Demographic

Characteristics). Additionally, Table 3.12-6 (Central Region: Population Characteristics, 2000-2030) presents a description of population statistics and estimated growth rates for cities and counties within the Central Region. As indicated in Table 3.12-14 (Central Region: Applicable Jurisdictions by Milepost), the vast majority of the proposed route within the Central Region is situated in the ANF. This Forest area, which is under the jurisdiction of the USDA Forest Service, is non-developable land. Outside of the Forest, the proposed route for Alternative 2 is situated in areas which are expected to experience aggressive population growth in the near future. Expected population growth rates for cities and counties along the Project route range from 6.1 percent by the year 2030 in the City of La Cañada Flintridge, to 28.4 percent by the year 2030 in the County of Los Angeles. With regards to these areas, the values presented for the Central Region in Section 3.12.2.1 are considered to be indicative of demographic characteristics along the proposed route for Alternative 2 (the proposed Project).

Housing Characteristics: Central Region, Alternative 2

Please see Section 3.12.2.1 (Regional Setting: Central Region, Housing Characteristics) for a discussion of housing characteristics along this portion of the proposed Project route. As indicated in Table 3.12-7 (Central Region: Housing Characteristics, 2000-2030), the predicted rate of growth for available housing generally corresponds with the predicted rate of population growth in the Central Region cities and counties, which are indicated in Table 3.12-14 (Central Region: Applicable Jurisdictions by Milepost). These values are considered to be indicative of housing characteristics along the proposed Project route.

Labor Characteristics: Central Region, Alternative 2

Please see Section 3.12.2.1 (Regional Setting: Central Region, Labor Characteristics) for a discussion of labor characteristics along this portion of the proposed Project route. As indicated in Table 3.12-8 (Central Region: Labor Force Characteristics, 2006), the unemployment rate in the Central Region ranges from a low of 1.9 percent in the City of La Cañada Flintridge, to a high of 4.7 percent in the County of Los Angeles. In addition, Table 3.12-5 (North Region: Major Industry Sector Characteristics by County, 2002-2012) provides a description of employment type within Los Angeles County, which encompasses the Central Region. Table 3.12-5 includes the expected rate of change for employment. These values are considered to be indicative of labor characteristics along the proposed Project route.

South Region, Alternative 2

The South Region extends in a southeastern direction from the southern boundary of the ANF to the Mira Loma Substation in Ontario, encompassing the Gould, Goodrich, Mesa, Rio Hondo, and Chino Substations. The South Region is entirely contained within Los Angeles County, although the Mira Loma Substation (the termination point for Segment 8) is within one-half mile of San Bernardino County. Table 3.12-15, shown below, indicates that the proposed route for Alternative 2 would cross through 22 different city jurisdictions within the South Region.

Table 3.12-15. South Region: Applicable Jurisdictions by Milepost

Segment	Mileposts	Jurisdiction
Segment 11	24.5 – 25.5	Los Angeles County
	25.5 – 28.7	City of Pasadena
	28.7 – 31.0	Los Angeles County
	31.0 – 31.5	Temple City
	31.5 – 34.5	City of Rosemead
	34.5 – 35.2	Los Angeles County
	35.2 – 36.2	City of Monterey Park

Table 3.12-15. South Region: Applicable Jurisdictions by Milepost		
Segment	Mileposts	Jurisdiction
Segment 7	0.0 – 1.9	City of Duarte
	1.9 – 7.3	City of Irwindale
	7.3 – 8.8	City of Baldwin Park
	8.8 – 10.3	City of Industry
	10.3 – 10.8	Los Angeles County
	10.8 – 11.4	City of South El Monte
	11.4 – 13.9	Los Angeles County
	13.9 – 15.4	City of Montebello
	15.4 – 15.8	City of Monterey Park
Segment 8A	0.0 – 0.3	City of Monterey Park
	0.3 – 2.1	City of Montebello
	2.1 – 3.8	City of South El Monte
	3.8 – 4.4	City of Pico Rivera
	4.4 – 4.6	City of Industry
	4.6 – 11.1	Los Angeles County / City of Whittier
	11.1 – 13.4	City of La Habra Heights
	13.4 – 20.6	Los Angeles County / City of Diamond Bar
	20.6 – 25.6	City of Chino Hills
Segment 8A (continued)	25.6 – 29.9	City of Chino
	29.9 – 35.2	City of Ontario
Segment 8B	0.0 – 1.5	City of Chino
	1.5 – 6.8	City of Ontario
Segment 8C	0.0 – 1.5	City of Chino
	1.5 – 6.4	City of Ontario

Source: SCE, 2007

Demographic Characteristics: South Region, Alternative 2

Demographic characteristics for the South Region jurisdictions which are traversed by the proposed route for Alternative 2 are presented in Section 3.12.2.1 (Regional Setting: South Region, Demographic Characteristics). Table 3.12-9 (South Region: Population Characteristics, 2000-2030) presents a description of population statistics and estimated growth rates for cities and counties within the South Region. As indicated above in Table 3.12-15 (South Region: Applicable Jurisdictions by Milepost), Alternative 2 would cross through 22 different city or community jurisdictions in addition to one county jurisdiction.

Although Alternative 2 does not cross directly into San Bernardino County, demographic characteristics for this area are provided because the proposed route comes within one-half mile of the county border. As shown in Table 3.12-9, expected population growth rates for cities and counties along the Project route range from a low of 2.8 percent by the year 2030 in the City of Industry to a high of 98.5 percent by the year 2030 in the City of Irwindale. With regards to these areas, the values presented for the South Region in Section 3.12.2.1 are considered to be indicative of demographic characteristics along the proposed route for Alternative 2 (the proposed Project).

Housing Characteristics: South Region, Alternative 2

Please see Section 3.12.2.1 (Regional Setting: South Region, Housing Characteristics) for a discussion of housing characteristics along this portion of the proposed Project route. As indicated in Table 3.12-10 (South Region: Housing Characteristics, 2000-2030), the predicted rate of growth for available housing

generally corresponds with the predicted rate of population growth in this area, as described above. These values are considered to be indicative of housing characteristics along the proposed Project route.

Labor Characteristics: South Region, Alternative 2

Please see Section 3.12.2.1 (Regional Setting: South Region, Labor Characteristics) for a discussion of labor characteristics along this portion of the proposed Project route. As indicated in Table 3.12-11 (South Region: Labor Force Characteristics, 2006), the unemployment rate in the South Region ranges from a low of 0.0 percent in the Cities of Industry, Irwindale, and La Habra Heights to a high of 6.1 percent in the City of Baldwin Park. In addition, Table 3.12-12 (South Region: Major Industry Sector Characteristics by County, 2002-2012) provides a description of employment type in the Project area, including expected rate of change. These values are considered to be indicative of labor characteristics along the proposed Project route.

3.12.2.3 Alternative 3: West Lancaster Alternative

Alternative 3 includes a minor re-route of the proposed Project in the West Lancaster area of the North Region. The affected environment for Alternative 3 would be exactly the same as the proposed Project, with regard to socioeconomics. Therefore, the demographics, housing characteristics, and labor characteristics described above in Sections 3.12.2.1 (Affected Environment: Regional Setting) and 3.12.2.2 (Affected Environment: Alternative 2) apply to Alternative 3 as well as the proposed Project.

3.12.2.4 Alternative 4: Chino Hills Route Alternatives

Alternative 4 includes four different routing options (Routes A, B, C, and D), all of which would diverge from the proposed Project route along Segment 8A in the South Region. With the exception of these South Region routing options, the proposed route for Alternative 4 would be exactly the same as the proposed Project route. As such, the affected environment for Alternative 4 would be exactly the same as the proposed Project, with regard to socioeconomics. Therefore, the demographics, housing characteristics, and labor characteristics described above in Sections 3.12.2.1 (Affected Environment: Regional Setting) and 3.12.2.2 (Affected Environment: Alternative 2) apply to Alternative 4 as well as the proposed Project.

3.12.2.5 Alternative 5: Partial Underground Alternative

Alternative 5 would follow the exact same route as the proposed Project route, but portions of the proposed transmission line would be installed underground. As such, the affected environment for Alternative 5 would be exactly the same as the proposed Project, with regard to socioeconomics. The demographics, housing characteristics, and labor characteristics described above in Sections 3.12.2.1 (Affected Environment: Regional Setting) and 3.12.2.2 (Affected Environment: Alternative 2) therefore apply to Alternative 5 as well as the proposed Project.

3.12.2.6 Alternative 6: Maximum Helicopter Construction in the ANF Alternative

Alternative 6 would follow the same alignment as the proposed Project route. As such, the affected environment for Alternative 6 would be exactly the same as the proposed Project, with regard to socioeconomics. The demographics, housing characteristics, and labor characteristics described above in Sections 3.12.2.1 (Affected Environment: Regional Setting) and 3.12.2.2 (Affected Environment: Alternative 2) therefore apply to Alternative 6 as well as the proposed Project.

3.12.2.7 Alternative 7: 66-kV Subtransmission Alternative

Alternative 7 includes the relocation and/or undergrounding of three 66-kV subtransmission lines along portions of Segment 7 and Segment 8A in the South Region. With the exception of these subtransmission line elements, the proposed route for Alternative 7 would be identical to the proposed Project alignment. As such, the affected environment for Alternative 7 would be exactly the same as the proposed Project, with regard to socioeconomics. The demographics, housing characteristics, and labor characteristics described above in Sections 3.12.2.1 (Affected Environment: Regional Setting) and 3.12.2.2 (Affected Environment: Alternative 2) apply to Alternative 7 as well as the proposed Project.

3.12.3 Applicable Laws, Regulations, and Standards

This section below provides an overview of federal, State, and local policies that are applicable to SCE's proposed Project with regards to the Issue Area of Socioeconomics.

3.12.3.1 Federal

National Environmental Policy Act (NEPA)

Under NEPA (42 United States Code [USC] 4321 et seq.), an EIS must discuss social and economic effects if they are related to the natural or physical effects, and the definition of "effects" includes economic and social factors. Implementation of NEPA (40 CFR Parts 1500-1508) defines (Section 1508.8) "effects" to include, among other things, economic and social factors, whether direct, indirect, or cumulative. Consequently, an EIS must include an analysis of the proposed Project's economic, social, and demographic impacts related to effects on the natural or physical environment in the affected area, but does not allow for economic, social, and demographic effects to be analyzed in isolation from the physical environment.

Forest Service Handbook 1909.17 - Economic and Social Analysis Handbook

This handbook provides guidance on the evaluation of economic and social effects of policies, plans, programs, and projects with the goal of promoting consistent use of social and economic analysis in Forest Service Projects. In addition to providing guidance on using economic estimates and measures, the document also provides direction on selecting and analyzing social variables. Social variables discussed in the Forest Service Handbook include: Lifestyles; Attitudes; Beliefs and Values; Population; Housing Characteristics; Employment; Social Organization; and Land Use Patterns (USDA Forest Service, 2005). Some of these variables, such as Population, Housing, and Employment, are addressed in this section. Due to the type of this project and the qualitative nature of variables such as lifestyles, attitudes and beliefs, and social organization, these variables were not selected for analysis in this section.

3.12.3.2 State

California Environmental Quality Act (CEQA)

Title 14 of the California Code of Regulations, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act, Article 9(a), Section 15131, states the following in regards to Economic and Social Effects:

a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes

caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project.

Consistent with the requirements set forth in State CEQA Guidelines Section 15131described above, social and economic effects are not treated as significant effects on the environment in this analysis and, therefore, no CEQA significance conclusions are presented for such effects.

3.12.3.3 Local

Local plans are considered in this report to assist the CPUC and the USDA Forest Service in determining the proposed Project's consistency with local plans, goals, and policies as related to socioeconomics. As the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of public utilities, no local discretionary permits (e.g., conditional use permits) or local plan consistency evaluations are required for the proposed Project or the Project alternatives. However, SCE would be required to obtain all ministerial building and encroachment permits from local jurisdictions. The following discussion summarizes the local plans and policies that are applicable to the Project.

The proposed Project would cross lands within Kern County, Los Angeles County and San Bernardino County, and would come within 0.5 mile of Riverside County. The Project would also traverse through the General Plan area for the following 22 city jurisdictions: City of Lancaster; City of Palmdale; City of Duarte; City of Monrovia; City of Azusa; City of Irwindale; City of Baldwin Park; City of El Monte; City of Industry; City of South El Monte; City of Montebello, City of Monterey Park; City of Pico Rivera; City of Whittier; City of La Habra Heights; City of La Cañada Flintridge; City of Pasadena; City of San Gabriel; City of Temple City; City of Rosemead; City of Chino Hills; and City of Ontario.

As required by the State of California, each General Plan includes the following seven mandatory elements: Circulation, Conservation, Housing, Land Use, Noise, Open Space, Safety, and Seismic Safety. Although it is not mandatory that General Plans include an element for socioeconomics, some cities may choose to include additional elements to address such issue areas.

3.12.4 Impact Analysis Approach

This section explains how potential impacts associated with SCE's proposed Project are assessed with regard to socioeconomics. Section 3.12.4.1 discusses impact significance for socioeconomics, Section 3.12.4.2 discusses Applicant Proposed Measures (APMs) presented in the Proponent's Environmental Assessment (PEA), and Section 3.12.4.3 describes the methodology used to assess impacts.

3.12.4.1 Criteria for Determining Impact Significance

According to NEPA, an EIS must evaluate social and economic effects of a project if they are related to effects on the natural or physical environment, although social and economic effects alone should not trigger preparation of an EIS (40 CFR 1508.8, 1508.14). According to CEQA, "Economic and social changes resulting from a project shall not be treated as significant effects on the environment" (CEQA Guidelines Sec. 15064[e]). NEPA provides no specific thresholds of significance for socioeconomic impact assessment. Therefore, as described below in Section 3.12.4.3, five Issues of Concern have been identified as areas where SCE's proposed Project could potentially introduce socioeconomic impacts. All impacts identified for the proposed Project and alternatives are presented in Sections 3.12.5 through 3.12.11.

3.12.4.2 Applicant-Proposed Measures (APMs)

Applicant-Proposed Measures (APMs) are a commitment by the Applicant (SCE) and are considered part of the proposed Project. SCE has not identified any APMs to address social or economic effects of the Project.

3.12.4.3 Impact Assessment Methodology

This analysis first established baseline conditions for the affected environment, which is presented above in Section 3.12.2 (Affected Environment) and includes a description of demographics, housing characteristics, and labor characteristics in the Project Regions (North/Central/South). These baseline conditions were evaluated based on their potential to be affected by construction activities as well as operation and maintenance activities related to the proposed Project and alternatives. Construction, operation, and maintenance activities associated with the proposed Project and alternatives were identified based on the PEA provided by SCE. For the purposes of this analysis, five categories of potential socioeconomic impacts have been identified and evaluated with regards to the baseline conditions provided in Section 3.12.2 (Affected Environment). These categories, which are referred to as "Issues of Concern", include the following:

- Population and Housing
- Quality of Life
- Employment
- Private Property Value
- Local Business Revenue
- Public Revenue

The following sections provide analyses of potential Project impacts to socioeconomics that could occur under each of the Issues of Concern identified above. Where applicable, mitigation measures are also introduced to minimize or avoid potential impacts.

3.12.5 Alternative 1: No Project/Action

Under the No Project/Action Alternative, the proposed Project would not be implemented and the impacts associated with construction and operation of the Project or the alternatives to the Project (as described

below, in Sections 3.12.5 through 3.12.11) would not occur. As a result, the No Project/Action Alternative would not result in any impacts related to the Socioeconomic Issues of Concern, including: Population and Housing, Quality of Life, Employment, Private Property Value, Local Business Revenue, and Public Revenue. However, conditions in the environment are not static and will change over time. Environmental conditions will evolve based on growth and change that are not associated with the proposed Project. As discussed in Section 3.12.2 (Affected Environment), population and housing growth in the Project area is expected to continue with or without the Project, to which there would be no contribution by the No Project/Action Alternative.

However, other indirect actions would occur. SCE would need to accommodate new power generation by upgrading existing transmission infrastructure or building new transmission facilities along a different alignment. Construction methods, resulting impacts, and regulatory requirements associated with other transmission projects would be similar to those identified for the proposed Project; as such, socioeconomic impacts associated with construction and operation of other transmission projects would be expected to be similar to the proposed Project.

3.12.6 Alternative 2: SCE's Proposed Project

The following section describes SCE's proposed Project's impacts to socioeconomics, which are presented according to the identified Issues of Concern listed in Section 3.12.4 (Impact Assessment Methodology). Mitigation measures are introduced where applicable.

3.12.6.1 Direct and Indirect Effects Analysis

Direct and indirect effects associated with Alternative 2 (the proposed Project) are discussed below. In accordance with CEQA Section 15358(a)(2), "Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems." The Issues of Concern that have been used to identify socioeconomic impacts are introduced in Section 3.12.4.3 (Impact Assessment Methodology) and summarized below in Table 3.12-16, as well as the impacts that have been identified under each Issue of Concern.

Table 3.12-16. Issues of Concern and Associated Impacts – Socioeconomics

Issue of Concern	Impact Statements
Population and Housing	No Impact
Quality of Life	No Impact
Employment	No Impact
Private Property Value	S-1: Project implementation would decrease existing private property values.
Business Revenue	S-2: Construction activities would cause a temporary decrease in revenues for agricultural landowners.
Public Revenue	S-3: Operational activities would benefit public agency revenue.

The Issues of Concern and related socioeconomic impacts are discussed in detail below.

Population and Housing: Alternative 2

This discussion addresses the potential for the proposed Project to introduce impacts related to Population and Housing concerns, which could occur if the Project would:

- Directly or indirectly induce population growth in an area

- Displace existing residents or housing units and necessitate the construction of replacement housing elsewhere
- Obstruct proposed or approved residential development

Following are analyses of the Project's potential to result in Growth-Inducing Effects, Housing Displacement, and Obstruction of Planned Development.

Growth-Inducing Effects: Alternative 2

CEQA requires a discussion of the ways in which a proposed project could induce growth. The CEQA Guidelines (Section 15126.2 (d)) identify a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. Other examples of projects that are growth-inducing are the expansion of urban services into a previously un-served or under-served area, the creation or extension of transportation links, or the removal of major obstacles to growth. It is important to note that these direct forms of growth have secondary effects of expanding the size of local markets and attracting additional economic activity to the area.

Typically, a project would be considered to have growth-inducing potential if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. The proposed Project would involve construction of new transmission line infrastructure between the TWRA, located in southern Kern County, California, and SCE's existing Mira Loma Substation, located in southwestern San Bernardino County. The proposed Project does not include the construction of any habitable housing structures and would not construct any businesses. There would be no change in staffing for the existing substations. All telecommunications equipment would be operated and maintained by SCE technicians. Therefore, no direct population growth would occur as a result of the proposed Project.

The primary purposes of the proposed Project are to accommodate potential renewable power generation in the Tehachapi area, prevent overloading of existing transmission facilities, and comply with reliability criteria for transmission planning. The TWRA is considered to be one of the world's leading wind energy centers and SCE, pursuant to several State and federal goals and policies related to renewable energy sources, is obligated to accommodate future wind generated electricity in southern California. In doing so, the CAISO maintains that the use of 500-kV standards for the proposed Project will avoid the future need to construct and/or tear down and replace multiple 220-kV facilities with 500-kV facilities to meet growing power generation and transmission needs.

Both locally and regionally, the proposed Project area is experiencing substantial population growth, which is reflected in the large number of future residential development projects that are currently proposed and planned in the Project area. As discussed in Section 3.12.2.1 (Regional Setting), population and housing are expected to increase concurrently and dramatically throughout the Project area, and particularly in the North and South Regions. This growth is expected to occur with or without implementation of the proposed Project. SCE is responding to sources of wind energy generation that are planned by independent generators for construction in the Antelope Valley and Tehachapi areas through the proposed Project, which would accommodate the anticipated future load growth in a timely manner. Although the proposed Project would not directly result in population growth in the Project area, its

implementation would remove future obstacles to population growth by facilitating the transmission of future projected power generation in the TWRA.

Housing Displacement: Alternative 2

The proposed Project ROW does not contain any habitable housing structures and would not require the removal of any housing units. While residential developments do occur along the route, all such developments are located outside of the Project ROW and would not require removal or relocation. It is not expected that any existing residents or housing units would be displaced as a result of the Project and the proposed Project would not necessitate replacement housing; no impact would occur regarding this concern.

Obstruction of Planned Development: Alternative 2

The proposed Project would have the potential to obstruct or preclude planned residential development if it would permanently convert planned residential areas to non-residential utility uses. As described in Section 3.12.2.2 (Affected Environment: Alternative 2), the North and South Regions of the Project area are both expected to experience population growth with corresponding increased housing units. However, in comparison with the South Region, the North Region is expected to experience highly aggressive population and housing growth, particularly in and surrounding the Cities of Lancaster and Palmdale, which would be traversed by the proposed Project route. As shown in Table 3.12-2 (North Region: Population Characteristics), between the years 2000 and 2030, the population of the Cities of Lancaster and Palmdale is expected to grow by 118.8 percent and 189.1 percent, respectively. Accordingly, as shown in Table 3.12-3 (North Region: Housing Characteristics), between the years 2010 and 2030, forecasted housing units in the Cities of Lancaster and Palmdale are expected to grow by 112.6 percent and 157.3 percent, respectively. As such, the proposed Project would cross through areas with multiple planned residential developments in the vicinity. Segment 10 would be situated in an entirely new ROW through a portion of southern Kern County and the ROW utilized by Segment 4 would be widened by about 180 feet through northern Los Angeles County and a small portion of the City of Lancaster. However, the proposed transmission line and associated ROW areas would not preclude proposed or approved residential development. Implementation of the proposed Project is not expected to permanently convert planned residential areas to non-residential uses in any of the three Project Regions. As such, none of the current or future planned residential developments would be altered or precluded by implementation of the proposed Project. No impact would occur.

Quality of Life: Alternative 2

Quality of Life refers to the level of satisfaction or degree of well-being experienced by an individual partly as a result of physical surroundings, although a variety of factors contribute to an individual's overall experience of Quality of Life. Because Quality of Life is unique to each individual, the factors which contribute to this experience may vary greatly between individuals. As such, Quality of Life is a multi-faceted and intangible concept which cannot be evaluated using quantitative measures. Therefore, for the purposes of this analysis, Quality of Life is discussed in terms of various aspects of the physical environment which are perceived to contribute to Quality of Life and may be affected or altered through implementation of the proposed Project. These aspects include the following environmental Issue Areas, which are analyzed in detail in their respective EIR/EIS sections: Biological Resources (Section 3.4), Environmental Contamination and Hazards (Section 3.6), Land Use (Section 3.9), Noise (Section 3.10), Traffic and Transportation (Section 3.13), Visual Resources (Section 3.14), Wilderness and Recreation

(Section 3.15), and Electrical Interference and Hazards (Section 3.17). Implementation of the proposed Project would include construction activities that would introduce temporary impacts to the Project area and could have an adverse effect on Quality of Life, in addition to operation and maintenance activities that would have the potential to introduce permanent impacts to the Project area and could have an adverse effect on Quality of Life.

A variety of temporary impacts associated with construction of the proposed Project could have an adverse effect on Quality of Life. For instance, construction of transmission towers would require the use of heavy machinery, equipment, and vehicles that would be expected to introduce temporary impacts to aesthetics, noise, air quality, and traffic. These factors may have an adverse effect on Quality of Life for individuals who choose to live in quiet or undeveloped locations within the Project area due to the lack of noise, traffic, and industrial aesthetics associated with more developed areas. In addition, construction activities may result in the temporary closure of wilderness or recreational areas, which may have an adverse effect on Quality of Life for individuals who value the availability of such resources in their community, or for individuals who have chosen to reside in the Project area due to the accessibility and availability of such resources. As discussed above, Quality of Life is a multi-faceted and intangible concept which individuals develop through a combination of many different factors, in addition to the environmental issue area factors described here. With regards to the proposed Project, full analysis of environmental issue areas, including discussion of specific impacts, is available in their respective EIR/EIS sections.

In addition to temporary construction impacts, operation and maintenance of the proposed Project would introduce permanent Project features and the potential for impacts that may have an adverse effect on Quality of Life. For instance, there is a great deal of public interest and concern regarding the potential health and safety effects of Electric and Magnetic Fields (EMF) that would be introduced or intensified through implementation of the proposed Project. EMF could have an indirect adverse effect on Quality of Life by resulting in an alteration of the perception of safety and/or security that members of the public have of their communities, regardless of the fact that, as described in Section 3.17 (Electrical Interference and Hazards), there remains a lack of consensus in the scientific community regarding public health impacts of EMF at the levels expected from electric power facilities.

Implementation of the proposed Project would also introduce permanent aesthetic impacts by altering the visual landscape through the introduction of new transmission infrastructure, which could have an adverse effect on Quality of Life for individuals who value the present lack or minimal effect of such features in the visual landscape of their community. Similarly, installation of the proposed transmission line would be expected to result in new or increased corona noise levels, particularly in areas with minimal development and in undeveloped or preserved areas such as the ANF. This could have an adverse effect on Quality of Life for individuals who value the lack of corona noise in their community, as well as for public recreationists such as hikers and campers who value a lack of corona noise in recreational areas. As described above, individuals develop a sense of Quality of Life through a combination of many different factors, in addition to the environmental issue area factors discussed here. With regards to the proposed Project, full analysis of environmental issue areas, including discussion of specific impacts, is available in their respective EIR/EIS sections.

Although the proposed Project would be expected to introduce impacts that may have an adverse affect on Quality of Life, as described above, the Project would also have the potential to counterbalance this affect by providing a service which is considered beneficial to Quality of Life. Implementation of the proposed Project would serve to reliably interconnect new wind generation resources in the Tehachapi Wind

Resource Area and accommodate solar and geothermal projects which are currently being planned or expected in the future. As such, the Project would serve renewable energy generation projects, providing for the transmission of renewable energy to areas of southern California where the demand for power is growing. These results of the Project are considered to be positive effects on Quality of Life by providing the power necessary to accommodate the presently growing population of southern California. In addition, the Project would be expected to introduce a positive impact to public revenue, as described in the Public Revenue Issue of Concern in this report. Such an impact would be considered beneficial to Quality of Life because it would result in financial resources to be utilized towards public benefit. In this context, the renewable energy and economic development aspects of the proposed Project may be viewed to counterbalance adverse Quality of Life effects that could be introduced through Project construction activities and infrastructure placement. Furthermore, although the proposed Project would introduce impacts which could affect certain aspects of Quality of Life, it is not expected that the proposed Project would have the potential to adversely impact the overall concept or experience of Quality of Life for individuals who live in the Project area.

Employment: Alternative 2

This discussion addresses the potential for the proposed Project to cause a change in local employment. Construction employment for the proposed Project would include skilled or semi-skilled positions such as line workers, welders, heavy equipment operators, surveyors, engineers, utility equipment workers, truck drivers, warehouse workers, clerical workers, and laborers. As described in Section 3.12.2.1 (Regional Setting), there is a substantial construction workforce available throughout the Project area, particularly within the North and South Regions. The proposed Project construction schedule is estimated to extend for about 52 months and would require an average daily workforce of approximately 75 persons (actual workforce would range between 10 and 300 workers, as needed). As described in Section 3.12.2.2 (Affected Environment: Alternative 2), total construction workforce available in the Counties of Kern, Los Angeles, and San Bernardino are respectively as follows: 13,300, 134,500, and 90,900. As such, total construction workforce available in the Project area is approximately 238,700 personnel. The maximum required construction workforce of 300 personnel for the proposed Project would comprise approximately 0.12 percent of the total construction workforce available in the Project area. No workers would be required to relocate into the Project area for construction of the proposed Project and no new workers are required for operation of the Project. Local employment conditions in the Project area are not expected to be affected by the proposed Project. No impact would occur.

Private Property Value: Alternative 2

The issue category of Private Property Value addresses concerns related to the potential effect of transmission lines on the value of private property in proximity to the transmission infrastructure. The proposed Project would introduce an impact to private property value if any aspect of Project construction or operation would be reasonably expected to cause a substantial change in existing property values.

Impact S-1: Operation and maintenance activities would affect property values along the Project alignment.

During recent transmission line projects, the CPUC has noted a high level of public concern associated with the potential effects of transmission line siting on property values. The California Energy Commission (CEC), in its review and licensing of several power plant projects between 2000 and 2003, received similar public interest and concern regarding the potential impacts of transmission lines on

property values. As a result, CEC Staff researched the literature on proximity impacts analysis for property values. The CEC cited "A Primer on Proximity Impact Research: Residential Property Values Near High-Voltage Transmission Lines" (Kinnard and Dickey, 1995), as a comprehensive study on this topic.

The CPUC used this literature-review approach in addressing concerns regarding property values in four recent transmission line EIRs. Claims of diminished property value through decreased marketability are based on the reported concern about potential hazards to human health and safety, as well as the potential for increased noise, traffic, and visual impacts associated with living in proximity to unwanted land uses such as power plants, freeways, high-voltage transmission lines, landfills, and hazardous waste sites.

Kinnard and Dickey (1995). Kinnard and Dickey (1995) identify three useful procedures in measuring differences in property sales prices, marketing periods, and/or comparative property sales volume (considering properties in close proximity to transmission or distribution lines versus competitive properties that are not in close proximity to such infrastructure). The three procedures cited in the Kinnard and Dickey (1995) paper, include:

- **Paired Sales Analysis.** Paired Sales Analysis involves finding sales of properties within the impact area and comparing them with sales of similar, competitive properties in the control area. Any price differentials are noted, and any pattern of such differences is identified and statistical testing procedures are applied to the results. There are two possible shortcomings of this market procedure. First, identifying what constitutes a pair of virtually identical properties is often a matter of subjective judgment on the part of the analyst-appraiser. Different analysts studying the same market frequently produce different pairs. Secondly, the relative paucity of appropriate pairs can render the entire procedure (and its results) questionable in terms of its representing the market.
- **Survey Research/Opinion.** Survey Research/Opinion method is used as either a supplement or substitute for analysis of market sales transaction data, because it reflects responses to hypothetical situations by interviewees who are not necessarily prospective buyers. Potential purchasers either will or will not buy; they either will or will not pay the same or similar prices for proximate properties.
- **Market Impact Studies Using Multiple Regression Analysis (MRA) in the Hedonic Pricing Model Format.** MRA in the Hedonic Pricing Model Format involves gathering data on many market sales transactions within the impact area and within one or more similar control areas over a specified period (usually a few years prior to public knowledge of the project). The extended time period is used to identify and measure any price/value impact that occurs within the impact area after an awareness of the project occurs. This type of "before and after" analysis supplements the comparison of levels and trends and prices, marketing time, and sales volume within the impact and control area. The post-announcement sales information also provides a basis for testing the likely duration of any value impact that might be identified.

The paper concludes that current professional and academic literature reflects a preference for the MRA approach because it indicates what buyers and sellers actually do as opposed to what potential buyers say they might do under specified hypothetical circumstances. Further, the use of large sets of sales data indicates that the results are more representative of the market than those of the paired sales studies.

Under the general rubric of diminution in the market value of residential properties, three possible effects have been claimed, singly or in combination, in the Kinnard and Dickey (1995) paper:

- **Diminished Price**. Diminished price is identified by comparing prices of units that are proximate to power lines with prices of similar and competitive properties more distant from transmission lines.
- **Increased Marketing Time.** Even when proximate properties sell at or near the same prices as more distant properties, claimants argue that proximate properties take longer to sell. Such increased marketing time can represent a loss to the seller by deferring receipt, availability, and use of sale proceeds.
- **Decreased Sales Volume.** A more subtle indicator of diminished property value is if potential buyers decide not to buy in the impact area. A measurable decrease in sales volume in the impact area compared with sales

volume in the control area where otherwise similar properties purportedly not moving in the market are selling can represent evidence of decreased market value from proximity to the high-voltage transmission lines (or claimed hazard).

In conclusion, Kinnard and Dickey (1995) determined that proximity to a transmission line does not necessarily cause a reduction in the value of surrounding private properties and that other physical and neighborhood qualities have a greater impact on property value determination; as such, the three factors described above must be considered in evaluating the potential influence of transmission lines on private property value.

Electric Power Research Institute (2003). A 2003 Electric Power Research Institute (EPRI) study entitled "Transmission Lines and Property Values: State of the Science," states that differences in location and time of data collection, as well as research design, make direct comparisons of results from the various studies very difficult. Although quantitative generalizations from studies cannot be reliably made, the following conclusions from studies seem to be similar across the board (EPRI, 2003):

- There is evidence that transmission lines have the potential to decrease nearby property values, but this decrease is usually small (6.3 percent or lower).
- Lots adjacent to the ROW often benefit; lots next to adjacent lots often have value reduction.
- Higher-end properties are more likely to experience a reduction in selling price than lower-end properties.
- The degree of opposition to an upgrade project may affect size and duration of the sales-price effects.
- Setback distance, ROW landscaping, shielding of visual and aural effects, and integration of the ROW into the neighborhood can significantly reduce or eliminate the impact of transmission structures on sales prices.
- Although appreciation of property does not appear to be affected, proximity to a transmission line can sometimes result in increased selling times for adjacent properties.
- Sales-price effects are more complex than they have been portrayed in many studies. Even grouping adjacent properties may obscure results.
- Effects of a transmission line on sale prices of properties diminish over time and all but disappear in five years.
- Opinion surveys of property values and transmission line may not necessarily overstate negative attitudes, but they understate or ignore positive attitudes.

The EPRI (2003) study points out that one of the difficulties in determining the potential impact of transmission line siting on property values is the wide range of methodologies used to measure impacts. It is extremely difficult, if not impossible, to predict the likely impacts on property values of the proposed Project, let alone differences between alternative routes and/or with tower removal/consolidation.

Pacific Consulting Services (1991). A Pacific Consulting Services (1991) study of the area around Vallejo, CA which is entitled "A Statistical Analysis of Transmission Line Impacts on Residential Property Values in Six Neighborhoods" found that overall, the presence of a transmission line within a neighborhood has less than a one-percent effect on the sales prices of most properties in the neighborhood. Under some specific conditions, however, there can be as much as a 12 percent adverse effect or a 10 percent positive effect on selling price.

In the Pacific Consulting Services study of Vallejo, six neighborhoods with transmission lines were selected for review, reflecting a variety of transmission line and ROW conditions. Two of the neighborhoods were crossed by 115-kV lines, one neighborhood was crossed by a 230-kV line, and three neighborhoods were crossed by a ROW that originally contained a 115-kV line, but at the time of the study contained both the original 115-kV lines as well as new 230-kV lines. Two additional areas that were not in proximity to transmission lines were considered as comparison areas. In addition, some of the

neighborhoods were located on hilly terrain, affording more pronounced views of nearby lines and towers, while other neighborhoods were flat. Access to the ROWs varied from locked gates to integrated walkways, and maintenance quality/landscaping also varied as well.

The study described above concluded that factors linked with adverse property value effects include: (1) ROW passage through adjacent property, and (2) modification to (upgrading) the line after development of the neighborhood. Factors linked with favorable price impacts include: (1) integration of the ROW design into the neighborhood with unobstructed access, and (2) planned landscaping of the ROW. Visibility of transmission lines located outside the neighborhood appears to have no effect on selling prices in the neighborhood (Pacific Consulting Services, 1991). Like the aforementioned studies, the Pacific Consulting Services study also found that adverse impacts associated with transmission line upgrading diminish over time and nearly disappear within five years of reconstruction. It may be that both the size of these effects and the amount of time until they dissipate depend on the level of community opposition to construction and how the utility handles such opposition.

Crockett Cogeneration Project, 1992. In addition to a literature search on proximity analysis impacts, the CEC staff reviewed the Analysis of Property Value Impacts of the Crockett Cogeneration Project, submitted by the Applicant for the Crockett Cogeneration Project. The Crockett analysis cites several studies that examine the impacts on property values of very large industrial facilities.[1] Such facilities include nuclear power plants, industrial waste incinerators, and landfills. The findings of previous studies in the Crockett analysis "yield an equivocal conclusion. Under some conditions facilities result in negative economic impacts and under other conditions they do not. Thus, even for very large facilities that are extreme in terms of their potential health, safety, and aesthetic impacts, there is no clear association with diminished economic impacts. Indeed, economic impacts are not clearly and reliably observed even for nuclear power generation facilities near residential properties" (Analysis of Property Value Impacts of the Crockett Cogeneration Project, Appendix X, Crockett Cogeneration Project, 1992). (CPUC, 1992) Further, the Crockett analysis states that "there are many factors involved in purchasing a new home: affordability; age; size; schools; location; and so on, and it has simply not been demonstrated that a view obstruction would be a major factor in a property value decline" (Analysis of Property Value Impacts of the Crockett Cogeneration Project, Appendix X, Crockett Cogeneration Project, 1992).

Comparison of Literary Research. The Kinnard and Dickey (1995) paper and the Crockett (1992) analysis cite several examples of proximity impact analyses, methodologies used to measure impacts, and types of possible proximity impacts on residential property values. Both studies conclude that differing and sometimes conflicting findings have emerged from market studies. While it is possible that property owners near the proposed Project route may believe that their homes will diminish in value because of Project implementation, the actual loss of property value and potential effects can only be tested through data from home sales. The MRA method, as supported by the Kinnard and Dickey (1995) paper, requires that data be collected on as many market sales transactions as possible within the impact area and within one or more similar control areas over a few years prior to an awareness of a project to accurately reflect what buyers and sellers actually do as opposed to what potential buyers say they might do under specified hypothetical circumstances.

[1] As stated in the Crockett analysis, one or more of the following three methods were used to study impacts on property values: hedonic pricing; contingent valuation; and/or regression analysis of market sales data. Hedonic pricing techniques analyze how the attributes of a good affect its price, and have been used in several of the studies to estimate the losses in sale price of homes due to possible exposure to technological or natural risks.

The studies cited in this section and multiple regression analyses have shown that there is evidence that transmission lines have affected property values in some cases, though the effects are generally smaller than anticipated and difficult to quantify. In one study, about half of the estimated reduction in value was due to non-EMF effects (e.g., visual impacts), and the other half of estimated reduction was due to health and safety concerns such as EMF for homes within 100 meters of the line (von Winterfeldt, et al., 2004). With regard to the proposed Project, visual impacts are addressed in Section 3.14 (Visual Resources), while concerns related to EMF are addressed in Section 3.17 (Electrical Interference and Hazards).

Portions of the proposed Project would be constructed within and adjacent to existing residential housing and commercial development. As discussed in Section 3.17 (Electrical Interference and Hazards), there remains a lack of consensus in the scientific community regarding public health impacts due to EMF at the levels expected from electric power facilities. Further, there are no federal or State standards limiting human exposure to EMFs from transmission lines or substation facilities in California. For those reasons, it is not possible to reach any firm conclusions regarding potential EMF effects associated with the proposed Project. However, the CPUC has implemented and recently re-confirmed a decision requiring utilities to incorporate "low-cost" or "no-cost" measures for managing EMF from power lines. These measures would be incorporated into the proposed Project design and may help to reduce perceived health effects of transmission lines that could adversely affect property values. However, as previously discussed, it is not possibly to analyze potential EMF or property value quantitatively.

The numerous studies discussed above additionally conclude that the potential for other environmental issue areas associated with transmission line projects (including aesthetics and noise) to have an effect on property value is usually smaller than anticipated and essentially impossible to quantify due to the individuality of properties and their respective neighborhoods, as well as differences in the personal preferences of individual buyers/sellers, and the weight of other factors that contribute to a person's decision to purchase a property. Furthermore, studies such as those discussed above indicate that other property-specific factors such as neighborhood features, square footage, size of lot, and irrigation potential are substantially more likely than the presence of overhead transmission lines to be major determinants of the sales price of property (Kroll and Priestley, 1992). In addition, across the board, studies have generally concluded that over time, potential adverse effects to property value tend to diminish to a point of being negligible within five years; the studies determine that this decreasing effect is most likely due to increased screening of transmission lines over time, as trees and shrubbery increase in size, as well as diminished public sensitivity to the transmission line proximity, particularly resulting from the absence of adverse publicity.

While it is possible that property owners near the proposed Project route may have the perception that their homes will diminish in value because of Project implementation, potential property value issues associated with the Project can only be tested through real data from actual home sales. The MRA method, as supported by the Kinnard-Dickey (1995) paper, requires that data be collected on as many market sales transactions as possible within the impact area and within one or more similar control areas over a few years prior to an awareness of a project, in order to accurately reflect what buyers and sellers actually do as opposed to what potential buyers say they might do under specified hypothetical circumstances.

The Wolverton-Bottemiller (2003) paper suggests that understanding the effects of transmission lines on property value is a highly dynamic process which requires on-going study, identification of accurate and reliable data sources, measurement consistency, and rich data sets that allow for variety in analytical methods. (Wolverton and Bottemiller, 2003) In order to assess whether particular environmental and

physical changes associated with implementation of the proposed Project could affect property values, a market study of current and future properties within a specified distance from the transmission line would be required to evaluate property values with and without the proposed Project being constructed. However, the data that would be required to conduct such an analysis for the proposed Project is not realistically available and as such any conclusions regarding effects on property values would be speculative.

As demonstrated by the studies discussed above, factors that have the potential to affect property value are numerous and varied; as a result, it is not possible to identify exactly how the Project would potentially affect private property values. However, because the conclusions of the Kinnard-Dickey (1995) paper and the Crocket analysis are applicable to this analysis, it is possible to say that under the proposed Project, property-specific factors such as neighborhood features, square footage, size of lot, and irrigation potential are more likely to be major determinants in affecting property values than the presence of overhead transmission lines such as those included under the proposed Project. It is reasonable to assume that some aspect of Project construction and/or operation and maintenance would potentially affect private property values in the North and South Regions. However, as discussed above, the effects of transmission lines on property value are generally smaller in comparison to other relevant factors.

Local Business Revenue: Alternative 2

This Issue of Concern addresses the potential of the proposed Project to result in a substantial change in revenue for local businesses. A wide range of land uses are near or adjacent to the proposed Project route, including agricultural uses (particularly in the North Region), residential developments, commercial and industrial uses, and the ANF. While business uses occur along the route, all Project-related activities and infrastructure placement would occur within designated utility ROW and would not require the removal or relocation of any business uses. Potential effects on businesses or other adjacent land uses resulting from changes to visual resources, vehicular or pedestrian traffic patterns, land use, or health and safety concerns (such as EMF) are addressed in their respective EIR/EIS sections: Land Use (Section 3.9), Traffic and Transportation (Section 3.13), Visual Resources (Section 3.14), and Electrical Interference and Hazards (Section 3.17). Project effects such as those described in the aforementioned issue area sections would have the potential to affect local business revenue. However, due to the diverse and varied nature of factors that could affect local business revenue, it is not possible at this time to describe exactly how and to what extent the Project would have the potential to affect local business revenue. However, Project construction and operation would have the potential to affect agricultural revenues, as described below.

Impact S-2: Construction activities would cause a temporary decrease in revenues for agricultural landowners.

The proposed Project would cross through agricultural areas in the North Region of the Project area. Segments of the proposed Project that could potentially affect agricultural business revenue include Segment 10, which would require approximately 17 miles of new 330-foot ROW and Segment 4, which would require approximately 20 miles of new 200-foot ROW. Although these segments of the Project would not be routed entirely through agricultural lands, portions of the segments would cross through some areas used for agricultural purposes. Section 3.2 (Agricultural Resources) provides detailed baseline conditions and analysis of all agricultural areas in the North Region, including specific areas that could be affected by the proposed Project. If the construction of Segments 10 or 4 of the proposed Project would occur during the growing season, this could temporarily restrict crop production or potentially damage

crops, thereby introducing the potential to decrease local business revenues for the agricultural landowners whose crops would be affected. No new permanent roads would be constructed over agricultural lands in the Project area. Although new utility ROWs would be established for Segments 10 and 4, as described above, agricultural use of lands within the ROW would continue to be permitted.

Mitigation Measure AG-1 (Coordinate construction activities with agricultural landowners), as described in Section 3.2 (Agricultural Resources), would minimize and/or avoid impacts to agricultural revenues by minimizing losses to crop production, thereby also minimizing any lost crop revenues associated with the proposed Project.

Public Revenue: Alternative 2

This Issue of Concern addresses the potential for the proposed Project to cause a substantial change in public agency revenue. The proposed Project would be owned, operated, and financed by SCE, which is a private utility company and wholly-owned subsidiary of the Edison International Company. Completion of the proposed Project would provide for the transfer of wind-generated electricity in the Tehachapi Wind Resource Area to SCE customers throughout southern California. The proposed Project would not preclude or necessitate the supply or transfer of electricity between SCE and its customers. Additionally, the proposed Project would also benefit the local economy through payment of property taxes.

Impact S-3: Project activities would affect public agency revenue.

Construction and operation of the proposed Project would have the potential to result in short-term negative effects as well as long-term positive effects to public agency revenue. In the short-term, Project construction activities would have the potential to negatively affect Forest Service revenue through decreased sales of National Forest Adventure Passes as a result of temporary closures of Forest recreational areas during the construction period. In order to accommodate Project construction activities, it would be necessary to temporarily restrict public access to some portions of High Impact Recreation Areas (HIRAs). As described in the Wilderness and Recreation analysis (Section 3.15), in order to use recreational resources within a designated HIRA, recreationists are required to purchase a National Forest Adventure Pass, which is authorized under a fee-based program aimed to generate necessary funding for backlogged maintenance activities throughout the ANF. Due to construction-related access restrictions within designated HIRAs, recreationists may choose to visit other recreational areas that do not require the purchasing of an Adventure Pass. As a result, Forest Service revenue from Adventure Pass sales would temporarily decrease during construction of the Project. Mitigation Measure R-1e (SCE shall assist in the completion of backlogged maintenance activities in the ANF), as described in Section 3.15 (Wilderness and Recreation), would help to compensate for this temporary revenue loss by requiring that SCE assist the Forest Service in accomplishing backlogged maintenance activities for which Adventure Pass revenues are intended.

As mentioned, the Project would also have the potential to result in long-term positive effects to public agency revenue. The positive effect would occur in the form of property taxes paid to local agencies, as SCE's property taxes are expected to increase as a result of the proposed Project. Local property tax revenues are a function of tax rates charged within the affected jurisdictions, with infrastructure facilities assessed annually by the State of California Board of Equalization (BOE). Property tax revenue is collected by the appropriate County Tax Collector and dispersed to local agencies. Any increase in property tax revenue, such as expected to occur under the proposed Project, would be a benefit to the

local government agencies that receive a share of the property tax revenue. The Forest Service would not directly receive property tax revenue as a result of the Project being constructed on NFS lands.

3.12.6.2 Cumulative Effects Analysis

A cumulative impact is one which results from the incremental impact of the proposed Project when combined with other past, present, and reasonably foreseeable future actions that occur within the geographic extent of the cumulative effects analysis.

Geographic Extent

The geographic extent of this cumulative effects analysis is the same as the extent of the regional setting, as described in Section 3.12.2.2 (Affected Environment: Alternative 2). As such, this cumulative effects analysis is presented according to three separate geographic regions: the North Region, which includes parts of southern Kern County and northern Los Angeles County; the Central Region, which encompasses the ANF; and the South Region, which begins at the southern border of the ANF and includes lands within southern Los Angeles County and western San Bernardino County. This geographic scope is appropriate for the issue area of Socioeconomics because impacts of the proposed Project are primarily localized in that they would be limited to this area and would not combine with similar impacts of other projects beyond this area.

Existing Cumulative Conditions

Past development and population growth within the Project area have impacted the population, housing demand, business revenues and conflicts, as well as property values throughout the region. As the population increases through an indirect and direct influence of development, housing demands and workforce expands to serve the growing population. In addition, continued development creates more infrastructure affecting business operations, revenues, and property values. Section 3.12.2.2 (Affected Environment: Alternative 2) describes existing socioeconomic conditions within the Project area, including demographics, housing characteristics, and labor characteristics, which have developed as a result of the past and present projects that comprise existing cumulative conditions.

Reasonably Foreseeable Future Projects and Changes

Development of the proposed Project in conjunction with the projects described in the Cumulative Scenario would continue to result in the potential for impacts to local businesses and residential structures from displacement issues, revenue changes, and factors affecting existing property values. While it is not expected that operation of energy and transportation projects listed would substantially change existing business revenues or property values, the large number of development projects described that are ongoing and planned in the North and South Regions would have the potential to impact existing development.

Cumulative Impact Analysis

The potential for the socioeconomic impacts of the proposed Project to combine with similar effects of other projects within the geographic scope of the cumulative analysis is described below. The "incremental contribution" of the proposed Project is considered to be the degree to which impacts of the proposed Project would combine with similar effects of other projects, thereby contributing to the Cumulative Scenario. As discussed above in Section 3.12.6.1 (Direct and Indirect Effects Analysis), the proposed Project is not expected to introduce any socioeconomic impacts under the following Issues of

Concern: Population and Housing, Quality of Life, and Employment. The proposed Project would introduce potential impacts under the following Issues of Concern: Private Property Value, Local Business Revenue, and Public Revenue. In addition, impacts that would be expected to occur under the latter three Issues of Concern could potentially combine with similar impacts of other projects in the Cumulative Scenario, as discussed below.

- **Operation and maintenance activities would affect property values along the Project alignment (Impact S-1).** This impact addresses the potential for implementation of the proposed Project to result in decreased private property values. As described in Section 3.12.2.2 (Affected Environment: Alternative 2) and reflected in the Cumulative Scenario, the North and South Regions of the Project area are experiencing rapid rates of growth and residential development. This growth trend indicates that the Project area is consistently becoming a more desirable place to site homes and businesses, which typically leads to an increase in property values. However, regardless of the potential for continuing development to increase existing private property values, the proposed Project would have the potential to negatively affect the existing value of private properties in the immediate vicinity of the Project alignment. It is not expected that other projects in the Cumulative Scenario would have the potential to introduce property value affects that would be similar to the proposed Project (thus introducing the potential for such affects to combine); however, this effect of the proposed Project is considered to have an incremental contribution to the Cumulative Scenario.
- **Construction activities would cause a temporary decrease in revenues for agricultural landowners (Impact S-2).** The temporary restriction of crop production or damage to crops that is reasonably expected to result from construction of the proposed Project could potentially decrease revenues for the agricultural landowners whose crops would be affected by Project activities. Within the Project area, the North Region includes substantial agricultural land uses, as described in the Agricultural Resources analysis (Section 3.2). Because population growth and residential developments are expanding throughout the North Region, it is possible that this impact of the proposed Project would have the potential to combine with similar impacts of other projects in the region. However, construction impacts from other projects in the Cumulative Scenario would be temporary in nature and therefore would have to occur at the same time and in the same vicinity as each other in order to combine. It is considered highly unlikely that projects with construction impacts similar to the proposed Project's construction impacts would occur at the same time and in the same vicinity as under the proposed Project.
- **Project activities would affect public agency revenue (Impact S-3).** Project activities would not result in a permanent adverse change in public resource revenue. Although Project construction would likely result in a loss of Forest Service revenue as a result of decreased Adventure Pass sales related to access restrictions on ANF lands, such losses would be temporary in nature and would not extend beyond the construction period. Furthermore, it is not expected that other projects on ANF lands would require access restrictions resulting in decreased Adventure Pass sales within the same vicinity and time period as the proposed Project. The Project's permanent, incremental contribution to potential public revenue impacts due to combined operation of projects in the Project area would likely result in beneficial public revenue impacts through property taxes and sales taxes that would be paid to public agencies. No permanent direct or cumulative effect on Forest Service revenue would occur as a result of the proposed Project.

Mitigation to Reduce the Project's Contribution to the Cumulative Scenario

Mitigation measure AG-1, which is recommended in Section 3.12.6.1 to minimize the effect of Impact S-2, would help to reduce the proposed Project's incremental contributions to the Cumulative Scenario. No additional mitigation measures have been identified to reduce or avoid cumulative socioeconomic impacts.

3.12.7 Alternative 3: West Lancaster Alternative

The following section describes the potential socioeconomic impacts of Alternative 3 (West Lancaster Alternative), according to the Issues of Concern provided in Section 3.12.4.1. Mitigation measures are introduced where necessary in order to reduce or avoid potential impacts. This alternative would deviate from the proposed Project route along Segment 4, at approximately S4 MP 14.9, where the new 500-kV

transmission line would turn south down 115th Street West for approximately 2.9 miles and turn east for approximately 0.5 mile, rejoining the proposed route at S4 MP 17.9. This re-route would increase the overall distance of Segment 4 by approximately 0.4 mile.

3.12.7.1 Direct and Indirect Effects Analysis

The Issues of Concern used to identify impacts to socioeconomics that are introduced in Section 3.12.4.1 are presented below with their respective impacts.

Population and Housing: Alternative 3 Direct and Indirect Effects

The Population and Housing Issue of Concern would be exactly the same under Alternative 3 as it would under the proposed Project (please refer to Section 3.12.6.1). The West Lancaster re-route associated with Alternative 3 would occur in an area that is currently being used for agricultural purposes. As with the proposed Project, Alternative 3 would not directly induce substantial population growth, displace existing residents or housing, necessitate the construction of replacement housing, or preclude planned residential development. No impact would occur.

Quality of Life: Alternative 3

The Quality of Life Issue of Concern would be exactly the same under Alternative 3 as it would under the proposed Project (please refer to Section 3.12.6.1). No impact would occur.

Employment: Alternative 3

The Employment Issue of Concern would be exactly the same under Alternative 3 as it would under the proposed Project (please refer to Section 3.12.6.1). No workers would be expected to permanently relocate into the Project area as a result of Alternative 3, and local employment conditions in the Project area would not be affected by this alternative. No impact would occur.

Private Property Value: Alternative 3

The Private Property Value Issue of Concern would be exactly the same under Alternative 3 as it would under the proposed Project (please refer to Section 3.12.6.1). Although Alternative 3 includes a minor re-route in the West Lancaster area, this re-route would not remove the transmission line from proximity to existing structures, and nor would it place the transmission line within proximity of existing structures. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), as described in Section 3.12.6.1, would be the same as the proposed Project.

Local Business Revenue: Alternative 3

The Local Business Revenue Issue of Concern would be exactly the same under Alternative 3 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners) would require implementation of Mitigation Measure AG-1 (Coordinate construction activities with agricultural landowners). As previously described, land uses in the North Region include extensive agriculture; the West Lancaster re-route included under Alternative 3 would be situated within an agricultural area. However, this re-route would not diverge substantially from the proposed Project route and agricultural uses along this portion of Alternative 3 are the same as along this portion of the proposed Project.

Public Revenue: Alternative 3

The Public Revenue Issue of Concern would be exactly the same under Alternative 3 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-3 (Project activities would affect public agency revenue) would have the potential to temporarily decrease Forest Service revenue as a result of decreased Adventure Pass sales in the ANF, but would not result in a permanent adverse change in public resource revenue. Permanent changes to public agency revenues as a result of Alternative 3 are expected to be beneficial.

3.12.7.2 Cumulative Effects Analysis

This section addresses potential cumulative effects that would occur as a result of implementation of Alternative 3 (West Lancaster Alternative). This alternative consists of a minor re-route of the proposed transmission line in the West Lancaster area of the North Region. As previously described, this alternative traverses the same uses as the portion of the proposed Project route it is proposed to replace, would require the same types of construction activities to build, and would result in the same operational capacity as the proposed Project. Based on the substantial similarity of Alternative 3 to the proposed Project, this alternative's contribution to cumulative impacts would be identical to that of the proposed Project.

Geographic Extent

The geographic extent of the cumulative analysis is exactly the same as the proposed Project, as described in Section 3.12.6.2.

Existing Cumulative Conditions

Existing cumulative conditions for Alternative 3 are exactly the same as the proposed Project, as described in Section 3.12.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes under Alternative 3 are exactly the same as under the proposed Project, as described in Section 3.12.6.2.

Cumulative Impact Analysis

Cumulative impacts under Alternative 3 would be the same as under the proposed Project, as described in Section 3.12.6.2. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners), and Impact S-3 (Project activities would affect public agency revenue) would have incremental contributions to the Cumulative Scenario. Please see Section 3.12.6.2 for a full description of these cumulative socioeconomic impacts.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measure AG-1, which is recommended in Section 3.12.7.1 to minimize the effect of Alternative 3 on Impact S-2, would help to reduce this alternative's incremental contributions to the Cumulative Scenario. No additional mitigation measures have been identified to reduce or avoid cumulative socioeconomic impacts.

3.12.8 Alternative 4: Chino Hills Route Alternatives

Alternative 4 includes four separate routing options: Route A, Route B, Route C, and Route D. The following section describes the socioeconomic impacts of Alternative 4, as determined by the Issues of Concern provided in Section 3.12.4.1. Mitigation measures are introduced where necessary in order to reduce or avoid potential impacts.

3.12.8.1 Direct and Indirect Effects Analysis

This alternative would follow the same route as the proposed Project through the North and Central Regions, diverging from the proposed Project route along Segment 8A in the South Region, at S8A MP 19.2. Each of the four routing options under Alternative 4 would diverge from the proposed Project route at this point, then turn to the southeast and cross through part of Orange County and San Bernardino County before reaching the northern border of the Chino Hills State Park (CHSP). Routes A, B, C, and D would each follow a different alignment through and/or around the Park. Potential impacts of the Project to the CHSP are discussed in their respective environmental issue area sections, including: Biological Resources (Section 3.4), Land Use (Section 3.9), Visual Resources (Section 3.14), and Wilderness and Recreation (Section 3.15), among others as appropriate.

Because Alternative 4 would diverge from the proposed Project route at Segment 8A MP 19.2, any socioeconomic impacts of the proposed Project that would occur between S8A MP 19.2 and 35.2 (16 miles) through the Cities of Chino Hills, Chino, and Ontario would not occur under Alternative 4. In addition, socioeconomic impacts associated with Segments 8B and 8C of the proposed Project also would not occur under Alternative 4.

From a socioeconomic perspective, the proposed routing options under Alternative 4 would not differ from one another in that the affected socioeconomic environment would be exactly the same for Routes A, B, C, and D with regards to the identified Issues of Concern, including: Population and Housing, Quality of Life, Employment, Private Property Value, Local Business Revenue, and Public Revenue. Therefore, the proposed Routes A, B, C, and D of Alternative 4 are evaluated collectively under Alternative 4.

Population and Housing: Alternative 4

The Population and Housing Issue of Concern would be the same under Alternative 4 as it would under the proposed Project. Although the proposed routing options under Alternative 4 would diverge from the proposed Project route, the land uses that would be traversed between the proposed Project route and the Chino Hills State Park are generally open space areas and are not utilized for housing purposes. Alternative 4 would not directly induce substantial population growth, displace existing residents or housing, necessitate the construction of replacement housing, or preclude planned residential development. No impact would occur.

Quality of Life: Alternative 4

The Quality of Life Issue of Concern would be exactly the same under the Alternative 4 routing options as it would under the proposed Project. No impact would occur.

Employment: Alternative 4

The Employment Issue of Concern would be exactly the same under Alternative 4 as it would under the proposed Project. As discussed, Alternative 4 would include a divergence from the proposed Project route; however, construction and operation activities associated with Alternative 4 would be the same as

those associated with the proposed Project. No workers would be expected to permanently relocate into the Project area as a result of Alternative 4, and local employment conditions in the Project area would not be affected by this alternative. No impact would occur.

Private Property Value: Alternative 4

The Private Property Value Issue of Concern would be the same under Alternative 4 as it would under the proposed Project, with the exception that Alternative 4 would avoid all potential impacts to private property value that would occur along the eastern-most 16 miles of Segment 8A (MP 19.2 – 35.2), as well as any private property value impacts associated with Segments 8B and 8C of the proposed Project. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment) would occur in the same way under Alternative 4 as it would under the proposed Project, with the exception (as described) that Alternative 4 would avoid all potential private property value impacts of the proposed Project within the Cities of Chino Hills, Chino, and Ontario.

Local Business Revenue: Alternative 4

The Local Business Revenue Issue of Concern would be exactly the same under Alternative 4 as it would under the proposed Project. As described in Section 3.12.6.1, Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners) would apply to agricultural areas in the Project area and would require implementation of Mitigation Measure AG-1 (Coordinate construction activities with agricultural landowners). The proposed alignment for Alternative 4 would not avoid any agricultural areas potentially affected by the proposed Project and would not introduce any new agricultural areas that could potentially be affected by Impact S-2.

Public Revenue: Alternative 4

The Public Revenue Issue of Concern would be the same under Alternative 4 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-3 (Operation and maintenance activities would affect public agency revenue) would have the potential to temporarily decrease Forest Service revenue as a result of decreased Adventure Pass sales in the ANF, but would not result in a permanent adverse change in public resource revenue. Permanent changes to public agency revenues as a result of Alternative 4 are expected to be beneficial.

3.12.8.2 Cumulative Effects Analysis

This section addresses potential cumulative effects that would occur as a result of implementation of Alternative 4 (Chino Hills Route Alternative). This alternative consists of four routing options (Routes A, B, C, and D) through Chino Hills State Park (CHSP) in the South Region of the Project area. As previously described, each of the four routing options under Alternative 4 would diverge from the proposed Project route along Segment 8A, at approximately MP 19.2, then turn to the southeast and cross through parts of Orange County and San Bernardino County before reaching the northern border of the Chino Hills State Park (CHSP). As described in Section 1.2.4 (Introduction: Alternative 4), Routes A, B, C, and D would each follow a different alignment through and/or around the Park.

Because Alternative 4 would diverge from the proposed Project route at Segment 8A MP 19.2, any cumulative socioeconomic impacts of the proposed Project that would occur between S8A MP 19.2 and 35.2 (16 miles) through the Cities of Chino Hills, Chino, and Ontario would not occur under Alternative 4. In addition, socioeconomic impacts associated with Segments 8B and 8C of the proposed Project also would not occur under Alternative 4. Although Alternative 4 would have the potential to introduce

cumulative socioeconomic impacts along the proposed alignments for Routes A, B, C, and D, which are situated in an area that would not be affected by the proposed Project route, this area is characterized as predominately open space and the potential for cumulative socioeconomic impacts to occur along the route alternatives would be less than the portion of the proposed Project that would be avoided by Alternative 4. Therefore, this alternative's contribution to cumulative socioeconomic impacts would be incrementally less than that of the proposed Project.

Geographic Extent

The geographic extent of the cumulative analysis is exactly the same as the proposed Project, as described in Section 3.12.6.2.

Existing Cumulative Conditions

Existing cumulative conditions for Alternative 4 are exactly the same as the proposed Project, as described in Section 3.12.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes under Alternative 4 are exactly the same as under the proposed Project, as described in Section 3.12.6.2.

Cumulative Impact Analysis

Cumulative socioeconomic impacts under Alternative 4 would be the same as under the proposed Project, as described in Section 3.12.6.2, with the exception that cumulative socioeconomic impacts of Alternative 4 would be expected to be incrementally less than the proposed Project (as described above) due to the avoidance of cumulative impacts in the South Region, under routing options A through D included under Alternative 4. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners), and Impact S-3 (Operation activities would affect public agency revenue) would have incremental contributions to the Cumulative Scenario. Please see Section 3.12.6.2 for a full description of these cumulative socioeconomic impacts.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measure AG-1, which is recommended in Section 3.12.8.1 to minimize the effect of Alternative 4 on Impact S-2, would help to reduce the alternative's incremental contributions to the Cumulative Scenario. No additional mitigation measures have been identified to reduce or avoid cumulative socioeconomic impacts.

3.12.9 Alternative 5: Partial Underground Alternative

The following section describes the potential socioeconomic impacts of Alternative 5 (Partial Underground Alternative), according to the Issues of Concern introduced in Section 3.12.4.1. Mitigation measures are introduced where necessary in order to reduce or avoid potential impacts.

3.12.9.1 Direct and Indirect Effects Analysis

The Issues of Concern used to identify impacts to socioeconomics that are introduced in Section 3.12.4.1 are presented below with their respective impacts. For this alternative, portions of the proposed transmission line would be installed underground. The proposed route for Alternative 5 is exactly the

same as the proposed Project route and as such, all potential socioeconomic impacts of Alternative 5 would be exactly the same as the proposed Project.

Population and Housing: Alternative 5

The Population and Housing Issue of Concern would be exactly the same under Alternative 5 as it would under the proposed Project (please refer to Section 3.12.6.1). As with the proposed Project, Alternative 5 would not directly induce substantial population growth, displace existing residents or housing, necessitate the construction of replacement housing, or preclude planned residential development. No impact would occur.

Quality of Life: Alternative 5

The Quality of Life Issue of Concern would be exactly the same under Alternative 5 as it would under the proposed Project (please refer to Section 3.12.6.1). No impact would occur.

Employment: Alternative 5

The Employment Issue of Concern would be exactly the same under Alternative 5 as it would under the proposed Project (please refer to Section 3.12.6.1). No workers would be expected to permanently relocate into the Project area as a result of Alternative 5, and local employment conditions in the Project area would not be affected by this alternative. No impact would occur.

Private Property Value: Alternative 5

The Private Property Value Issue of Concern would be exactly the same under Alternative 5 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), as described in Section 3.12.6.1, would be the same as the proposed Project.

Local Business Revenue: Alternative 5

The proposed route under Alternative 5 is the same as the proposed Project route. As described in Section 3.12.6.1 (Direct and Indirect Effects Analysis: Alternative 2), businesses occur along the proposed transmission line route, but are not expected to be disrupted by implementation of the Project because all Project-related activities and infrastructure placement would occur within designated utility ROW areas and would not require the removal or relocation of any business uses.

As with the proposed Project, local businesses could potentially be affected by Alternative 5 through impacts to visual resources, vehicular or pedestrian traffic patterns, land use, or health and safety concerns (such as EMF). Under Alternative 5, these Issue Area-specific effects would likely be greater along the 3.5-mile underground section in the South Region, due to extensive construction activities that would occur at each access shaft location. Installation of the underground transmission line and facilities would be more intensive and require more time than would be required for overhead installation of the same section of transmission line. Therefore, any activities associated with installation of the underground segment that could potentially result in Issue Area-specific effects related to local business revenue would likely be slightly greater under Alternative 5 than under the proposed Project.

As with the proposed Project, impacts related to the Issue Areas that could potentially influence business revenue are addressed in their respective EIR/EIS sections: Land Use (Section 3.9), Traffic and

Transportation (Section 3.13), Visual Resources (Section 3.14), and Electrical Interference and Hazards (Section 3.17).

Although Alternative 5 would not require the removal or relocation of any businesses, Project construction and operation would have the potential to affect agricultural revenues. As with the proposed Project, Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners) would require implementation of Mitigation Measure AG-1 (Coordinate construction activities with agricultural landowners).

Public Revenue: Alternative 5

The Public Revenue Issue of Concern would be exactly the same under Alternative 5 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-3 (Operation and maintenance activities would affect public agency revenue) would have the potential to temporarily decrease Forest Service revenue as a result of decreased Adventure Pass sales in the ANF, but would not result in a permanent adverse change in public resource revenue. Permanent changes to public agency revenues as a result of Alternative 5 are expected to be beneficial.

3.12.9.2 Cumulative Effects Analysis

This section addresses potential cumulative effects that would occur as a result of implementation of Alternative 5 (Partial Underground Alternative). The proposed route for Alternative 5 is exactly the same as the proposed Project route. This alternative would require the same types of construction activities to build, and would result in the same operational capacity as the proposed Project. Based on the substantial similarity of Alternative 5 to the proposed Project, and the fact that the proposed route for Alternative 5 would be exactly the same as the proposed Project route, this alternative's contribution to cumulative impacts would be identical to that of the proposed Project.

Geographic Extent

The geographic extent of the cumulative analysis is exactly the same as the proposed Project, as described in Section 3.12.6.2.

Existing Cumulative Conditions

Existing cumulative conditions for Alternative 5 are exactly the same as the proposed Project, as described in Section 3.12.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes under Alternative 5 are exactly the same as under the proposed Project, as described in Section 3.12.6.2.

Cumulative Impact Analysis

Cumulative impacts under Alternative 5 would be the same as under the proposed Project, as described in Section 3.12.6.2. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners), and Impact S-3 (Project activities would affect public agency revenue) would have an incremental contribution to the Cumulative Scenario. Please see Section 3.12.6.2 for a full description of these cumulative impacts to socioeconomics.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measure AG-1, which is recommended in Section 3.12.9.1 to minimize the effect of Alternative 5 on Impact S-2, would help to reduce this alternative's incremental contributions to the Cumulative Scenario. No additional mitigation measures have been identified to reduce or avoid cumulative socioeconomic impacts.

3.12.10 Alternative 6: Maximum Helicopter Construction in the ANF Alternative

The following section describes the potential socioeconomic impacts of Alternative 6 (Maximum Helicopter Construction in the ANF Alternative), according to the Issues of Concern introduced in Section 3.12.4.1. Mitigation measures are introduced where necessary in order to reduce or avoid potential impacts.

3.12.10.1 Direct and Indirect Effects Analysis

The Issues of Concern used to identify impacts to socioeconomics that are introduced in Section 3.12.4.1 are presented below with their respective impacts. This alternative would utilize helicopter construction through the ANF to the maximum extent feasible, towards the purpose of reducing the length of new roads that would need to be constructed or improved during Project construction. The proposed route for Alternative 6 is exactly the same as the proposed Project route and as such, all potential socioeconomic impacts of Alternative 6 would be exactly the same as the proposed Project.

Population and Housing: Alternative 6

The Population and Housing Issue of Concern would be exactly the same under Alternative 6 as it would under the proposed Project (please refer to Section 3.12.6.1). As with the proposed Project, Alternative 6 would not directly induce substantial population growth, displace existing residents or housing, necessitate the construction of replacement housing, or preclude planned residential development. No impact would occur.

Quality of Life: Alternative 6

The Quality of Life Issue of Concern is considered in terms of the individual perception of various issue areas, as previously described. The use of helicopters during construction of this Project would have different and, in some cases, more intense effects on the Issue Areas that are considered to contribute to a perception of Quality of Life. However, as with the proposed Project, it is not expected that Alternative 6 would have the potential to adversely impact the overall concept or experience of Quality of Life for individuals who live in the Project area. No impact would occur.

Employment: Alternative 6

The Employment Issue of Concern would be exactly the same under Alternative 6 as it would under the proposed Project (please refer to Section 3.12.6.1). No workers would be expected to permanently relocate into the Project area as a result of Alternative 6, and local employment conditions in the Project area would not be affected by this alternative. No impact would occur.

Private Property Value: Alternative 6

The Private Property Value Issue of Concern would be exactly the same under Alternative 6 as it would under the proposed Project (please refer to Section 3.12.6.1). Although construction methodology in the ANF would be different under Alternative 6 than under the proposed Project, permanent effects would be the same. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), as described in Section 3.12.6.1, would be the same as the proposed Project.

Local Business Revenue: Alternative 6

The Local Business Revenue Issue of Concern would be exactly the same under Alternative 6 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners) would require implementation of Mitigation Measure AG-1 (Coordinate construction activities with agricultural landowners).

Public Revenue: Alternative 6

The Public Revenue Issue of Concern would be exactly the same under Alternative 6 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-3 (Operation and maintenance activities would affect public agency revenue) would have the potential to temporarily decrease Forest Service revenue as a result of decreased Adventure Pass sales in the ANF, but would not result in a permanent adverse change in public resource revenue. Permanent changes to public agency revenues as a result of Alternative 6 are expected to be beneficial.

3.12.10.2 Cumulative Effects Analysis

This section addresses potential cumulative effects that would occur as a result of implementation of Alternative 6 (Maximum Helicopter Construction in the ANF Alternative). This alternative would utilize helicopter construction through the ANF to the maximum extent possible, towards the purpose of minimizing the length of roads in the ANF that would need to be constructed or improved as a result of Project implementation. The proposed route for Alternative 6 is exactly the same as the proposed Project route. This alternative would result in the same operational capacity as the proposed Project. From a socioeconomic perspective, the contribution of Alternative 6 to cumulative impacts would be identical to that of the proposed Project.

Geographic Extent

The geographic extent of the cumulative analysis is exactly the same as the proposed Project, as described in Section 3.12.6.2.

Existing Cumulative Conditions

Existing cumulative conditions for Alternative 6 are exactly the same as the proposed Project, as described in Section 3.12.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes under Alternative 6 are exactly the same as under the proposed Project, as described in Section 3.12.6.2.

Cumulative Impact Analysis

Cumulative impacts under Alternative 6 would be the same as under the proposed Project, as described in Section 3.12.6.2. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners), and Impact S-3 (Project activities would affect public agency revenue) would have incremental contributions to the Cumulative Scenario. Please see Section 3.12.6.2 for a full description of these cumulative socioeconomic impacts.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measure AG-1, which is recommended in Section 3.12.10.1 to minimize the effect of Alternative 6 on Impact S-2, would help to reduce the alternative's incremental contributions to the Cumulative Scenario. No additional mitigation measures have been identified to reduce or avoid cumulative socioeconomic impacts.

3.12.11 Alternative 7: 66-kV Subtransmission Alternative

The following section describes the potential socioeconomic impacts of Alternative 7 (66-kV Subtransmission Alternative), according to the Issues of Concern provided in Section 3.12.4.1. Mitigation measures are introduced where necessary in order to reduce or avoid potential impacts. This alternative is identical to the proposed Project, with the exception of the following three 66-kV subtransmission elements: undergrounding the 66-kV subtransmission line through the Duck Farm Project (between S7 MP 8.9 and S7 MP 9.9); re-routing and undergrounding the 66-kV subtransmission line around the Whittier Narrows Recreation Area, between S7 MP 11.4 and S7 MP 12.025; and re-routing an overhead 66-kV subtransmission line around the Whittier Narrows Recreation, between S8A MP 2.2 and S8A MP 3.8.

3.12.11.1 Direct and Indirect Effects Analysis

The Issues of Concern used to identify impacts to socioeconomics that are introduced in Section 3.12.4.1 are presented below with their respective impacts.

Population and Housing: Alternative 7

The Population and Housing Issue of Concern would be exactly the same under Alternative 7 as it would under the proposed Project (please refer to Section 3.12.6.1). The 66-kV subtransmission elements associated with Alternative 7 would be constructed along existing ROWs, roads, or open space areas, and would not be located in residential communities. As with the proposed Project, Alternative 7 would not directly induce substantial population growth, displace existing residents or housing, necessitate the construction of replacement housing, or preclude planned residential development. No impact would occur.

Quality of Life: Alternative 7

The Quality of Life Issue of Concern would be exactly the same under Alternative 7 as it would under the proposed Project (please refer to Section 3.12.6.1). No impact would occur.

Employment: Alternative 7

The Employment Issue of Concern would be exactly the same under Alternative 7 as it would under the proposed Project (please refer to Section 3.12.6.1). No workers would be expected to permanently relocate into the Project area as a result of Alternative 7, and local employment conditions in the Project area would not be affected by this alternative. No impact would occur.

Private Property Value: Alternative 7

The Private Property Value Issue of Concern would be exactly the same under Alternative 7 as it would under the proposed Project. Although Alternative 7 includes minor re-routes and underground construction of 66-kV subtransmission lines along Segments 7 and 8A, this alternative would not create a new effect on existing structures that is not already discussed in Section 3.12.6.1. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), as described in Section 3.12.6.1, would be the same as the proposed Project.

Local Business Revenue: Alternative 7

The Local Business Revenue Issue of Concern would be exactly the same under Alternative 7 as it would under the proposed Project. The 66-kV subtransmission elements of Alternative 7 would not create any new impacts to local businesses that are not already discussed in Section 3.12.6.1. As discussed for the proposed Project, construction and operation would have the potential to affect agricultural revenues. Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners) under Alternative 7 would require implementation of Mitigation Measure AG-1 (Coordinate construction activities with agricultural landowners).

Public Revenue: Alternative 7

The Public Revenue Issue of Concern would be exactly the same under Alternative 7 as it would under the proposed Project (please refer to Section 3.12.6.1). Impact S-3 (Operation and maintenance activities would affect public agency revenue) would have the potential to temporarily decrease Forest Service revenue as a result of decreased Adventure Pass sales in the ANF, but would not result in a permanent adverse change in public resource revenue. Permanent changes to public agency revenues as a result of Alternative 7 are expected to be beneficial.

3.12.11.2 Cumulative Effects Analysis

This section addresses potential cumulative effects that would occur as a result of implementation of Alternative 7 (66-kV Subtransmission Alternative). This alternative consists of minor 66-kV subtransmission re-routes and underground construction along Segments 7 and 8A. As previously described, this alternative traverses the same uses as the portion of the proposed Project route it is proposed to replace, would require the same types of construction activities to build, and would result in the same operational capacity as the proposed Project. Based on the substantial similarity of Alternative 7 to the proposed Project, this alternative's incremental contributions to the Cumulative Scenario would be identical to that of the proposed Project.

Geographic Extent

The geographic extent of the cumulative analysis is exactly the same as the proposed Project, as described in Section 3.12.6.2.

Existing Cumulative Conditions

Existing cumulative conditions for Alternative 7 are exactly the same as the proposed Project, as described in Section 3.12.6.2.

Reasonably Foreseeable Future Projects and Changes

Reasonably foreseeable future projects and changes under Alternative 7 are exactly the same as under the proposed Project, as described in Section 3.12.6.2.

Cumulative Impact Analysis

Cumulative impacts under Alternative 7 would be the same as under the proposed Project, as described in Section 3.12.6.2. Impact S-1 (Operation and maintenance activities would affect property values along the Project alignment), Impact S-2 (Construction activities would cause a temporary decrease in revenues for agricultural landowners), and Impact S-3 (Project activities would affect public agency revenue) would have incremental contributions to the Cumulative Scenario. Please see Section 3.12.6.2 for a full description of these cumulative socioeconomic impacts.

Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects

Mitigation measure AG-1, which is recommended in Section 3.12.11.1 to minimize the effect of Alternative 7 on Impact S-2, would help to reduce the alternative's incremental contribution to the Cumulative Scenario. No additional mitigation measures have been identified to reduce or avoid cumulative socioeconomic impacts.

3.12.12 Impact Significance Summary

Table 3.12-17 summarizes the direct and indirect environmental impacts of the proposed Project (Alternative 2) and all alternatives, as related to socioeconomics. As described in Section 3.12.4.1 (Criteria for Determining Impact Significance), economic and social effects of a project may not be treated as significant environmental effects (per CEQA) and no specific thresholds of significance for socioeconomic impact assessment have been identified (per NEPA). Therefore, for the purposes of this analysis, socioeconomic impacts were assessed with regards to five Issues of Concern. Through this assessment, three impacts were identified under the relevant Issues of Concern. Table 3.12-17 lists the identified impacts and indicates whether they would occur under each alternative. The direct and indirect effects of the Project and alternatives have been fully described in Sections 3.12.5 through 3.12.11 above. Alternative 1 (No Project/No Action) impacts are fully described in Section 3.12.5; however, because no potential future project information is available at the time of this analysis, an indication of whether the identified socioeconomic impacts would occur under Alternative 1 is not included in the table below.

Table 3.12-17. Summary of Impacts and Mitigation Measures – Socioeconomics

Impact	Impact Significance								Mitigation Measures
	Alt. 1+	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	NFS Lands*	
S-1: Project activities would affect property values along the Project alignment.	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No	N/A
S-2: Construction activities would cause a temporary decrease in revenues for agricultural landowners.	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	AG-1: Coordinate construction activities with agricultural landowners.
S-3: Operation and maintenance activities would affect public agency revenue.	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	R-1e: SCE shall assist in the completion of backlogged maintenance activities.

N/A = Not Available.

* Indicates whether this impact is applicable to the portion of the Project on National Forest System lands.

+ Potential projects would likely traverse the same geographic regions as either the proposed Project or Alternatives 3 through 7, and subsequently introduce similar types of impacts.