

## **E. Other CEQA Considerations**

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Sections E.1 through E.5 include discussions of various topics required by the California Environmental Quality Act (CEQA) associated with the proposed Project's long-term implications, including a summary description of the significant and unavoidable environmental impacts (Class I) of the proposed Project identified in Sections C.2 through C.13. Section E.6~~2~~ discusses the effects of the proposed Project that were found not be significant.

### **~~E.1 Long Term Implications~~**

#### **~~E.1.1 Significant Unavoidable Impacts~~**

The environmental impacts of the proposed Project are described in Section C (Environmental Analysis) of this EIR. Impacts that are significant and cannot be reduced to less-than-significant levels through the application of feasible mitigation measures have been characterized as Class I impacts. All significant and unavoidable (Class I) impacts resulting from the proposed Project are summarized below. Complete descriptions of these impacts are presented in each applicable issue area discussion in Section C.

#### **Air Quality**

As discussed in Section C.2, daily construction emissions, for the proposed Project, as well as Options A and B, would be significant for NO<sub>x</sub> and PM<sub>10</sub> on a daily basis in the AVAQMD and based on the proposed Project schedule, would be significant for PM<sub>10</sub> on an annual basis in the AVAQMD. Implementation of Mitigation Measures A-1a through A-1i would reduce construction impacts to air quality to the maximum degree feasible but would not eliminate all significant impacts. The proposed Project and Options A and B's NO<sub>x</sub> and PM<sub>10</sub> emissions, even after implementation of all feasible mitigation measures, will remain above the AVAQMD daily significance threshold values for NO<sub>x</sub> and PM<sub>10</sub>. Additionally, depending on the actual project schedule the annual PM<sub>10</sub> emission would remain above the AVAQMD annual significance thresholds. Therefore, the daily emissions from the proposed Project or from Options A or B would cause significant and unavoidable impacts (Class I).

#### **Land Use**

As discussed in Section C.8, the easement for the proposed line would extend over privately owned parcels that include residential and agricultural uses. Future use of the property within the proposed easement would be restricted, as the removal of existing structures would be required and no new structures would be permitted within the easement during Project operation. The proposed Project would require the removal of agricultural structures, three residences along Cherry Tree Lane in unincorporated Los Angeles County, and would traverse a proposed school site, thereby precluding the use of that property for educational facilities within 350 feet of the proposed Project ROW due to California Department of Education (CDE) school siting requirements. The removal of existing residences and the restriction of current or future land uses on private property are considered a significant and unavoidable impact (Class I). Although the proposed Project would require the removal of a single residence in the City of Lancaster, Mitigation Measure L-2 (Re-locate Project ROW to Avoid Residence) would re-route the ROW to avoid removal of this residence. While Option A would avoid the condemnation of three residences, it would still preclude the use of the school property. The magnitude of the impact would be reduced with Option A, but the impact would remain significant and

unavoidable (Class I). While Option B would not preclude the use of the school site, the construction and operation of Option B would preclude the use of land parcels within Ritter Ranch that have been designated for future residential development in addition to the impacts to residences described for the proposed Project, resulting in significant and unavoidable impacts (Class I). Option B, however, would not preclude the use of the proposed school site.

### **Agriculture**

As discussed in Section C.9, the proposed Project would construct LSTs and new access and spur roads across Williamson Act contract lands classified as Prime Agricultural Land and Mixed Acreage Parcels. In total, operation of the Project (i.e., tower footings, access and spur roads, substation pad), as well as Options A and B, would permanently remove approximately 1.0 acre of Prime Agricultural Land and 28.6 acres of Mixed Acreage Parcels, which would exceed the 10-acre Prime Farmland threshold level established to determine the level of significance. This would be considered a significant and unavoidable impact (Class I) for the proposed Project and Options A and B.

### **Noise**

As discussed in Section C.10, corona noise would occur along the entire corridor of the proposed Project, which is in close proximity to sensitive receptors, and would create ambient noise levels greater than the noise occurring under existing conditions. The level of worst-case wet weather and heavy load noise would likely be between 55 and 65 dBA along the proposed Project corridor as well as Options A and B, meaning that introduction of new corona noise could result in a substantial (more than five dBA) increase to the ambient noise levels of nearby receptors. This potential increase in ambient noise levels to sensitive receptors immediately adjacent to the proposed ROW would be significant and unavoidable (Class I). This would also violate the Los Angeles County Noise Ordinance, which contains a noise standard of 45 dBA for noise-sensitive areas such as residential land uses along the route within Los Angeles County. Therefore, operational corona noise levels at these locations would exceed Los Angeles County Ordinance Standards and would therefore result in a significant and unavoidable impact (Class I).

### **Visual Resources**

As discussed in Section C.11, construction of the proposed Project and the associated increase in structures of an industrial character would result in a permanent change in landscape character and scenic vistas as seen from Avenue L near Olive Grove and Elizabeth Lake Road. At Avenue L (KOP 7), the proposed Project and both Options A and B would replace the line of wooden 66-kV transmission poles with LSTs, and the existing 66-kV line would be demolished, then relocated further to the right (southwest) with 75-foot tall, light-weight, direct-buried TSPs, 180 feet west of and parallel to existing alignment of the existing wooden structures. The existing landscape has moderate-to-high visual sensitivity, so the resulting visual impact for travelers on nearby roads would be significant. For residents of the single residence on Avenue L in the City of Lancaster that would be removed, the overall visual change would be high and in the context of the high visual sensitivity, visual impacts would be significant and unavoidable (Class I) even with mitigation that would re-route the proposed Project. Along Cherry Tree Lane in unincorporated Los Angeles County, the proposed Project would be constructed on the southwest side of the existing transmission lines and would pass directly over one uninhabited and three inhabited residences on the northeast side of Elizabeth Lake Road (KOP 10) in this vicinity. The view from these sensitive receptor locations would be permanently disrupted and the viewer platforms would be removed. The proposed Project would add visual clutter and industrial character to this pastoral landscape, but more importantly, the proposed alignment would eliminate three existing houses from

three different ranchettes, creating high visual contrast, dominance, and view blockage. The overall visual change seen from Elizabeth Lake Road would be high and in the context of the existing landscape's high visual sensitivity, the resulting visual impacts would be significant and unavoidable (Class I). Option B would have the same impacts near Elizabeth Lake Road as the proposed Project, and would therefore result in significant and unavoidable impacts. Option A would avoid removal of the existing homes, and consequently avoid the significant and unavoidable impact.

### **Population and Housing**

As discussed in Section C.13, more than 80 residences are located less than 0.2 miles (approximately 1,000 feet) from the Project. Four residences, one in the City of Lancaster and three in unincorporated Los Angeles County, would be within the proposed Project ROW and would need to be removed, although the implementation of Mitigation Measure L-2 (Re-locate Project ROW to Avoid Residence) would re-route the proposed Project to avoid the removal of the residence in the City of Lancaster. The removal of housing as a result of the proposed Project is considered a significant and unavoidable impact (Class I). Option A would avoid impacts to the housing along Cherry Tree Lane in unincorporated Los Angeles County and while the residence in the City of Lancaster would still need to be removed under Option A, Mitigation Measure L-2 (Re-locate Project ROW to Avoid Residence) would avoid this impact. Option B would require the removal of residential units identical to those listed above for the proposed Project. Therefore, the impact associated with the removal of housing associated with Option B would be significant and unavoidable (Class I).

## **E.4-2 Irreversible and Irretrievable Commitment of Resources**

The CEQA Guidelines (Section 15126.2(c)) require that an EIR identify significant irreversible environmental changes that would be caused by the proposed Project. These changes include, for example, uses of nonrenewable resources or provision of access to previously inaccessible areas. These changes can also include project accidents that could change the environment in the long-term or project-related changes that could commit future generations to similar uses.

The transmission line construction phase would require an irretrievable commitment of natural resources from direct consumption of fossil fuels, construction materials, the manufacture of new equipment that largely cannot be recycled at the end of the Project's useful lifetime, and energy required for the production of materials. Approximately 355,000 gallons of fossil fuels would be required for Project construction (see Appendix 3). Additionally, construction would require the manufacture of new materials, some of which would not be recyclable at the end of the proposed Project's lifetime, and the energy required for the production of these materials, which would also result in an irretrievable commitment of natural resources.

The proposed Project, including Options A and B, would result in permanent loss of sensitive vegetation communities, rare plant communities, and sensitive plant and animal species. Permanent loss of habitat may also occur from permanent project features (e.g., new transmission towers and sub-stations) that would remain throughout the life of the Project. Construction of the transmission line would require the permanent disturbance of approximately 185.5 acres of land. Of this, approximately 161.9 acres (87.3 percent of the total land disturbed) would be disturbance of native vegetation and habitat, as evaluated in Section C.3 (Biological Resources). Construction activities would result in potential impacts to listed and special-status plant species; federal- and State-listed amphibians, including California red-legged frog, desert tortoise, southwestern willow flycatcher, vermilion flycatcher, and least Bell's vireo; and special status amphibians, reptiles, birds, and mammals. Assuming implementation of the Mitigation Measures B-3a through B-27b recommended in Section

C.3 (Biological Resources), permanent loss of biological resources would be confined to small areas at each structure location.

Construction activities associated with the proposed Project and Options A and B would result in significant damage or destruction of a part or all of 31 culturally or historically sensitive sites as described in Section C.4 (Cultural Resources). In addition, as described in Section C. 5 (Geology, Soils, and Paleontology), the proposed Project and Options A and B could result in landslides or slope instability and could damage unique or significant fossils. Soil erosion and sedimentation, as also described in Section C.5 (Geology, Soils, and Paleontology), would be associated with grading and excavation necessary for tower pads and substation sites as well as for road construction. As discussed in Section C.7 (Hydrology and Water Quality), surface water and groundwater quality could be impacted through the accidental release of hazardous materials at pole or tower installation locations, site laydown and preparation areas, substation sites, substation expansion sites, and other locations where Project activities would occur. With the implementation of Mitigation Measures C-1a through C-31b, G-1, G-2, G-8, H-1a through H-7, however, permanent impacts to these resources would be less than significant.

Both the proposed Project and Option B would result in a permanent conversion and preclusion of land uses including the removal of four residences and agricultural structures, although with mitigation, removal of the residence in the City of Lancaster would be avoided. Additionally, the proposed Project and both Options A and B would alter the recreational character of the Pacific Crest National Scenic Trail (PCT) trailhead. The proposed Project and Options A and B would also convert 1.0 acre of Prime Agricultural Land and 28.6 acres of Mixed Acreage Parcels under Williamson Act contracts to non-agricultural uses. As previously discussed (in Section C.8 (Land Use) and above in Section E.1-4) the conversion and/or preclusion of residential, institutional, agricultural, and recreational land uses would result in significant impacts. In some cases, these land uses impacts can be mitigated to less-than-significant levels and, in some cases, the impacts are unavoidable. In either case, the siting of a new transmission line and the creation of a new utility corridor would establish a new industrial land use type in the area. Therefore, it is likely that future transmission line projects may be sited or planned either within the same corridor, or in the Project vicinity thereby committing future generations to similar uses of an industrial nature.

The proposed Project and Options A and B would adversely affect scenic vistas in a variety of locations as discussed in Section C.11 (Visual Resources), and would create a new source of substantial light or glare at proposed Substations One and Two that would adversely affect day or nighttime views. Construction of the transmission line at Avenue L near Olive Grove (KOP 7) would increase the industrial character and would result in a permanent change to the landscape and scenic vistas. Along Elizabeth Lake Road (KOP 10), the removal of three residences and construction of the transmission line would permanently alter the scenic character of the area. However, at the other KOPs evaluated for the proposed Project, these impacts can be mitigated to less-than-significant levels. These permanent changes to the scenic quality and landscape of the Project area would be irreversible in the long-term, since it is likely that similar uses would be sited in the area due to the establishment of a new utility corridor and the resultant industrial character. This would make future removal or non-use of the Project unlikely.

During the Project's operational phase, the transmission line would allow for the transport of additional electrical power generated from nonrenewable resources (e.g., natural gas, large hydroelectric, coal), as well as an increasing proportion of renewable resources (e.g., wind, solar, small hydroelectric). While the construction of the proposed Project, a new transmission line, does commit the future use of some amounts of

nonrenewable resources, no differentiation between renewable and non-renewable power would be made in the transport of electrical power by the proposed Project.

### **E.4.3 Growth-Inducing Effects**

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 unserved 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, the growth-inducing potential of a project would be considered significant 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. Significant 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.

#### **E.4.3.1 Growth Caused by Direct Employment**

As described in Section C.13, Population and Housing, the construction and operation of the project itself would not affect the employment patterns in the area. The project would require between 50 to 300 personnel per day with an estimated daily average workforce of 130 crew members over the 16 month period. It is anticipated that the majority of the construction personnel would come from the existing labor pool of Kern and Los Angeles Counties. Project operation requires minimal staffing and would not create new jobs. Operation would be handled by current SCE employees. Substations One and Two would be unmanned and no changes to staffing would be made at Antelope or Vincent Substations. Inspections and maintenance would be performed by existing staff.

Some of the construction personnel may commute from outside of the Project area and stay at existing local hotels during construction. According to the Year 2000 U.S. Census, Kern County and Los Angeles County had approximately 160,047 vacant housing units, of which 63,118 were available for rent and 19,303 were for seasonal, recreational, or occasional use (U.S. Census, 2000). Therefore, no growth in residential services would occur. Over the long term, the hiring of employees for the proposed Project would have no impact on population growth, as no long-term employment growth would result directly from Project operations. Long-term employment growth indirectly resulting from Project operations are addressed below in Section E.4.3.2 (Growth Related to Provision of Additional Electric Power).

#### **E.4.3.2 Growth Related to Provision of Additional Electric Power**

As outlined in Section A.2, Project Objectives, 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 Tehachapi Wind Resource Area 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. As discussed in Section A.2.2, the proposed Project would initially be operated at 220-kV in order to meet current transmission needs associated with ongoing wind development. However, the line would be built to 500-kV standards so that as renewable power loads increase, future overloading of transmission facilities would be avoided. The California Independent System Operator (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.

Section C.13.1.1 (Demographic Characteristics) provides a description of the existing and projected population within the proposed Project area. Between 2000 and 2020, the populations of Los Angeles and Kern Counties and the Cities of Lancaster and Palmdale are anticipated to increase by 28, 30, 26 and 24 percent, respectively. Both locally and regionally, the proposed Project area is experiencing substantial population growth, which is reflected in the large number of proposed and planned future residential development projects listed in Table E-1 -4 (located at the end of Section E) and shown in Figures E.1-1a and E.1-1b (also located at the end of this section). 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 being proposed by independent generators for construction in the Antelope Valley and Tehachapi areas that are currently restricted by the Antelope-Mesa 220-kV transmission line operating at capacity. Section E-4.4.2 (Energy and Transmission Projects), below, further describes the roles and plans for these projects. The proposed Project would accommodate the anticipated future load growth in a timely manner and would be consistent with local planning documents and policies (see Section C.13.2). Any growth that occurs with the availability of the additional power provided by the proposed Project would need to conform to the local planning documents and policies. An assessment of the potential significant cumulative impacts of the proposed Project is provided below, in Section E-4.4. Although the proposed Project would not directly result in growth in the area, its implementation would remove future obstacles to population growth by facilitating the transmission of future projected power generation in the Tehachapi Wind Resource Area (as described below in Section E-4.3.3).

### **E-4-3.3 Development of Wind Generation in the Tehachapi Area**

In the late 1970s and early 1980s the California Energy Commission (CEC) conducted wind resource evaluations throughout the state, and discovered promising sites in the Tehachapi pass and in the adjacent Antelope Valley. Tehachapi is a mountain pass area spreading into the adjacent Mojave Desert. The land in the expanded Tehachapi Wind Resource Area is diverse, ranging from high desert floor to mountain pass, to tall mountains. Elevation spans from 2,500 feet to near 8,000 feet.

As discussed in Section A.2.5, Senate Bill 1078 requires electrical corporations (investor-owned utilities) starting in 2003 to increase procurement of renewables-based generation such that the consumption from this source is increased by one percent per year until 20 percent consumption is reached no later than the end of 2017. Senate Bill 1038, enacted in the same year, required the Energy Commission to prepare a plan for the development of renewable resources. This plan was submitted to the Legislature in December of 2003. It identifies 8,000 megawatts (MW) of potential renewables generation available to meet the SB1078 goal of 20 percent in 2017. One-half of this 8,000 MW would come from wind generation in the Tehachapi Mountains. Decision 04-06-010 identifies the amount of wind power in Tehachapi as 4,060 MW.

In 2003, the California Power and Conservation Financing Authority, the Energy Commission and the CPUC jointly adopted the Energy Action Plan, which accelerated achievement of the 20 percent procurement goal to

2010. To reach this goal, a total of about 6,600 MW of renewables generation is needed, from which a little more than half (3,700 MW) was identified by the Energy Commission as Tehachapi wind power.

### **Interconnection Request Process**

On July 1, 2005, a Federal Energy Regulatory Commission (FERC) order established Interim Large Generator Interconnection Procedures (LGIP) and ordered the CAISO to create a Centralized Interconnection Study process where the CAISO itself conducts the Interconnection Studies. On November 1, 2005, the CAISO, SCE, San Diego Gas & Electric (SDG&E), Pacific Gas & Electric (PG&E) made the compliance filing to establish the Centralized Interconnection Study process. On May 24, 2006, FERC largely accepted the study process.

Interconnection procedures are in place for proposed “Large Generators”, which are defined as generating facilities that are greater than 20 MW, and for proposed generating facilities that are less than or equal to 20 MW. There are also specific procedures required for wind plants for each of these categories. Generating facilities planning to re-power or new generating facilities seeking to interconnect to the CAISO Controlled Grid are required to submit an Interconnection Request (IR) and applicable deposits in accordance with Section 25 (Interconnection of Generating Units and Generating Facilities to The ISO Controlled Grid) and Appendix U (Rate Schedules) of the CAISO Tariff.

Receipt of an IR and Interconnection Customer (IC) deposits initiates the Centralized Interconnection Study Process, whereby the CAISO acts as the single point of contact for the IC. The CAISO provides direction, oversight, and approval of both the administrative and technical portions of the study process.

If Tariff requirements are not met by an IC, the CAISO is responsible for notifying the IC of the potential withdrawal of the project from the CAISO Queue. If the Tariff requirements are not cured by an IC within the time specified in the Tariff and within the notice of withdrawal, then the CAISO is responsible for withdrawing the IC’s project from the CAISO Queue.

### **CAISO Interconnection Queue**

Information taken from the American Wind Energy Association website, January 18, 2006 ([www.awea.org](http://www.awea.org)) indicates that 608.72 MW of wind generation is on-line in the Tehachapi area. Seventeen wind projects totaling approximately 3,450MW were identified for the Tehachapi area in the CAISO Interconnection Queue (<http://www.caiso.com>) as of August 11, 2006. The list includes:

- 300 MW connecting to Antelope Substation with a current on-line date of 12/31/2008. System Impact Study (SIS) and Facility Study (FS) have been completed. Interconnection agreement status – unknown.
- 201 MW connecting to Monolith Substation with a current on-line date of 12/31/2009. SIS has been completed and a FS is in progress. Interconnection agreement status – unknown.
- 300 MW connecting to Monolith Substation with a current on-line date of 12/31/2009. SIS has been completed and a FS is in progress. Interconnection agreement status – unknown.
- 250 MW connecting to Antelope Substation with a current on-line date of 12/31/2008. SIS is in progress. Interconnection agreement status – unknown.
- 51 MW connecting to the proposed “new” Dutchwind Substation with a current on-line data of 12/15/2009. Feasibility Study (IFS) has been completed and a SIS is in progress. Interconnection agreement status – unknown.
- 400 MW connecting to Cottonwind Substation with a current on-line date of 12/31/2009. The IFS has been received by the California ISO. Interconnection agreement status – unknown.

- 33.1 MW connecting to Vincent Substation with a current on-line date of 1/1/2008. Interconnection agreement status – unknown.
- 34 MW connecting to Vincent Substation with a current on-line date of 1/1/2008. Interconnection agreement status – unknown.
- 51 MW connecting to Segment 3 of Antelope Transmission Project with a current on-line date of 3/31/2010. SIS is in progress. Interconnection agreement status – unknown.
- 220 MW connecting to the proposed Substation One of Antelope Transmission Project with a current on-line date of 12/31/2008. IFS is in progress. Interconnection agreement status – unknown.
- 180 MW connecting to the proposed Substation Two of Antelope Transmission Project with a current on-line date of 12/31/2008. IFS is in progress. Interconnection agreement status – unknown.
- 550 MW connecting to the proposed Substation One of Antelope Transmission Project with a current on-line date of 12/31/2009. IFS is in progress. Interconnection agreement status – unknown.
- 600 MW connecting to the proposed Substation One of Antelope Transmission Project with a current on-line date of 12/31/2009. IFS is in progress. Interconnection agreement status – unknown.
- 160 MW connecting to the proposed Substation Five of Antelope Transmission Project with a current on-line date of 12/31/2009. IFS is in progress. Interconnection agreement status – unknown.
- 120 MW connecting to Vincent Substation through Sagebrush 230-kV line with a current on-line date of 12/31/2007. Interconnection agreement status – unknown.

From these in-queue projects, only one is currently known to be in the application and permitting process with Kern County. This project is called the PdV Wind Energy Project (PdV) and the project proponent is Power Partners Southwest, LLC, a wholly-owned subsidiary of enXco, Inc. PdV would generate up to 300 MW of renewable wind power for distribution through Antelope Substation. Without adequate transmission capabilities such as the proposed Project and other similar planned transmission projects in the area, the implementation of the above wind projects is unlikely.

## **E.4.4 Cumulative Impact Analysis**

### **E.4.4.1 Introduction**

In accordance with CEQA (State CEQA Guidelines § 15130 et seq.), this EIR includes an analysis of cumulative impacts. Per CEQA, “cumulative impacts” refers to two or more individual effects, which are considerable when combined, or which compound or increase other environmental impacts (State CEQA Guidelines § 15355). In order to comply with CEQA, a cumulative scenario has been developed as a part of this EIR in order to identify projects that are reasonably foreseeable and that would be constructed or commence operation during the timeframe of activity associated with the proposed Project. This information will be used to determine if the impacts of the proposed Project have the potential to combine with similar impacts of the other projects, thereby resulting in cumulative effects.

The projects considered to be part of the cumulative scenario include past, present and probable future projects producing related or cumulative impacts. These include a range of project types, such as land development projects, infrastructure and energy projects, and maintenance and restoration projects, among others. A list of energy and transmission projects in the Project vicinity, including transmission and wind energy projects, is presented in Table E-4-3 at the end of the section. A list of projects obtained from each local jurisdiction in the Project vicinity, mainly consisting of land development projects, is presented in Table E-4-4 at the end of the section. The analyses of cumulative effects for each issue area utilize this information, as appropriate, to estimate the potential for combined effects of the proposed Project and other projects in the vicinity. However, the geographic scope of analysis varies for each issue area and, therefore, only of subset of the listed projects



may be considered in the cumulative analyses for various issue areas. The geographic scopes of analysis considered for each issue area are described at the beginning of the cumulative impact sections for individual issue areas in Section E-4.5 below.

## **E-4.4.2 Energy and Transmission Projects**

### **Proposed Wind Generation Facilities**

SCE is obligated to integrate power generation facilities, including wind farms, into its electrical system, per Section 210 and 212 of the Federal Power Act (16 U.S.C. § 824 (i) and (k)) and Section 3.2 and 5.7 of the California Independent System Operator's (CAISO) Tariff. There are a series of wind generation facilities that are currently in the ISO Interconnection Queue for the Tehachapi area (see Section E-4.3.3, above) (CAISO, 2005). Most of these Tehachapi-area wind facilities are currently in the very early planning stage and only very limited information about these potential projects is available at this time. Accordingly, insufficient information currently exists to conduct any meaningful impact analysis for these potential projects. However, the general environmental effects of wind energy projects are known because there are many operating wind energy facilities in California. In addition, the characteristics of the latest generation of wind turbine technology are known, including descriptions of their physical components and operation. Further, environmental impact analysis has been conducted for recent wind energy proposals, including the Pine Tree Wind Project being planned by the Los Angeles Department of Water and Power (LADWP) north of Mojave, California. This information can be used to estimate the environmental effects of future wind energy facilities in the Tehachapi region for the purposes of cumulative impact analysis. Specific information about these future wind energy projects does not affect the CPUC's decision to approve or deny SCE's application to construct and operate Segments 2 and 3 of the Antelope Transmission Project. While Segments 2 and 3 are intended to facilitate the transmission of power generated by unspecified future wind energy projects in the Tehachapi Region, specific information about these projects would not change the nature of the proposed Project or its environmental effects as described in this EIR.

Two wind energy projects have submitted applications for approval to Kern County, in addition to the Pine Tree Wind Project mentioned above. An application was submitted to Kern County for the PdV Wind Energy in 2005. The PdV Wind Energy Project would be located a 6,275-acre site in the south Tehachapi Mountains about 7 miles west of the proposed route for Segment 3. The PdV project would be capable of generating about 300 MWs of power. The PdV project would not be served by Segments 2 and 3. When preparation of this EIR was initiated, the PdV application had not been deemed complete by Kern County and CEQA review of the project had not been initiated. The proposed Aero Wind Project would consist of 42 wind turbines located on a 120-acre site near Tehachapi-Willow Springs Road in unincorporated Kern County. The application for the Aero Wind Project was also not considered complete by Kern County at the time this EIR was in preparation. The Pine Tree Wind Project was approved by LADWP in 2005 and will be located about 12 miles north of Mojave. It will generate 120 MWs of electrical power. The Pine Tree Wind Project will be interconnected to the LADWP transmission system and will not be served by Segments 2 and 3. These projects are listed in Table E-4-3.

### **Antelope Transmission Project**

Wind farm development is concentrated approximately 25 miles north of SCE's Antelope Substation, in the Tehachapi Wind Resource Area. A comprehensive transmission development plan for phased expansion of transmission capability in the Tehachapi area is currently in progress, through a collaborative study effort ordered by the CPUC (Ordering Paragraph No. 4 of Decision 04-06-010). Construction of the Antelope

Transmission Project would provide a portion of the infrastructure necessary to serve growing wind power generation in the Tehachapi area for delivery to southern California customers, and also facilitate construction of other wind generation sites throughout Kern County and northern Los Angeles County (SCE, 2005).

Segment 1 of the Antelope Transmission Project involves the construction of a new 25.6-mile 500-kV transmission line between SCE's existing Antelope and Pardee Substations, located in the City of Lancaster and the City of Santa Clarita, respectively. As described in Table E-1-3, this project includes modifications to Antelope and Pardee Substations and the expansion of Antelope Substation. Segment 1 is a 500-kV single-circuit transmission line within an existing SCE 66-kV transmission line ROW for 22.8 miles and establishes a new 500-kV ROW for 2.8 miles. Segment 1 of the Antelope Transmission Project would initially be energized at 220 kV to serve the existing transmission needs determined by SCE and, as energy demand increases, it would be upgraded to 500 kV.

### **Future Transmission Projects**

The CPUC issued Decision 04-06-10 on the transmission needs in the Antelope Valley and Tehachapi areas, which identified potential power generation in this area to be several thousand megawatts. This decision mandated the convening of a collaborative study group to develop a comprehensive development plan for the phased expansion of transmission capabilities in the Tehachapi area. Subsequently, the Tehachapi Collaborative Study Group (TCSG) was formed with coordination by the CPUC, assistance from the CAISO, and with the participation of the IOUs (such as SCE), wind-power developers, and other stakeholders.

Per the California Independent System Operator (CAISO) Tariff, SCE is obligated to interconnect and integrate power generation facilities into its electric system. SCE developed the first version of its Renewable Conceptual Transmission Plan (RCTP) in accordance with the Scope of Work described by the CPUC in a March 27, 2003, ruling (Proceeding I0011001). The plan describes all SCE conceptual transmission upgrades that are needed to connect potential renewable energy resources in the SCE and Imperial Irrigation District territories. The identified upgrades would allow up to 4,220 MW of renewable resources by 2017.

The proposed Project would complete the Antelope Transmission Project, thereby ensuring that transmission capacity is available to deliver power from future wind energy projects in the region. Implementation of Segments 2 and 3 is necessary to realize the mandate set forth in SB 1078, to achieve 20 percent of electrical power from renewable sources by 2017, and is essential to meet the accelerated goal established in the adopted Energy Action Plan of 20 percent renewables by 2010 (CEC, 2000). Segments 2 and 3 will help fulfill these important State objectives regardless of whether or not the future upgrades of the Tehachapi Transmission Project (TTP) are implemented (see Section A.3.2). Segments 2 and 3 provide the basic transmission infrastructure needed to interconnect wind energy generated in the Tehachapi region into the SCE system by addressing the existing capacity constraints associated with the Antelope-Mesa line (with Segment 2), and by building a transmission line that connects the Tehachapi Wind Resource Area to the SCE grid (with Segment 3). Without these basic transmission upgrades, renewable energy from wind generated in the Tehachapi region would not be available to SCE customers. Future segments of the TTP will provide capacity as needed to deliver additional wind energy that may be developed in the Tehachapi region in the future, but will not accomplish the objectives of Segments 2 and 3.

SCE has identified twelve possible transmission segments (including the proposed Project) for integrating several thousand MWs of potential renewable energy generation from the Tehachapi region. The first of these transmission upgrades includes SCE's Antelope-Pardee 500-kV Transmission Project (Segment 1). The additional segments are outlined in Table E-1-3. Although the development of these future segments is

reasonably foreseeable, it should be understood that they will not come about as a result of the proposed Project, nor will approval of the proposed Project commit the CPUC to proceed with any future transmission upgrades.

### **E.1.4.3 Cumulative Projects List**

In addition to the energy generation and transmission projects discussed in Section E.1.4.2 above, Table E.1-3, at the end of Section E, lists other projects that have been considered in the cumulative impact analysis. These projects consist primarily of land development projects and have been organized by jurisdiction. Figures E.1-1a and E.1-1b, located at the end of Section E, portray the approximate locations of the projects listed in Table E.1-4. The list of cumulative projects was developed in consultation with the following agencies:

- Los Angeles County Regional Planning (Los Angeles County Planning Department , 2006a and b)
- City of Lancaster (City of Lancaster Community Development, 2006)
- City of Palmdale (City of Palmdale Planning Department, 2006a and b)
- City of Tehachapi (City of Tehachapi Community Development, 2006a and b)
- Kern County Planning Department (Kern County Planning Department, 2006)

These agencies were requested to provide information on all projects that are either approved, under construction, or are reasonably foreseeable future projects. Any current or future project identified by one of these five agencies that is expected to occur within approximately five miles of the proposed Project alignment is included in this cumulative scenario and is listed in Table E.1-4. Due to differences in how the proposed Project may affect each individual issue area, however, each issue area defines its own geographic scope, using the cumulative projects listed in Table E.1-4 as needed. In addition, there are current or future transmission and wind energy projects that are notable to this cumulative scenario, some of which were discussed earlier in Section E.1.4.2. A complete list of these additional projects is found in Table E.1-3, at the end of the section.

### **E.1.4.4 Forecast Population Growth**

In addition to the list of cumulative projects presented in Tables E.1-3 and E.1-4 at the end of Section E, general growth trends forecasted by the Southern California Association of Governments (SCAG) and Kern County Council of Governments (COG) were utilized to characterize anticipated population and employment growth in northern Los Angeles County and Kern County. This information provides a general understanding of the types of physical changes expected in the area and the potential for impacts that could combine with the impacts of the proposed Project. As a regional planning agency, SCAG forecasts growth projections up to 25 years into the future and Kern County COG forecasts growth projections up to 50 years by incorporating recently available information from international, federal, and State statistical agencies, along with subregions and local jurisdictions (SCAG, 2004a; COG, 2006). In providing growth projections for Los Angeles County, SCAG has divided the county into eight subregions. The proposed Project would be located entirely within the North Los Angeles County Subregion. The North Los Angeles County Subregion includes the Cities of Lancaster, Palmdale, and Santa Clarita, and the unincorporated Los Angeles County areas north of the City of Los Angeles. In providing growth projections for Kern County, COG prepares projections for Kern County as a whole.

Table E4-1 displays the forecasted growth for the North Los Angeles County Subregion of SCAG and Kern County as a whole. From the year 2000 through 2010, both the SCAG North Los Angeles County subregion and Kern County are projected to experience substantial population growth, with a 43.5 percent increase in population in the SCAG North Los Angeles County Subregion and a 21.7 percent increase in Kern County. It is anticipated that both areas will continue to be characterized by rapid growth through the year 2030, as shown in Table E-4-1.

Year	SCAG North Los Angeles County Subregion		Kern County	
	Area Population	Area Employment	Area Population	Area Employment
2000	512,391	178,899	664,694	N/A
2010	735,262	215,955	808,808	N/A
2020	967,387	253,417	950,112	N/A
2030	1,179,228	286,286	1,114,878	N/A
Change from 2000-2010	222,871 (43.5%)	37,056 (20.7%)	144,114 (21.7%)	-
Change from 2010-2020	232,125 (31.6%)	37,462 (17.3%)	141,304 (17.5%)	-
Change from 2020 - 2030	211,841 (21.9%)	32,869 (13.0%)	164,766 (17.3%)	-

N/A: Data is unavailable  
 Sources: SCAG, 2004a; SCAG, 2004b; COG 2006.

The increase in regional growth in the North Los Angeles County Subregion and Kern County may indirectly contribute to potential cumulative impacts in the proposed Project area. An increase in population growth directly affects the demand for jobs and housing, which may increase the number of planned development and improvement projects, such as public service facilities or transportation system expansions, in both the North Los Angeles County Subregion and Kern County.

## **E.4-5 Cumulative Impact Analysis by Issue Area**

For each issue area discussed in Section C, the appropriate geographic boundaries for cumulative analysis were first defined. Then, existing conditions within the geographic analysis area were identified in order to characterize the cumulative baseline condition. It was then determined which impacts of the proposed Project could potentially be “cumulatively considerable” or might be able to combine with similar impacts of other identified projects in a substantial way. For impacts that are cumulatively considerable, a discussion is provided describing the significance of the combined effects of the proposed Project and other projects. When applicable, mitigation measures are described to reduce significant cumulative effects.

### **E.4-5.1 Air Quality**

#### **Geographic Extent**

For Air Quality, the potential geographic extent of the cumulative impact area covers one air basin and two counties/jurisdictions. Cumulative impacts could extend over the entire project route. However, the identification of cumulative projects for air quality generally typically ranges from within one mile of a proposed project to as far as six miles or more from a proposed project.<sup>1</sup> The effect of downwind dispersion eliminates the potential for project level significant cumulative air quality impacts over areas larger than a few miles.

<sup>1</sup> Many local air quality jurisdictions provide no guidance regarding the distance for the selection of cumulative projects, as is the case with the AVAQMD and KCAPCD CEQA guidance documents. However, other jurisdictions and agencies use specific radius for specific analysis. The SCAQMD has approved CEQA analyses that have used a one-mile radius for cumulative project identification, while the California Energy Commission uses a six mile radius for operating emissions cumulative impact evaluation for power plants.

Since the proposed Project has very minor operating emissions, as discussed in Section C.2.4.2.2, the cumulative impact discussion is focused on construction impacts. Construction impacts are localized and of short duration. The potential for cumulative impacts during construction is limited since the active construction sites are constantly moving along the transmission line route and will not be near other cumulative projects for a long period of time. Additionally, while the proposed Project's construction emissions are significant on the whole due to the numerous concurrently active construction sites and extensive paved and unpaved traffic, the construction emissions at any one construction site at any one time would not be significant. The impacts from each of the proposed Project's construction sites would be reduced significantly with distance. Therefore, only projects within one mile of the project route, as well as projects that could impact traffic during project construction, are considered projects that could cause cumulative impacts. Additionally, only projects that are scheduled concurrently in the same area as the proposed Project are considered as projects that could contribute to cumulative impacts, since significant air quality cumulative impacts can only occur from emission sources that are active at the same time.

### Existing Cumulative Conditions

Past development and population growth within the cities of Palmdale and Lancaster and in adjacent unincorporated areas have increased the possibility that new projects would contribute to increased air emissions within the MDAB. The MDAB in the area of the proposed Project route is nonattainment for the State 1-hour and federal 8-hour ozone standards and the State 24-hour PM10 standard. The proposed Project area is designated as attainment/unclassified for the federal and State PM2.5, carbon monoxide, nitrogen dioxide, and sulfur dioxide ambient air quality standards. Long-term trends in reduced emissions of ozone precursors, specifically NO<sub>x</sub> and VOCs, have led to reduced ozone formation in the proposed Project area; however, the area continues to exceed the State 1-hour and federal 8-hour ozone standards. Additionally, while there is an overall gradual downward trend for PM10 concentrations, there has been little or no progress since 1993. As such, any increase in emissions of ozone precursors and particulate matter (and particulate matter precursors) would cause an adverse Air Quality impact.

### Cumulative Impact Analysis

Since the proposed Project would have very minor operating emissions, the cumulative impact analysis focuses on construction impacts, which are localized and of short duration. Therefore, only projects within one mile of the project route, as well as projects that could impact traffic during construction of the proposed Project are considered for analysis of cumulative impacts. Additionally, only new projects with construction or operating emissions that would occur at the same time as the proposed Project's construction are considered as part of this cumulative impact analysis since cumulative air quality impacts can only occur with emission sources that are active at the same time. Existing emission sources are considered part of the existing ambient background cumulative condition. The cumulative project lists that include projects that may be within one mile of the project route are provided in Tables E-1-3 and E-1-4 and Figures E.1-1a and E.1-1b. Although a large number of projects within one mile of the proposed Project route are listed in Tables E-1-3 and E-1-4 and shown in Figures E.1-1a and E.1-1b, the construction schedules of many of these projects are uncertain, making it possible that construction of many of these projects would not occur coincident with and within one mile of the construction of the proposed Project. Should construction activities from related projects within one mile of the proposed transmission route occur concurrent with construction of the proposed Project, cumulative Air Quality impacts could occur.

- **Construction emissions would exceed the AVAQMD regional emission thresholds (Impact A-1).** Construction activities associated with the proposed Project and all Project Options would result in air emissions that exceed the

AVAQMD regional emission thresholds. For cumulative assessment purposes the potential existence of nearby concurrent cumulative projects would only add to these significant emission totals. The cumulative project list (Tables E-1-3 and E-1-4 and Figures E.1-1a and E.1-1b) show approximately five dozen projects within one mile of the proposed Project route, or Project Option routes within AVAQMD jurisdiction. Most of these projects are in the Anaverde, Ritter Ranch, and northeast corner of Palmdale (approximately thirty projects combined); and the southern Lancaster Area (thirteen projects). While not all of these projects would occur at the same time as the proposed Project it can be assumed that one or more other projects will be in construction or will start operations and cause emissions that are cumulatively significant with those of the proposed Projects construction. The proposed Project is recommended to have extensive fugitive dust and construction equipment tailpipe emissions mitigation (Mitigation Measures A-1a through A -1i) and the other cumulative projects will also be mitigated to various degrees. However, the proposed Project along with these cumulative projects would have mitigated emissions well above the AVAQMD daily regional emission significance thresholds. Therefore, the combined effect of the daily construction emissions from the proposed Project and other projects construction and/or operating emissions would be cumulatively significant and unavoidable (**Class I**) at various times during construction.

- **Construction emissions would exceed the KCAPCD regional emission thresholds (Impact A-2).** Construction activities associated with the proposed Project and Project Options would result in air emissions, after mitigation, that are below the KCAPCD regional emission thresholds; however, the proposed Project emissions are 90 percent of the PM10 significance criteria and 70 percent of the NO<sub>x</sub> significance criteria. Therefore, any relatively large cumulative project could cause cumulatively significant emissions of PM10 and NO<sub>x</sub>. The cumulative project list (Tables E-1-3 and E-1-4 and Figures E.1-1a and E.1-1b) shows only one tentative cumulative project within one mile of the proposed Project route within KCAPCD jurisdiction. This one tentative cumulative project is a fairly large residential development that could have reasonably high annual construction emissions; however, this tentative project is not yet approved and should not overlap with the construction period of the proposed project. Therefore, there do not appear to be any cumulative projects within one mile of the project that would have concurrent emissions, so cumulative emissions would not exceed the KCAPCD regional significance criteria and would not be cumulatively significant during construction, after mitigation (**Class II**).
- **Construction of the proposed Project would expose sensitive receptors to substantial pollutant concentrations (Impact A-3).** Construction activities associated with the Project would expose sensitive receptors in the populated areas along the construction route. For the emissions of any two projects to have the potential for substantial cumulative downwind pollutant concentrations impacts to any single sensitive receptor they must be in very close proximity to limit the downwind dispersion from one site to the other and generally one of the projects must be able to cause a significant impact on it own (conservation of mass principles dictate that two exhaust plumes of stable criteria pollutants do not add concentration, they mix concentration with the plume of highest concentration being diluted by the plume with the lower concentration). This would not be true for air toxic pollutants that may have synergistic effects; however, the air toxic emissions impacts from the project would be very low at any one location and would not be of a magnitude to significantly contribute to cumulative impacts. The vast majority of the cumulative projects listed in Tables E-1-3 and E-1-4 and shown in Figures E.1-1a and E.1-1b are not within a few hundred feet of the proposed Project and Options A and B, and these cumulative projects would generally be similar in nature in terms of the type and magnitude of pollutant impacts (primarily small construction projects). Therefore, it can be assumed that the potential for cumulative impacts to sensitive receptors is the same as the project impacts to sensitive receptors, cumulative impacts to sensitive receptors would be less than significant after mitigation (**Class II**).
- **The Project would create objectionable odors (Impact A-4).** Construction equipment and operations, such as asphalt paving, may create temporary and mildly objectionable odors. Since most of the proposed route is located in unpopulated, agricultural, and low density residential areas, odors would not affect a substantial number of people. To have the potential to combine with odors from the Project and Options A and B, odor-generating activities from other current and proposed projects would have to occur concurrently, occur in very close proximity with the odor-generating activities of the Project, and result in a cumulatively worse odor condition. Given the temporary nature and relative mildness of the Project's construction odors, odor impacts related to the proposed Project would be adverse but not cumulatively significant (**Class III**).

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

There are no additional feasible mitigation measures that could be imposed on the proposed Project to further reduce its contribution to cumulative air quality effects. All feasible construction emission mitigation measures have been recommended to mitigate Impact A-1 to the extent feasible and mitigate Impact A-2 to less than significant.

### **E.4-5.2 Biological Resources**

#### **Geographic Scope**

The geographic scope of the analysis of biological resources impacts discussed in Section C.3 includes a one-half mile (0.8 km) buffer zone on either side of the proposed and alternative transmission line routes (Figure 2). However, for purposes of the cumulative impacts analysis, the geographic scope includes the Project impact footprint combined with the impact areas of past, present, or reasonably foreseeable future projects within the general vicinity of the Project Area.

#### **Existing Cumulative Conditions**

The project area transects portions of the City of Palmdale, the City of Lancaster, the Antelope Valley, and the Tehachapi Mountains (see Section C.3.1). The proposed Project extends from the Vincent Substation south of Highway 14 in Los Angeles County, California, to north of Highway 58 in Kern County, California (Figure 1). As described in Section C.3.1, three blue-line creeks appear on USGS quadrangles within the study area including Amargosa Creek in the south, Oak Creek in the north, and an unnamed creek north of Oak Creek. USGS National Wetland Inventory (NWI) maps depict numerous, small polygons (0.3 to 1.0 acres [0.1 to 0.3 ha] in size) primarily described as palustrine, unconsolidated shore, temporarily flooded, and excavated. Several freshwater emergent or forested wetlands less than one acre in size occur within the northern portions of the proposed Project area.

Historically, much of the Project area was cultivated with alfalfa and small grain crops before groundwater withdrawals were restricted in the 1950s due to a reduction in aquifer levels. However, extensive areas of undisturbed saltbush scrub and Joshua tree woodland habitats occur in areas where high soil salinity/alkalinity renders the land unsuitable for agriculture. Surface flows from the mountainous watersheds to the west and south move overland towards Rosamond Lake as sheet flow, or within natural or artificial channels.

The rapid population growth of Lancaster and Palmdale in the Antelope Valley has resulted in the continued loss of open space and the degradation of riparian and natural areas that historically supported populations of unique or rare species. Sensitive riparian, desert wash, and Joshua tree woodland habitats are gradually being displaced by development, wildlife movement corridors have been modified to the extent that the movement of wildlife is curtailed or limited, and expanding population centers are degrading the habitat values where urban and wilderness areas interface.

Furthermore, future growth and development in the analysis area may accelerate these impacts. The Lancaster General Plan (1997) projected that population levels within the City limits will increase by 205 percent between 1990 and 2020. While recent estimates are more conservative, population levels and the number of households in Lancaster are expected to increase by 117.5 percent and 112.9 percent respectively between 2000 and 2030 (SCAG RTP, 2004). Residential and non-residential development has been necessary to accommodate the increase in population. Many of these developments have occurred directly within or

adjacent to sensitive riparian areas, desert washes, Joshua tree woodland, or within habitats suitable for special-status species.

The growth and expansion in the Antelope Valley is also representative of reasonably foreseeable future projects, as supported by the aggressive population growth forecast in the region. Furthermore, the impacts to biological resources resulting from the loss or degradation of habitat from past and ongoing projects can be expected to continue and increase in the future.

### Cumulative Impact Analysis

The potential for biological impacts of the proposed Project (described in Sections C.3.5 through C.3.1) to combine with the effects of other projects within the geographic scope of the cumulative analysis are described below.

- **Effects on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS (Criterion BIO1).** The proposed project will result in the loss of desert wash habitat (Impact B-30). Periodic natural run-off from the Tehachapi and Sierra Pelona Mountains has created various natural washes and channels in the Antelope Valley as the waterways make their way down to the valley floor. As these natural desert washes, including portions of Amargosa Creek and Oak Creek, are converted from earthen channels to concrete-lined facilities, reaches are placed within culverts, or surface flows are diverted by paved road construction, their natural absorption capabilities are reduced, floodwaters are redirected, and important desert wash resources may be impacted. As mentioned above, one of the single largest negative effects of road construction and diversion of flows into culverts is the surface interruption of these flows into sink scrub habitats that support numerous special-status plants. These activities effectively dewater those downstream habitats, thus indirectly degrading or destroying habitat for special-status plants and wildlife. Planned improvements in the Amargosa Creek area associated with new development include the construction of a detention basin at the mouth of the creek and the construction of 12.5 miles (20 km) of earthen channels, 1.5 miles (2.4 km) of concrete channels, and 10 miles (16.1 km) of storm drains (City of Lancaster 1997). Furthermore, ongoing land development in the Leona Valley including the Ritter Ranch residential development would also likely result in adverse impacts to biological resources including the potential loss of annual grasslands and riparian communities. The loss of habitats including coastal sage scrub, chaparral, and riparian areas can be reasonably foreseen as ongoing development continues in the region.

Joshua tree woodland habitat occurs on approximately 28,826 acres (11,665 ha) according to the West Mojave HCP (2003). The CDFG considers Joshua tree woodland to be a sensitive habitat (CNDDDB) because of its scarcity and its support of a number of State and federally listed endangered, threatened, and rare species. Joshua trees are slow growing and sensitive to disturbance and as such, are a member of stable, climax plant communities. Seedlings are uncommon on many harsh sites and even under laboratory conditions only 24 percent of the seeds produce viable seedlings (USFS, 2006). Although Joshua trees can also reproduce asexually (sprouting), increasing development in the Antelope Valley, along with the limited regeneration of new plants and the very slow growth of the species, has had a cumulative negative effect on Joshua tree woodland habitat.

Therefore, the impacts to biological resources associated with Criterion BIO1, when combined with impacts from past, present, or reasonable future projects, as discussed in Section C.3.9.2, would be considered cumulatively significant and unavoidable (**Class I**).

- **Effects on Species Listed as Endangered, Threatened, or Proposed or Critical Habitat for These Species (Criterion BIO2).** The proposed project could result in the take of California red-legged frogs (Impact B-5) and the take of desert tortoises (Impact B-6). The project also may result in the potential take of, and habitat loss for, Mohave ground squirrel (Impact B-10). Project construction could also result in the disturbance of nesting Swainson's hawks (Impact B-7), the loss of foraging habitat for Swainson's hawks (Impact B-8), and the disturbance of nesting riparian birds (Impact B-9). Implementation of the mitigation measures described in Section C.3.8 (Mitigation Measures B-7a, B-7b, B-9a, and B-9b) would reduce direct and cumulative impacts to nesting Swainson's hawks and riparian birds to less-than-significant levels (**Class II**).

The cumulative projects discussed in Section C.3.9.2 include large community developments, which may be situated in areas providing habitat relevant to the potential impacts associated with Criterion BIO2. For example,



the Ritter Ranch development would occur in or adjacent to habitat that may support populations of California red-legged frogs. Continued degradation of native plant communities and riparian habitat in the Antelope and Leona Valleys from ongoing development will continue to contribute to the decline of listed species or their habitat throughout the region. The increased construction related to the proposed Project, including grading of spur roads, development of substations, and installation, on-going maintenance, and operation of transmission line may further increase the potential for impacts to listed species. Therefore, the impacts to biological resources associated with Criterion BIO2, as described above, have the potential to combine with similar impacts of other projects and would be considered cumulatively significant and unavoidable (**Class I**).

- **Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, or USFWS (Criterion BIO3).** The cumulative projects discussed in Section C.3.9.2 include large community and industrial developments. Some of these cumulative projects may be situated in areas that provide habitat relevant to the potential impacts associated with Criterion BIO3. The proposed Project and alternatives to the proposed Project have the potential to result in mortality and/or disturbance to Mariposa lily populations (Impact B-11), loss of and/or disturbance to Short-joint beavertail (Impact B-12), loss of montane scrub/juniper woodland habitats and habitat for special-status plants (Impact B-13), San Emigdio blue butterfly mortality from construction disturbance (Impact B-14), mortality of, and loss of habitat for, coast horned lizards and silvery legless lizards (Impact B-15), southwestern pond turtle and two-striped garter snake mortality (Impact B-16), loss of nesting and foraging habitat for Loggerhead Shrikes, Bendire's Thrashers, and LeConte's Thrashers (Impact B-17), disturbance to wintering Mountain Plover (Impact B-18), loss of occupied Burrowing Owl habitat (Impact B-19), disturbance of nesting raptors (Impact B-20), electrocution of state and/or federally protected birds (Impact B-21), mortality of state and/or federally protected bird species from collisions with project improvements (Impact B-22), mortality of, and loss of habitat for, Tehachapi pocket mouse, southern grasshopper mouse, and Tulare grasshopper mouse (Impact B-23), loss of habitat for ringtail (Impact B-24), mortality of special-status bat species due to electrocution and/or transmission line strikes (Impact B-25), loss of habitat for American badgers (Impact B-26).

As described under Criterion BIO2, above, construction of new housing and infrastructure projects will result in further loss to wild lands and riparian areas that support sensitive plants or animals. Large-scale housing projects can also contribute to the fragmentation of habitat and the loss of genetic variability between populations by severing linkages and movement corridors. The continued encroachment of residential communities on undisturbed open space also reduces the buffers that may minimize impacts to important edge communities and transition zones. The impacts to biological resources associated with Criterion BIO3 have the potential to combine with similar impacts of other projects and are therefore cumulatively significant and unavoidable (**Class I**). Potential cumulative impacts to Mariposa lily populations could be reduced to less-than-significant levels (**Class II**) through the implementation of mitigation measures that required avoidance of impacts to saltbush scrub or the 1:1 preservation of saltbush scrub habitat.

- **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (Criterion BIO4).** The Antelope Valley is an internally drained basin with no connection to navigable waters. Therefore, the USACE has chosen to disclaim all drainages and wetland areas within the basin (Pers comm. A. Allen, USACE, Los Angeles District, March 26, 2003). Therefore, no habitats subject to the regulatory jurisdiction of the USACE occur on the project site. Subsequently, the proposed Project would not be expected to combine with similar impacts of other projects in the geographic extent of this project. No impact would occur.
- **Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Criterion BIO5).** Ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, tower removal, and use or improvement of existing access roads will not substantially interfere with the movement of native resident or migratory wildlife species, their corridors, or impede nursery sites. Desert tortoise movement could be impeded through habitat modification associated with the proposed project such as road grading and the creation of berms (Impact B-27). However, habitat modification will be localized to relatively small footprints, and alternative movement corridors will remain intact for desert tortoise that may occur in the Project area. Furthermore, SCE would implement APM BIO-1 (Pre-construction Surveys) and BIO-

5 (Conduct Biological Monitoring), as part of the proposed project, and to reduce minimal impacts to this species Mitigation Measures B-27a and B-27b would be implemented. The proposed Project or alternatives would not result in impacts to Criterion BIO 4 resources, potential impact are not expected to combine with impacts from other projects in the region. Cumulative impacts are therefore not expected to occur.

- **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances (Criterion BIO6).** The proposed Project would not conflict with local policies or ordinances protecting biological resources. The Project mitigation measures are consistent with the General Plan policies and local ordinances protecting biological resources for the cities and counties within the Project area. Cumulative impacts would therefore not occur.
- **Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP (Criterion BIO7).** The proposed project is not expected to conflict with the West Mohave Plan (WMP). The habitat conservation plan has not been completed for the proposed Project area (BLM, 2006). Therefore, there is not an adopted HCP or NCCP within the Project area, and cumulative impacts would not occur.

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

Mitigation measures for the proposed Project addressing impacts to biological resources are presented in Section C.3. These mitigation measures would be implemented during construction and operation of the proposed Project in order to avoid or reduce impacts of the proposed Project. However, based on the continued expansion of residential housing and community developments, the proposed Project's impacts on biological resources would combine with similar impacts of these other projects and result in unavoidable significant impacts to biological resources. With the exception of Criterion BIO-3, no additional feasible mitigation measures beyond those identified in this EIR are available to reduce the Project's contribution to significant cumulative impacts and would also minimize any cumulative effects of these potential impacts. Potential cumulative impacts to populations of Mariposa lily could be reduced to less-than-significant levels through the implementation of mitigation measures that required avoidance of impacts to saltbush scrub or the 1:1 preservation of saltbush scrub habitat.

### ~~E.4~~5.3 Cultural Resources

#### Geographic Extent

The geographic extent for the analysis of cumulative impacts related to Cultural Resources is defined generally as a 10-mile-wide corridor with the proposed Project route at the center. The 10-mile-wide corridor is the area for which information about proposed projects in the Project vicinity has been compiled (Tables ~~E.4~~-3 and ~~E.4~~-4). It is likely that cultural resources similar to those in the Project's 230-foot-wide Area of Potential Effect (see Section C.4) are present in this area. The Project corridor passes through developed and soon to be developed areas in the Cities of Palmdale and Lancaster, and portions of unincorporated Los Angeles and Kern Counties.

#### Existing Cumulative Conditions

Cultural resources, including archaeological sites and historical structures, are impacted by ground disturbing activities associated with development. Current air photos show that development has modified much of the land in the eastern part of the 10-mile-wide corridor in the City of Palmdale. Cultural resources, such as prehistoric and historic archaeological sites and historic structures, that were located within this developed area, as indicated by the records search results for the proposed Project (which provided information about the distribution of cultural resources within a portion of 10-mile-wide corridor), have been significantly impacted (likely destroyed). Grading and other ground disturbing activities associated with residential and commercial

development destroy archaeological sites, which are usually on the surface and within three feet below surface. The rest of the corridor passes through undeveloped land where cultural resources are likely extant.

### Cumulative Impact Analysis

The list of approved and pending development projects within the 10-mile-wide corridor (Tables E-1-3 and E-1-4) indicates that in Lancaster, development will move westward from its present location on the eastern edge of the 10-mile corridor to near the proposed Project route. Grading and other ground disturbing activities that will affect most of the Ritter Ranch and Anaverde development areas would destroy cultural resources throughout the western part of the 10-mile wide corridor in Palmdale. Given the current rate of spread of development out from Palmdale and Lancaster, The rest of the corridor in unincorporated Los Angeles and Kern Counties will likely remain undeveloped over the next 10 years. Although the total number of cultural resources (NRHP-eligible and CEQA Historical Resources) that have been, and will be, impacted as a result of development in all of these areas is unknown, an order of magnitude estimate, based on the records search results for the proposed Project (which provided information about the distribution of cultural resources within a portion of 10-mile-wide corridor), would be 50 to 100 cultural resources. The proposed Project would create cumulative impacts to cultural resources as described below for the following significance criteria:

- **Effects on cultural resources which are “historical resources” as defined in section 15064.5(a) of the CEQA Guidelines would be significant if the impacts would demolish, destroy, relocate, or alter the resource or its immediate surroundings such that the significance of the resource would be materially impaired (Criterion CR1).** Impacts to CEQA Historical Resources are significant without mitigation. The combined impacts from existing and proposed development in the cumulative impact study area and the impacts on cultural resources from the proposed Project would be significant (**Class I**). Cultural Resources Mitigation Measures C-1 through C-32 for proposed Project impacts (Impacts C-1 through C-32), consisting of avoidance, historical documentation, or archaeological data recovery, would reduce impacts to less than significant levels. If the other development projects in the 10-mile-wide corridor also implement these mitigation measures as required by CEQA and CEQA regulations [CCR Title 14, Section 15126.4(b)], cumulative impacts on cultural resources would be reduced to less than significant levels.

Although 31 cultural resources were identified along the proposed Project and Options A and B routes that could be impacted by the Project (Impact C-32 assesses impacts to “undiscovered cultural resources”), it is probable that many of these would be determined to be ineligible (not significant). Of the eligible resources, it is likely that most of these would be avoided by Project-related construction. Fourteen of the resources are in the Substation One area. Thus, the number of cultural resources where there would be a significant impact as a result of Project activities would be very low, probably less than eight. Because there would likely be less than eight cultural resources significantly impacted by the proposed Project and 50 to 100 cultural resources impacted by other cumulative projects in the vicinity, the Project’s contribution to the magnitude of the cumulative effect on cultural resources would be less than significant (**Class III**).

### Mitigation to Reduce the Project’s Contribution to Significant Cumulative Effects

The cultural resources mitigation measures proposed for the Project (Mitigation Measure C-1 to C-32) will reduce the proposed Project’s contribution to significant cumulative effects.

### E.4-5.4 Geology, Soils, and Paleontology

#### Geographic Extent

The geographic extent for considering cumulative impacts to geology, soils, and paleontology is limited to the immediate vicinity of the ROW which is occupied by the proposed Project alignment. The “immediate vicinity” includes the area physically within the ROW, as well as any area outside the ROW which is occupied during construction or operation of the Project for project-related uses. For instance, staging areas,

marshalling yards, and spur roads that would be established and utilized for the purposes of the proposed Project are included in the cumulative analysis area. This geographic extent is appropriate for the issue area of geology, soils, and paleontology because any potential impacts of the proposed Project would be site-specific.

### Existing Cumulative Conditions

Past and ongoing development throughout the proposed Project area has resulted in substantial alterations to the natural landscape. The ongoing growth of communities such as Lancaster, Palmdale, and Tehachapi, as well as unincorporated areas of Los Angeles and Kern Counties, continues to transition agricultural and open space land uses to residential land uses. Past, existing, and future projects could contribute to the cumulative effects of geology, soils, and paleontology by creating any of the following conditions:

- Loss or restriction of access to known mineral, energy, and/or paleontological resources
- Triggering or acceleration of erosion or slope failures
- Groundshaking, earthquake-induced ground failure, and fault rupture

These conditions would be limited to the areas within and adjacent to the boundaries of individual projects. In order to be cumulatively considerable, such conditions would have to occur at the same time and in the same location as the same or similar conditions of the proposed Project. Seismic impacts (groundshaking, earthquake-induced ground failure, and fault rupture) from the numerous local and regional faults comprise an impact of the geologic environment on individual projects and would not introduce cumulatively considerable impacts. Existing geologic and paleontologic conditions are described in Section C.5.1.

### Cumulative Impact Analysis

Impacts to geology, soils, and paleontology that are associated with other current and proposed projects would have the potential to combine with similar impacts of the proposed Project if such impacts occur in the same location at the same time. Below is a discussion of potential impacts of the proposed Project that may be cumulatively considerable and/or cumulatively significant.

- **Excavation and grading during construction activities could cause slope instability. (Impact G-1)** As discussed in Section C.5, many of the hills and slopes crossed by Segment 2 are underlain by landslide-prone Pelona Schist, and several areas of the Segment 2 alignment cross mapped landslides, between Mile S2-8.0 and Mile S2-14.0. It is also possible that the proposed Project route may cross unmapped landslide areas. It is not expected that excavation and grading activities for other projects would occur along the proposed route at the same time as Project-related excavation and grading would occur. Due to the landslide-prone characteristics of soils in the Project area, slope instability could potentially be caused if excavation or grading for another project occurs very nearby (in distance and time) to similar activities for the proposed Project. Such a cumulative project may include the construction of a hillside roadway, for instance in association with expanding residential developments. However, this impact for the proposed Project would be mitigated to a less-than-significant level, thereby minimizing the potential to be cumulatively considerable. Because excavation and grading for multiple projects would not occur in the exact same location at the exact same time, Impact G-1 would not be cumulatively significant (**Class III**).
- **Erosion could be triggered or accelerated by construction or disturbance of landforms. (Impact G-2)** Portions of Segment 3 and most of Segment 2 are underlain by soils classified as having moderate to severe hazard of erosion on roads and trails. Construction of the proposed Project and other cumulative projects could trigger or accelerate soil erosion through land disturbance activities. These impacts of the proposed Project would be minimized through compliance with a Construction SWPPP and additional Project mitigation. In accordance with Section 402 of the Clean Water Act, a Construction SWPPP is required for all construction projects that disturb one or more acre of ground surface. Therefore, it is reasonably assumed that any project which could potentially introduce similar erosion events or erosion potential as the proposed Project would minimize such impacts through compliance with a Construction SWPPP. In addition, it is not expected that other projects would be constructed in

the same place and at the same time as the proposed Project. Impact G-2 would not be cumulatively significant (Class III).

- **Transmission line could be damaged by surface fault ruptures at crossings of active faults. (Impact G-3)** It is not expected that impacts of any other project could combine with potential impacts of the proposed Project in a way that would increase the potential for Project transmission lines to be damaged by surface fault ruptures. This impact would not be cumulatively considerable.
- **Project structures could be damaged by landslides, liquefaction, settlement, lateral spreading, and/or surface cracking resulting from seismic events. (Impact G-4)** It is not expected that impacts of any other project could combine with potential impacts of the proposed Project in a way that would increase the potential for Project structures to be damaged by landslides, liquefaction, settlement, lateral spreading, and/or surface cracking resulting from seismic events. This impact would not be cumulatively considerable.
- **Project structures could be damaged by strong groundshaking. (Impact G-5)** It is not expected that impacts of any other project could combine with potential impacts of the proposed Project in a way that would increase the potential for Project structures to be damaged by strong groundshaking. This impact would not be cumulatively considerable.
- **Buried tower and substation foundations could be damaged by corrosive soils. (Impact G-6)** It is not expected that impacts of any other project could combine with potential impacts of the proposed Project in a way that would increase the potential for buried Project tower and substation foundations to be damaged by corrosive soils. This impact would not be cumulatively considerable.
- **Transmission line structures could be damaged by landslides, earth flows, or debris slides. (Impact G-7)** It is not expected that impacts of any other project could combine with potential impacts of the proposed Project in a way that would increase the potential for Project transmission line structures to be damaged by landslides, earthflows, or debris slides. This impact would not be cumulatively considerable.

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

Mitigation measures for the proposed Project's impacts related to geology, soils, and paleontology are discussed in detail in Section C.5. These mitigation measures would be implemented during construction and operation of the proposed Project in order to minimize the associated impacts and would also minimize any cumulative effects of these potential impacts. Additionally, other potentially cumulative actions in the Project area would need to comply with CEQA requirements, which would reduce or mitigate their effects on the geologic and paleontologic environment. No additional mitigation measures are recommended.

#### **E.4-5.5 Hazards and Hazardous Materials**

##### **Geographic Extent**

The geographic extent for the analysis of cumulative impacts related to hazards and hazardous materials, including environmental contamination, is limited to the immediate vicinity surrounding the transmission line ROWs occupied by the proposed Project alignment. This is because any potential release of hazardous materials associated with Project activities would be site-specific to the location of the actual release. In the case where a release of hazardous materials could spread to other locations, such as with a release to the air or to a water body, compliance with the appropriate federal, State, and local regulations discussed in Section C.6.2 would address the entire affected area. Thus, while the geographic extent of this cumulative impact analysis is limited to the proposed Project route and facilities, this area would be extended as necessary in the event a release of hazardous materials.

##### **Existing Cumulative Conditions**

The area along the route of the proposed Project alignment consists primarily of undeveloped and open space land, scattered rural residences, and new residential developments. No known contamination exists along the

proposed Project alignment. Based on this mix of non-hazardous land uses along the Project alignment, there is little likelihood of significant existing unknown soil or groundwater contamination. There is a possibility that environmental contamination may exist at properties nearby but not within the geographic extent of this cumulative analysis. However, distance and separation of these sites from the Project alignment generally preclude contamination at these sites from directly affecting the proposed Project. In addition, SCE would conduct a Phase I ESA for each area along the proposed route where ground-disturbing activities would occur, in order to verify the presence of any unknown hazardous materials. Any clean-up of unexpected contaminated soil or groundwater encountered during a Phase I ESA, which would be conducted prior to construction activities, would be a beneficial impact. Prior to the completion of Phase I ESAs, it is understood that there are no known environmental contamination or hazardous release sites within the cumulative analysis area, consisting of the proposed Project ROW and substation sites. Any potential hazardous materials impacts caused by the proposed Project would be cumulatively considerable if they occur at the same time as hazardous materials impacts of other projects in the near vicinity.

### Cumulative Impact Analysis

With regard to environmental contamination issues, impacts resulting from the proposed Project would only be considered cumulatively significant if concurrent construction of the proposed Project and other local projects results in significant volumes of contaminated soil that require off-site treatment and that, as a combined volume, exceeds the capacity of available treatment facilities. Based on the largely rural character of the Project alignment, no significant quantities of contaminated soil are expected to be encountered during construction of the proposed Project. During construction, should activities from projects discussed in Section E-1.4 (Cumulative Impact Analysis) occur at the same time as construction of the proposed Project, and also in close proximity to the proposed Project, the following cumulative hazardous materials impacts could occur.

- **The release of hazardous materials occurs during construction activities (Impact HAZ-1).** The accidental release of hazardous materials could occur during Project-related construction activities. The proposed Project would include implementation of four mitigation measures to reduce Impact HAZ-1 to a less-than-significant level: Mitigation Measures HAZ-1a (Implement an Environmental Training and Monitoring Program), HAZ-1b (Implement a Hazardous Substance Control and Emergency Response Plan), HAZ-1c (Ensure Proper Disposal of Construction Waste), and HAZ-1d (Emergency Spill Supplies and Equipment for Construction). This impact is not expected to combine with similar impacts of other projects. Cumulatively, this impact would be less than significant. **(Class III)**
- **The release of hazardous materials occurs during operation and maintenance activities (Impact HAZ-2).** The impact of the potential accidental release of hazardous materials associated with transmission line and infrastructure maintenance is not likely to combine with comparable cumulative events. Impact HAZ-2 would be cumulatively less than significant. **(Class III)**

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

Mitigation measures for the Project's impacts to hazards and hazardous materials are summarized in Section C.6.4.2.1 (Impact and Mitigation Summary). These mitigation measures would be implemented during construction and operation of the Project in order to minimize the associated impacts and would also minimize any cumulative effects of these impacts. Additionally, other potentially cumulative projects in the Project area would need to comply with CEQA and other government requirements related to environmental contamination and hazardous materials use and storage, which would reduce or mitigate their effects on the environment.

## E.4-5.6 Hydrology and Water Quality

### Geographic Extent

As discussed in Section C.7.1.1 (Surface Hydrology), the State of California uses a hierarchical naming and numbering convention to define watershed boundaries on multiple levels and to facilitate interagency planning efforts. The geographic scope of cumulative effects for hydrology and water quality includes the area encompassed by the combined boundaries of the Hydrologic Sub-Areas (HSAs), which are traversed by the proposed Project. As described in Table C.7-1 (State of California Watershed Hierarchy Naming Convention), HSAs are defined as a major segment of a Hydrologic Area (HA) with similar, significant geographical characteristics or hydrological homogeneity. As with sub-watersheds, HSAs are typically similar in geology and hydrology. HSA boundaries are appropriate to represent the geographic extent of this cumulative effects analysis because their combined area includes all major hydrologic features that would be directly affected by the proposed Project or Options A and B.

The seven applicable HSAs are listed in Table C.7-2 and summarized below in Table E-4-2. See Figure C.7-4. The HA, HU, and HR watershed levels associated with these HSAs are listed in Table C.7-2.

HSA	Area (acres)	Average Annual Rainfall (inches)	Percentage of cumulative area	Percentage of cumulative rainfall
East Tehachapi	57,272	13.7	4.4	16.9
Chafee	61,747	6.5	4.7	8.0
Willow Springs	111,925	13.0	8.6	16.0
Neenach	197,778	12.7	15.1	15.6
Lancaster	556,348	7.3	42.5	9.0
Rock Creek	235,066	14.6	18.0	18.0
Acton	88,189	13.4	6.7	16.5
<b>TOTAL</b>	<b>1,308,325</b>	<b>81.0</b>	<b>100</b>	<b>100</b>

Sources: IWMC, 2004; CSUC, 2006

As indicated, the entire area of this geographic scope is approximately 1,308,325 acres, or approximately 2,044 square miles. Although this is a large cumulative effects area, it encompasses all hydrologic features that could be directly affected by the proposed Project and Options A and B, as discussed. Some of the HSAs listed above would only be traversed by the proposed Project or Options A or B for a few miles or portions of a mile, such as East Tehachapi HSA, Rock Creek HSA, and Acton HSA. These HSAs are included in the geographic scope in order to capture all potential cumulative effects.

East Tehachapi HSA would encompass proposed Substation Two and Willow Springs HSA would encompass proposed Substation One. The existing Antelope Substation is located in Lancaster HSA and the existing Vincent Substation is located in Acton HSA. Although the underlying groundwater basins are only partially bounded by the HSAs described in Table E-4-2 and above, any potential impacts to groundwater resources will be fully considered in this cumulative effects discussion.

### Existing Cumulative Conditions

This section discusses the past projects that have occurred in the cumulative analysis area described above, in addition to ongoing and future projects in the area. A wide variety of past, present, and reasonably foreseeable future development projects contribute to the cumulative conditions for hydrology and water quality in the Project area. A discussion of cumulative projects in the Project area is provided in Section E-4.4 (Cumulative

Impacts Scenario). Consideration of the projects identified in Section E-1.4 was used to develop this analysis of cumulative effects on hydrology and water quality.

Population growth and urban sprawl in the Project area have caused significant alterations to natural water systems in the Project area. Hydrology and water quality are affected by two main types of projects: 1) water projects such as dams and diversions for the purpose of generating supply; and 2) development projects, such as homes, businesses, and roadways, which alter the physical features of an area. Rapid development in the north Los Angeles area, such as described in Tables E-1-3 and E-1-4 has introduced new demands for municipal water supply and both new non-point source and point source pollution, as discussed below.

Throughout southern California, water development projects have historically been introduced, accompanying the spread of development both locally and regionally. The State Water Project (SWP) (see Section C.7.1.1) has affected California's natural hydrology State-wide and includes infrastructure in the proposed Project area, which contributes to the existing cumulative conditions. The SWP is a complex system of facilities, including pumping and power plants, reservoirs and storage tanks, canals, tunnels, and pipelines, which are used to deliver water to southern California consumers. Many communities in southern California are completely reliant upon the SWP for their water supply. Two important water-conveyance features in the Project area are the SWP's California Aqueduct and LADWP's Los Angeles Aqueduct. In the Project area and vicinity, the former is contained within concrete channels and pipes and the latter is in pipes. The California Aqueduct is 444 miles long and transports water south for both the SWP and the federal Central Valley Project. The Los Angeles Aqueduct is 223 miles long and transports water to the southern California market from the Owens Valley, to the north. The proposed Project and Options A and B would cross both the California Aqueduct and the Los Angeles Aqueduct, as described in Section C.7.1 (Environmental Setting) and in Section D.4 (Analysis of Alternatives).

In addition to the California Aqueduct and the Los Angeles Aqueduct, other major water development projects in the Project area include Lake Palmdale (Lancaster HSA), Littlerock Reservoir (Lancaster HSA), Bouquet Reservoir (Bouquet HSA), and a variety of other dams, reservoirs, and diversion projects throughout the six watershed areas shown in Tables C.7-2 and C.7-9. The Santa Clara River, which runs through multiple HSAs in the cumulative analysis area, is one of only two free-flowing natural river systems remaining in southern California (FSCR, 2005). The Santa Clara River was selected by American Rivers, a national non-profit organization, as one of the nation's most endangered rivers. Other waterways, rivers, and creeks in the Project area are described in Section C.7.1.

A list of existing projects within five miles of the proposed Project route is found in Tables E-1-3 and E-1-4 and the corresponding location of these projects is shown on Figures E.1-1a and E.1-1b. Although a five mile radius around the proposed route does not cover the entire cumulative effects area for hydrology and water quality, as defined by the HSAs in Tables C.7-2 and C.7-9, the projects identified in this list are representative of the ongoing project type and density throughout the cumulative effects area. For instance, Table E-1-4 indicates that the vast majority of ongoing projects are residential developments and Figures E.1-1a and E.1-1b show that the projects listed in Table E-1-4 are concentrated in and around community developments, such as Lancaster, Palmdale, Mojave, and Tehachapi. Furthermore, the population growth estimates portrayed in Figures E.1-1a, E.1-1b, and E.1-1c indicate that rapid population growth has not only occurred in the past, but it is ongoing and expected to continue into the future. Therefore, it is reasonably assumed that ongoing projects not within five miles of the proposed Project are concentrated in and around community areas and are characterized primarily by residential developments.



The past and existing projects discussed above have multiple impacts to hydrology and water quality, including the following:

- Introduction of a new demand for municipal water supply
- Alteration of the landscape, resulting in alterations in drainage patterns such as surface water runoff rates and volumes
- Alteration of the hydrological characteristics of surface water and groundwater features through the introduction of underground and above-ground infrastructure related to development
- Contribution to the degradation of surface water quality and groundwater quality through encroachment on waterways, generation of residential and commercial waste, and introduction of potentially hazardous substances to stormwater runoff

Water quality concerns largely stem from past and present non-point sources of pollution, which include activities related to construction, agriculture (particularly livestock grazing), and stormwater runoff. Stormwater runoff carries sediment and a variety of contaminants from non-point sources into the surrounding surface waterways. The Upper Santa Clara River in the Santa Clara River Watershed is on the 2002 Section 303(d) list for the following contaminants: chloride, coliform, nitrate, and nitrite. These water quality problems are dominantly attributable to the cumulative impacts of agricultural runoff and increasing development.

Groundwater quality in both the Tehachapi Valley East Groundwater Basin and the Antelope Valley Groundwater Basin has been cumulatively impacted by inorganic compounds and pesticides, generated through the spread of development and agriculture. Groundwater in these basins exceeds the Maximum Contaminant Levels for multiple constituents. Pollutants in these groundwater basins reach the water table predominately via infiltration through the alluvial fan systems located at the base of surrounding mountains and hills. Groundwater is withdrawn for municipal, industrial, and irrigation purposes (DWR, 2004/2004a). In the Tehachapi Valley East Groundwater Basin, water levels changed from a decrease of 26 feet between 1961 and 1978 to an increase of 71 feet between 1978 and 1999 (DWR, 2004). A possible explanation for this difference is the utilization of this groundwater basin for artificial recharge and storage, which is an increasingly common practice for growing communities, particularly in arid regions such as the Project area. In comparison, groundwater level trends in the Antelope Valley Groundwater Basin ranged from an increase of 84 feet to a decrease of 66 feet between 1975 and 1998 (DWR, 2004a). This change was likely due to over-use of the groundwater resources, possibly combined with declining recharge rates.

As discussed above and portrayed in Table E-1-2, ongoing development throughout the cumulative effects area for hydrology and water quality is dominated by residential developments, clustered in and around established community areas. This trend in residential development is also representative of reasonably foreseeable future projects in the cumulative effects area, as supported by the aggressive population growth forecast shown in Table E-1-2. Therefore, the impacts to hydrology and water quality from past and ongoing projects, as described above, are expected to continue and increase in the future.

### **Cumulative Impact Analysis**

The past, present, and reasonably foreseeable future residential projects discussed above range in size from several family units, to hundreds or even thousands of units, to entire community developments, including parks, schools, businesses, and roadways. These projects, among others, have the potential to affect hydrology and water quality through activities related to construction and/or operation and maintenance. Multiple projects are situated along the tributaries to the Santa Clara River, as well as within the boundaries of the Antelope Valley Groundwater Basin and the Santa Clara Valley East Groundwater Basin. The impact and mitigation

summary table for hydrology and water quality (Table C.7-8) indicates that the proposed Project would have eight distinct impacts to hydrology and water quality. In order to determine which, if any, of these impacts would be cumulatively considerable, the incremental impacts of the Project are considered in combination with the existing cumulative conditions, including past, present, and reasonably foreseeable projects, as described above.

The proposed Project would not change or alter the existing channel or drainage pattern of any waterway or water body. In addition, it would not impact the California Aqueduct, Los Angeles Aqueduct, or other water development projects in the cumulative effects area. Vincent Substation, which is the terminus for the proposed Project, is located adjacent to the Upper Santa Clara River (Segment 2 would cross the Upper Santa Clara River where it runs in Soledad Canyon at approximately Mile S2-21.2). There are no known projects within the geographic extent of this analysis that would alter the present free-flowing characteristics of the Santa Clara River. The proposed Project would not directly alter the existing hydrology or overall drainage patterns of any of the six HSAs discussed in Section C.7.5.1 (Geographic Extent). However, cumulative effects may have the potential to affect the hydrology and water quality within these HSAs. Below is a discussion of potential impacts that may be cumulatively considerable with regards hydrology and water quality.

- **Water quality degradation would result from soil erosion and sedimentation caused by construction activities. (Impact H-1)** Land-disturbing activities, such as grading, excavation, and trenching, have the potential to degrade water quality through soil erosion and sedimentation. The proposed Project and Options A and B are expected to cause soil erosion and sedimentation that could degrade water quality but would be mitigable to a less-than-significant level. When considered cumulatively with other proposed or ongoing projects, such as those described in Table E-4, it is possible that incremental effects of the proposed Project or the Project Options could combine with similar impacts of multiple other projects in the area. This combination of impacts would occur if it is known or reasonably foreseeable that at least one other project would introduce the same impact as described by Impact H-1 and that the additional impact would affect the same waterway as Project activities. Considering the rapid community development ongoing in the Project area, as demonstrated by the projects listed in Table E-4, it is reasonably assumed that at least one construction project in the Project area would include land-disturbing activities, such as grading, which would potentially degrade water quality through soil erosion and sedimentation.

As discussed in Section C.7 (Hydrology and Water Quality), the following mitigation measures would be implemented to minimize the potential significance of Impact H-1 for the proposed Project: H-1a (Implementation of Best Management Practices for Erosion and Sediment Control), H-1b (Maximum Road Gradient), H-1c (Road Surface Treatment), H-1d (Timing of Construction Activities), and H-1e (Control of Side-cast Material, Right-of-Way Debris and Roadway Debris). Although these mitigation measures would help to minimize Impact H-1 for the proposed Project, the cumulative degradation of water quality from construction-related soil erosion and sedimentation (Impact H-1) would be cumulatively significant when combined with the same impact from other projects. The application of Mitigation Measures H-1a through H-1e to other projects, including those on the cumulative projects list, which may contribute to the cumulative significance of Impact H-1, would help to minimize the significance of this impact. However, it is not feasible to implement such mitigation measures on other projects. Impact H-1 would be cumulatively significant and unavoidable (**Class I**).

- **Degradation of water quality would result from the accidental release of hazardous materials during construction activities. (Impact H-2)** Any construction activities that involve the use of potentially hazardous materials have the potential to cause the accidental release of those materials through a spill, improper handling or storage, or equipment malfunction, among other circumstances. Potentially hazardous materials include diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, and other fluids, all of which are commonly used during basic construction activities, such as the operation of tractors. If accidentally released, hazardous substances could contaminate surface water through direct runoff and groundwater through infiltration. Impact H-2 would be introduced and mitigated to a less-than-significant level for the proposed Project and Options A and B. This impact would be considered cumulatively significant if at least one other ongoing or reasonably foreseeable future project that would require use of any of the potentially hazardous substances

described above could affect one of the same waterways as the proposed Project and Options A and B, in the case of an accidental spill during construction. With the rapid spread of community developments in the Project area, it is reasonably assumed that at least one construction project located in the project vicinity would require the use of hazardous materials such as those listed above and could result in the accidental spill of such a material. In addition, because the construction of a residential development would include the use of heavy machinery that would require the use of potentially hazardous materials, there is a possibility that any one of the projects listed in Table E-4-4 could cause the accidental spill of potentially hazardous materials during construction, which could subsequently degrade water quality in the same waterways that are affected by the proposed Project and Options A and B. Due to the currently compromised condition of water quality in the Project area, as described in Section C.7.1.3 (Water Quality), any action that further degrades water quality should be considered significant.

As discussed in Section C.7 (Hydrology and Water Quality), the following mitigation measures would be implemented to minimize the potential significance of Impact H-2 for the proposed Project: HAZ-1a (Implement an Environmental Training and Monitoring Program), HAZ-1b (Implement a Hazardous Substance Control and Emergency Response Plan), HAZ-1c (Ensure Proper Disposal of Construction Waste), HAZ-1d (Emergency Spill Supplies and Equipment for Construction Activities), and HAZ-2b (Emergency Spill Supplies and Equipment for Operation and Maintenance Activities). Although these mitigation measures would help to minimize Impact H-2 for the proposed Project, the cumulative degradation of water quality from hazardous materials accidentally released during construction (Impact H-2) would be cumulatively significant, when combined with the same impact from other projects. The application of Mitigation Measures H-1a through H-1e to other projects, including those on the cumulative projects list, which may contribute to the cumulative significance of Impact H-2, would help to minimize the significance of this impact. However, it is not feasible to implement such mitigation measures on other projects. Impact H-2 would be cumulatively significant and unavoidable (**Class I**).

- **Degradation of water quality would result from the accidental release of hazardous materials during operational activities. (Impact H-3)** This impact is essentially the same as the preceding, with the exception that this impact addresses accidental spills that occur during operation and maintenance activities rather than construction activities. In general, operation and maintenance activities are less disruptive than construction activities because they require less land disturbance and less use of heavy machinery, if at all. Impact H-3 for the proposed Project and Options A and B would be less than significant with no mitigation recommended. This impact would be considered cumulatively significant if at least one other ongoing or reasonably foreseeable future project that would require use of any of the potentially hazardous substances described above could affect one of the same waterways as the proposed Project and Options A and B, in the case of an accidental spill during operation and maintenance activities. As described above for Impact H-2, multiple proposed and ongoing residential projects are clustered along the proposed Project route, particularly around existing communities. Although operation and maintenance activities associated with these projects would likely require different types of equipment than construction activities, it is reasonably foreseeable that some maintenance activities could require the use of heavy machinery, for instance in re-paving roadways or driveways, digging a swimming pool, or grading a yard, among others. In addition, as mentioned above, any action that further degrades water quality in areas where it is already compromised (see Section C.7.1.3), should be considered significant. Therefore, the cumulative effect of Impact H-3, as described above, would be significant and unavoidable (**Class I**).

Although mitigation was not recommended for the proposed Project, with regards to Impact H-3, the implementation of mitigation measures to the proposed Project and to other projects, including those on the cumulative projects list which may contribute to the cumulative significance of Impact H-3, would help to minimize the cumulative significance of this impact. Therefore, it is recommended that Mitigation Measures HAZ-1a (Implement an Environmental Training and Monitoring Program), HAZ-1b (Implement a Hazardous Substance Control and Emergency Response Plan), and HAZ-2b (Emergency Spill Supplies and Equipment for Operation and Maintenance Activities) be applied to the proposed Project and as well as to cumulative projects. However, it is not feasible to implement such mitigation measures on other projects. Impact H-3 would be cumulatively significant and unavoidable (**Class I**).

- **Existing groundwater resources would be disturbed through Project-related excavation activities. (Impact H-4)** The proposed Project and Options A and B each overlay two separate groundwater basins: the Tehachapi Valley East Groundwater Basin and the Antelope Valley Groundwater Basin. The potential for the proposed Project or Options A or B to disturb existing groundwater resources through excavation would be mitigated to a less-than-significant level. As discussed in Section C.7.4, excavation activities such as drilling and grading for tower

installation have the potential to disturb existing groundwater resources; although the potential to interfere with overall groundwater supply and recharge is not likely. This impact would be considered cumulatively significant if at least one other ongoing or reasonably foreseeable future project is located over the Tehachapi Valley East Groundwater Basin and/or the Antelope Valley Groundwater Basin and would require excavation activities such as drilling, which could potentially disturb the underlying groundwater resources. As shown on Figure E.1-1b approximately 121 proposed or ongoing projects are located in the City of Lancaster, which overlies the Antelope Valley Groundwater Basin, which is depicted on Figure C.7-3 (Groundwater Resources in the Proposed Project Area). Consideration of Table E-1-4 reveals that most of these projects are residential developments, with some exceptions such as industrial developments. It is reasonably assumed that at least one of these 121 projects overlying the Antelope Valley Groundwater Basin would involve some sort of excavation activity, such as for the installation of building foundations. Furthermore, as discussed in Section C.7.1.3 (Water Quality) and shown in Tables C.7-5 (Water Quality in Public Supply Wells – Tehachapi Valley East Groundwater Basin) and C.5-6 (Water Quality in Public Supply Wells – Antelope Valley Groundwater Basin), groundwater quality in the Project area exceeds multiple MCLs, particularly in the Antelope Valley Groundwater Basin.

- As discussed in Section C.7 (Hydrology and Water Quality), Mitigation Measure H-4 (Develop and Implement a Groundwater Remediation Plan) would be implemented to minimize the potential significance of Impact H-4 for the proposed Project. Although this mitigation measures would help to minimize Impact H-4 for the proposed Project, cumulative impacts to groundwater resources from excavation activities (Impact H-4) would be significant, when combined with the same impact from other projects. Because the quality of groundwater in this area is already compromised, any action that would further disturb the groundwater resource should be considered significant. The application of Mitigation Measure H-4 to other projects, including those on the cumulative projects list, which may contribute to the cumulative significance of Impact H-4, would help to minimize the significance of this impact. However, it is not feasible to implement such mitigation measures on other projects. Impact H-4 would be cumulatively significant and unavoidable (**Class I**).
- **Increased surface water runoff would result through the introduction of new impermeable areas. (Impact H-5)** As shown in Table C.7-8 (Impact and Mitigation Summary – Hydrology and Water Quality), the proposed Project and Options A and B would have a less-than-significant impact on runoff from the creation of new impermeable areas. This impact would be considered cumulatively significant if at least one other ongoing or reasonably foreseeable future project would introduce new impervious areas that could increase runoff into the same waterways affected by the proposed Project or Options A and B. Tables E-1-3 and E-1-4 indicate that approximately 341 new projects are planned or ongoing within five miles of the proposed Project route. The vast majority of these projects are residential developments, which would require the introduction of new impervious areas. Although mitigation was not recommended for the proposed Project, with regards to Impact H-5, the implementation of mitigation measures to the proposed Project and to other projects, including those on the cumulative projects list which may contribute to the cumulative significance of Impact H-5, may help to minimize the cumulative significance of this impact. Such mitigation would require that in areas where a project would result in a decreased permeability of ground cover or ground surface, the material which is used to cover or replace existing material should achieve maximum permeability while fulfilling its intended purpose. For instance, roadways, sidewalks, and driveways could be covered with a permeable crushed rock or comparable material rather than with concrete. However, although this mitigation could theoretically minimize the potential for projects to create substation runoff from new impermeable areas, it would not be feasible to implement such mitigation on other projects, given development standards and practices. The cumulative affect of this impact would be significant and unavoidable (**Class I**).
- **Runoff introduced as a result of permanent Project features would cause the overloading of a local stormwater drainage system. (Impact H-6)** The proposed Project and Options A and B would have a less than significant impact to local stormwater drainage systems, with no mitigation recommended. As discussed, existing stormwater drainage systems may be affected through the introduction of increased runoff due to new impervious areas such as transmission tower footings. Stormwater drainage systems are expected to be in place in community areas such as within Mojave, Rosamond, Lancaster, Palmdale, Acton, and Agua Dulce. It is reasonably assumed that any new housing developments would include the installation of stormwater drainage features. Since the majority of ongoing and future cumulative projects within the analysis area are characterized as residential or community developments, it is reasonably assumed that ongoing and future cumulative projects would be constructed with stormwater drainage systems in place and such systems would be designed with sufficient capacity to accommodate stormwater runoff caused by the particular project. Although mitigation was not

recommended for the proposed Project, with regards to Impact H-6, the implementation of mitigation measures to the proposed Project and to other projects, including those on the cumulative projects list which may contribute to the cumulative significance of Impact H-6, may help to minimize the cumulative significance of this impact. Such mitigation would require that project proponents ensure sufficient stormwater drainage system capacity prior to the onset of construction activities. However, although this mitigation could theoretically avoid the potential for projects to overload stormwater drainage systems due to increased runoff, it would not be feasible to implement such mitigation on other projects, given development standards and practices. Furthermore, as discussed, it is reasonably assumed that cumulative projects include adequate stormwater drainage facilities and that project proponents ensure the adequacy of stormwater facilities for their projects. Therefore, the cumulative effect of Impact H-6 resulting from the proposed Project or Options A and B would be less than significant with no mitigation recommended (**Class III**).

- **Flood hazards would be created through the placement of permanent aboveground structures in a flood hazard area, a floodplain, or a watercourse. (Impact H-7)** After mitigation, the proposed Project and Options A and B would have a less-than-significant effect on the creation of flood hazards due to the placement of permanent project infrastructure. As discussed above in Sections C.7.4, the proposed Project and Options A and B would not site permanent infrastructure within a known watercourse. However, infrastructure would be situated within known existing floodplains and FEMA-designated flood hazard areas, which are shown on Figure C.7-2 (FEMA-Designated Flood Hazard Areas). This figure indicates that the proposed Project would cross through Flood Hazard Areas in multiple locations. As previously described, infrastructure required for the proposed Project and Options A and B would be engineered to withstand mechanical stresses from potential flooding in these areas, thus mitigating this impact to a less-than-significant level. However, this impact would be considered cumulatively significant if at least one other ongoing or reasonably foreseeable future project would introduce permanent, aboveground infrastructure in a floodplain, a flood hazard area, or a watercourse which is already affected by the proposed Project and Options A and B. Tables E-1-3 and E-1-4 indicates that multiple planned and ongoing projects are situated within five miles of the proposed route; many of these projects would be located in the same Flood Hazard Areas as the proposed Project.
- As discussed in Section C.7 (Hydrology and Water Quality), Mitigation Measure H-7 (Protect Aboveground Structures Against Flood and Erosion Damage) would be implemented to minimize the potential significance of Impact H-7 for the proposed Project. The application of Mitigation Measure H-7 to other projects including those on the cumulative projects list, which may contribute to the cumulative significance of Impact H-7, would help to minimize the significance of this impact. However, it is not feasible to implement such mitigation measures on other projects. Because the cumulative projects discussed above would introduce permanent, aboveground structures into a Flood Hazard Area affected by the proposed Project, the cumulative effect of Impact H-7 would be significant and unavoidable (**Class I**).

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

As discussed above, Impact H-6 would be cumulatively less than significant with no mitigation recommended, while all other impacts (Impact H-1 through H-5 and Impact H-7) would be cumulatively significant and unavoidable with no feasible mitigation recommended. For those impacts which involve mitigation measures for the proposed Project (or Options A or B), such mitigation measures would also be applied to the cumulative scenario where possible. However, the application of proposed Project-related mitigation measures to other cumulative projects is not expected to be feasible and would therefore not affect the significance of the cumulative scenario. Similarly, Impact H-5 and H-6 do not involve mitigation measures for the proposed Project. The potential for mitigation measures that could apply to these impacts in the cumulative scenario are discussed above, however, the application of such mitigation to other projects is not feasible and therefore would not alter the significance of the cumulative scenario. No additional mitigation measures are recommended to reduce cumulative impacts related to hydrology and water quality.

### E.4-5.7 Land Use

The following section discusses the incremental effects of the proposed Project and Options A and B in conjunction with past, existing, and reasonably foreseeable future projects (identified in Tables E-1-3 and E-1-4) to create significant cumulative impacts to residential, commercial, industrial, and recreational land uses.

#### Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with land use and public recreation are the communities that would be traversed by or adjacent to the proposed Project and Options A and B. This includes unincorporated Kern County areas that are within five miles of the Project route; the Antelope Valley area of unincorporated Los Angeles County and communities such as Antelope Acres, Del Sur, Lakeview, and Big Mountain Ridge; the City of Lancaster; and the City of Palmdale. This is defined as the geographic extent because many of these areas have been characterized by rapid growth, which results in the development of new residential, commercial, and industrial land uses. New development affects existing land uses (i.e., open space, low-density uses) within the communities that are traversed by the Project.

#### Existing Cumulative Conditions

Rapid development and population growth has been ongoing within incorporated areas (i.e., Cities of Lancaster and Palmdale) and the unincorporated Antelope Valley area of Los Angeles County. Less development has been noted in the unincorporated areas of Kern County that would be traversed by or adjacent to the Project. Past and ongoing development has impacted existing land uses such as open space and rural residential areas. The siting of new residential, commercial, and industrial land uses is often located in existing open space areas, and has also extended across existing agricultural uses, especially in northern Los Angeles County (see Section C.9.5 for a discussion of cumulative impacts to agriculture). For example, the Ritter Ranch and Anaverde developments that are currently under construction are located in former open space areas. Past development within Los Angeles and Kern Counties has already altered existing land uses and permanently precluded some land uses such as open space. Consequently, the impacts of additional development projects that encroach and permanently alter existing land uses would be cumulatively considerable.

#### Cumulative Impact Analysis

The potential for land use impacts of the proposed Project and Options A and B described in Section C.8.4 to combine with the effects of other projects within the geographic scope of the cumulative analysis are described below.

- **Construction of the proposed Project would temporarily disturb land uses that are traversed by or adjacent to the Project (Impact L-1).** Construction activities associated with the Project would impact residential and recreational uses. A minimum of 80 residences are located less than 0.2 miles from the Project route, and the Project would cross the PCT in Kern County and recreational trails within Ritter Ranch. The noise, emissions, and dust generated during construction, and the temporary closure of trails would significantly impact residential and recreational land uses. While mitigation is required to reduce significant construction impacts resulting from the proposed Project and Options A and B, construction activities associated with other projects in close proximity, if they occur at the same time as the Project, would also disturb the aforementioned residential and recreational uses. These projects would include the following planned residential developments: Pre-App 12-05-4, TTM 061894, and the Joshua Ranch Residential Development (see Table E-1-4). The combined construction effects of multiple projects would be cumulatively significant at various times during construction (**Class I**). While Mitigation Measures L-1a (Coordinate Construction Schedule and Activities with the Authorized Officers for the Recreation Areas), L-1b (Provide Access for Pacific Crest National Scenic Trail Users), L-1c (Identify Alternative

Recreation Areas), N-3a (Provide Advance Notification of Construction), and N-3b (Implement Best Management Practices for Construction Noise) have been identified to reduce the impacts of the proposed Project and Options A and B, residual impacts from the construction of multiple projects would remain significant. No mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.

- **Operation of the proposed Project would require the removal of a residence in the City of Lancaster (Impact L-2).** The siting of the proposed Project and Options A and B would create potentially significant impacts to a single-family residence located on Avenue L in the City of Lancaster. As proposed, the Project would require the removal of this residence during construction and operation. Mitigation Measure L-2 (Re-locate Project ROW to Avoid Residence) would be implemented to reduce potentially significant Project impacts to a less-than-significant level. No current or future projects have been proposed in the vicinity of the Project that would contribute to a cumulative impact to this residence. As such, cumulative impacts from operation of the proposed Project and Options A and B would remain significant but mitigable (**Class II**).
- **Operation of the proposed Project would require the removal of residences in unincorporated Los Angeles County (Impact L-3).** The siting of the proposed Project and Option B would significantly impact three single-family residences located on Cherry Tree Lane in unincorporated Los Angeles County. As proposed, the Project and Option B would require the removal of these residences during construction and operation. No current or future projects have been proposed in the vicinity of the Project that would contribute to a cumulative impact to these residences. However, impacts resulting from the proposed Project or Option B alone would remain significant and unavoidable (**Class I**). A Project re-route as proposed under Option A would avoid cumulative impacts to existing residences. No additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.
- **Operation of the proposed Project would preclude the development of a school property (Impact L-4).** The siting of the proposed Project and Option A would traverse property that is owned by the AVUHSD, thereby precluding the development of educational facilities within 350 feet of the Project ROW. No current or future projects have been proposed in the vicinity of the Project that would contribute to a cumulative impact to the development of school property. However, impacts resulting from the proposed Project or Option A alone would remain significant and unavoidable (**Class I**). Although implementation of Mitigation Measure L-4 (Coordinate with Antelope Valley Union High School District and Ritter Ranch) is recommended, impacts are likely to remain significant (**Class I**). A Project re-route as proposed under Option B or Alternative 4 would avoid cumulative impacts to school property. No additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.
- **Implementation of Option B would preclude planned development within Ritter Ranch (Impact L-5).** As proposed, the Project would not create impacts to planned residential development within Ritter Ranch. No current or future projects have been proposed in the vicinity of the Project that would contribute to a cumulative impact to planned development within this community (see Tables E-1-3 and E-1-4). As such, no cumulative impacts to the Ritter Ranch development would be anticipated to occur.
- **Operation of the proposed Project would change the character of a recreational resource, diminishing its recreational value (Impact L-6).** The siting of the proposed Project and Options A and B would be located across recreational resources such as the PCT and trails within Ritter Ranch. No other current or future projects have been identified in the vicinity of the Project that would contribute to the long-term loss or degradation of recreational facilities. However, existing development has occurred across and in the area surrounding the PCT that would be traversed by the Project (e.g., transmission lines, wind turbines). The Ritter Ranch trails are also currently traversed by transmission lines in the same area that would be traversed by the proposed Project. As such, the operation of the proposed Project and Options A and B in conjunction with past projects would be cumulatively significant (**Class I**). Although Mitigation Measure L-6 (Site Towers to Avoid Pacific Crest National Scenic Trail Trailhead) has been recommended to minimize the impacts of the proposed Project and Project Options, cumulative impacts resulting from past projects would remain significant. Given the existing cumulative impact to recreational resources, no mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.

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

Mitigation measures described in Section C.8 would reduce the cumulative effects of the proposed Project as described under Impact L-2. However, in order to avoid cumulative impacts resulting from Impacts L-3 and L-4, a Project re-route would be required (i.e., Option A re-route for Impact L-3; Option B or Alternative 4 re-route for Impact L-4). As described under Impacts L-1 and L-6, cumulative effects may occur or have already occurred regardless of the proposed Project. Given these existing or future cumulative effects, no additional mitigation measures have been identified to reduce cumulative impacts to land use and public recreation.

### **E.4-5.8 Agriculture**

The following section discusses the incremental effects of the proposed Project and Options A and B in conjunction with past, existing, and future projects (identified in Tables E-4-3 and E-4-4) to create significant cumulative impacts to agricultural resources.

#### **Geographic Extent**

The geographic extent for the analysis of cumulative impacts associated with agricultural resources is a five-mile zone on either side of the proposed Project. Throughout Los Angeles and Kern Counties, agricultural land is being converted to other land uses. The 10-mile-wide geographic extent is necessarily arbitrary, as farmland conversion is a region wide phenomenon. However, this 10-mile width is used to determine the relationship between the proposed Project's incremental contribution to farmland conversion and the cumulative impact of other projects. Cumulative impact analysis for agricultural resources has been conducted using the projects listed in Tables E-4-3 and E-4-4.

#### **Existing Cumulative Conditions**

Northern Los Angeles County and southern Kern County are characterized by existing rural land uses, including agriculture (see Section C.9.1). However, along the proposed Project and the Project Options routes, the predominant amount of important farmland as identified by the DOC is located in Kern County. While the Antelope Valley area of Los Angeles County is still utilized for a number of agricultural operations, this area has experienced rapid development, and has been subject to the past conversion of farmland to non-agricultural use (e.g., residential and commercial land uses). The impacts of additional development projects in northern Los Angeles County and southern Kern County that convert Farmland to non-agricultural use and conflict with agricultural operations would be cumulatively considerable.

#### **Cumulative Impact Analysis**

The potential for agricultural resource impacts of the proposed Project and Options A and B described in Section C.9.4 to combine with the effects of other projects within the geographic scope of the cumulative analysis are described below.

- **Construction and operational activities would convert Farmland to non-agricultural use (Impacts AG-1 and AG-2).** The proposed Project and Options A and B would encroach upon Farmland during construction and operation. Temporary and permanent Farmland conversion would not be anticipated to exceed 10 acres for Prime Farmland and 40 acres for non-Prime Farmland. However, the construction of other projects such as the Del Sur Ranch residential development (TTM 046250) would also create a temporary and permanent conversion of Farmland to non-agricultural use. The combined effects to Farmland from the construction of multiple projects would be cumulatively significant (**Class I**). Although mitigation measures described in Section C.9 would reduce agricultural impacts of the proposed Project, the residual effects of other projects would remain cumulatively



significant. No additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.

- **Construction and operational activities would interfere with agricultural operations (Impacts AG-3 and AG-4).** Construction and operation of the proposed Project and Options A and B would introduce transmission structures and create new access and spur roads across agricultural land. These activities could temporarily or permanently disrupt agricultural operations, and as such, the following mitigation is required to reduce significant construction and operational impacts resulting from the proposed Project: Mitigation Measures N-3a (Provide Advance Notification of Construction), AG-3 (Establish Agreement and Coordinate Construction Activities with Agricultural Landowners), and AG-4 (Locate Transmission Towers and Pulling/Splicing Stations to Avoid Agricultural Operations). However, the siting of other proposed projects (e.g., Del Sur Ranch residential development [TTM 046250]) would be located across farmland, and would similarly disrupt agricultural operations. The combined effects to agricultural operations from the construction and operation of multiple projects would be cumulatively significant (**Class I**). Although mitigation measures described in Section C.9 would reduce agricultural impacts of the proposed Project, the residual effects of other projects would remain cumulatively significant. No additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.
- **Construction activities would conflict with a Williamson Act contract (Impact AG-5).** The Project would be constructed across Williamson Act lands designated as Prime Agricultural Land and Mixed Acreage Parcels. Temporary impacts to Williamson Act lands would not be anticipated to exceed 10 acres for Prime Farmland and 40 acres for non-Prime Farmland. No current or future projects have been proposed in the vicinity of the Project that would contribute to a temporary disruption of Williamson Act lands. As such, cumulative impacts from construction of the proposed Project would remain less than significant (**Class III**).
- **Operation would conflict with a Williamson Act contract (Impact AG-6).** As proposed, the Project and Options A and B would permanently remove 1.0 acre of Prime Agricultural Land and 28.6 acres of Mixed Acreage Parcels. Depending on the amount of Prime Agricultural Land that is included in the Mixed Acreage Parcels, permanent disturbance of Williamson Act lands may exceed the 10-acre threshold for Prime Farmland, resulting in significant impacts. No current or future projects have been proposed in the vicinity of the Project that would contribute to a permanent disruption of Williamson Act lands. However, impacts resulting from the proposed Project or Options A and B alone would remain significant and unavoidable (**Class I**). No additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level.

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

Mitigation measures described in Section C.9 would reduce the cumulative effects of the proposed Project under Impacts AG-3 and AG-4. However, as described above, the combined effects to agricultural operations from the construction and operation of multiple projects would be cumulatively significant. No additional mitigation measures have been identified that would serve to reduce cumulative impacts to agricultural resources.

#### **E.4-5.9 Noise**

The following analyzes the proposed Project and Options A and B with regard to whether a particular impact of the proposed Project or the Project Options could combine with similar effects of other projects (identified in Tables E-4-3 and E-4-4) to create cumulative noise impacts.

#### **Geographic Extent**

The geographic extent for the analysis of cumulative impacts related to noise is generally limited to areas within approximately 600 feet of the Project route. The route traverses through generally rural and low-density residential areas of Lancaster and Palmdale. In addition to these areas, the geographic area also traverses unincorporated areas of Los Angeles County and Kern County. This area is defined as the geographic extent of

the cumulative noise impact area because noise impacts would generally be localized, mainly within approximately 600 feet from any noise source and rarely more than one-quarter mile away.

### Existing Cumulative Conditions

Past development and population growth within the cities of Palmdale and Lancaster and in adjacent unincorporated areas have expanded the potential for man-made noise, mainly due to roadway traffic, air traffic, and ongoing construction projects. Due to the multiple types of land uses that have developed, a wide range of noise sources occur in the geographic area and will continue to occur in the cumulative baseline.

Future baseline noise levels within the geographic area described above are expected to be incrementally higher than the levels in the present regional setting where increased urbanization, population growth, or human activity occurs. This is particularly true for the Ritter Ranch and Anaverde areas, where large-scale residential development projects are currently under construction and for open areas that currently have relatively low ambient noise levels. Approved and pending projects (future), listed in Tables E-1-3 and E-1-4, located within approximately 600 feet of the proposed Project route include approximately 40 residential development projects. These projects would add to the future noise levels of the geographic area.

### Cumulative Impact Analysis

- **Noise levels would violate local standards (Impact N-1).** Construction activities associated with the proposed Project and Options A and B would result in intermittent temporary violations of the County of Los Angeles noise ordinances as a result of mobile construction equipment, which would produce noise levels up to 95 dBA at 50 feet. Similarly, construction activities associated with other projects in close proximity to the Project, such as the Ritter Ranch or Ana Verde Community Development Projects could potentially occur at the same time as Project activities and could also violate local standards. The combined effect of construction noise could be cumulatively significant at various times during construction. For the proposed Project and Options A and B, Mitigation Measures N-1 (Provide Shields for Stationary Construction Equipment), N-3a (Provide Advanced Notification of Construction), and N-3b (use of best management practices during construction) would reduce the potential to violate the local noise standards to the extent feasible; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class II**). Although it would not be necessary to consider further mitigation, a potential additional mitigation measure to reduce cumulative noise impacts would be to coordinate with Los Angeles County, Kern County, and the Cities of Lancaster and Palmdale to stagger construction schedules to the extent feasible for construction projects occurring within 600 feet of the Project construction areas. While such a mitigation measure would reduce the potential for cumulative increases in ambient noise levels during construction, it would result in potentially longer periods of construction noise nuisance, which may in effect be considered by the communities to be worse than higher noise levels over a shorter duration. Therefore, such a mitigation measure for cumulative noise impacts is not recommended. No other mitigation measures have been identified.
- **Construction noise could substantially disturb sensitive receptors (Impact N-2).** Construction activities associated with the proposed Project and Options A and B would result in intermittent temporary violations of the County of Los Angeles noise ordinances as a result of mobile construction equipment, which would produce noise levels up to 95 dBA at 50 feet. Similarly, construction activities associated with other projects in close proximity to the proposed Project and Options A and B that potentially occur at the same time as Project activities could also violate local standards. The combined effect of construction noise could be cumulatively significant at various times during construction. For the proposed Project and Options A and B, Mitigation Measures N-1 (Provide Shields for Stationary Construction Equipment), N-3a (Provide Advanced Notification of Construction), and N-3b (use of best management practices during construction) would reduce the potential to violate the local noise standards to the extent feasible; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**). Mitigation to reduce Project specific construction noise impacts to sensitive receptors would reduce the overall cumulative construction noise generated by all construction projects in the area, but to mitigate cumulative construction noise would require the staggering of construction timing and dismissal of construction projects, which is infeasible.

- **Permanent noise levels along the ROW would increase due to corona noise from operation of the transmission lines (Impact N-3).** Sensitive receptors are located directly adjacent to the proposed Project and Options A and B that could be impacted by operational noise from the transmission ROW. Because the operational noise generated by the proposed Project or Options A or B alone could result in a substantial increase to the ambient noise levels at sensitive receptor locations along the lines, additional further development within 600 feet of these receptors could combine with this impact to further increase ambient noise levels. Therefore, the effect of operational corona noise combined with other noise sources located within close proximity to the proposed transmission line and residences would be cumulatively significant (**Class I**). Mitigation to reduce project specific operational noise impacts to sensitive receptors would reduce the overall cumulative operational noise generated by all construction projects in the area, but to mitigate cumulative operational noise would require the dismissal of development projects, which is infeasible.
- **Maintenance activities during transmission line operation would increase ambient noise levels. (Impact N-3).** The inspection and maintenance activities for the proposed Project and Options A and B would occur on average once per year. Noise increases related to these activities would be short-term and intermittent, not exceeding established local standards and/or ordinances resulting in less-than-significant impacts. The likelihood of another project, which results in noise impacts, occurring within proximity of the new transmission line where maintenance activities would occur is considered extremely low. Therefore, noise impacts related to routine inspection and maintenance would not combine with other cumulative projects and no cumulative impact would occur. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).
- **Operation of modified and new substations would result in increased ambient noise levels (Impact N-4).** The proposed Substations would generate low level noise and do not contain sensitive receptors immediately adjacent to project-related substation sites. While the noise generated by the proposed Project substations is not significant, the addition of further development within 600 feet of these receptors could combine with this impact to further increase ambient noise levels. However, as identified in Tables E-4-3 and E-4-4, no approved or pending projects are listed to be located within approximately 600 feet of the proposed Project substation sites. Therefore, the operational cumulative noise impact of the proposed Substations would be adverse but less than significant (**Class III**).

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

No mitigation measures are recommended to reduce cumulative noise impacts. Mitigation to reduce Project specific construction and operational noise impacts to sensitive receptors would reduce the overall cumulative construction noise generated by all construction projects in the area, but to mitigate cumulative construction and operational noise would require the staggering of project construction timing and/or the dismissal of development projects, which is infeasible.

#### **E.4-5.10 Traffic and Transportation**

##### **Geographic Extent**

After construction, the proposed Project and Options A and B would have little transportation or traffic activity associated with them. Therefore, the only opportunity for cumulatively significant impacts to occur with other projects would be during construction of the proposed Project or Options A or B, making them temporally as well as spatially dependent. Furthermore, construction-related traffic impacts would mostly result from lane closures that would occur within the immediate vicinity of the proposed Project. Therefore, the geographic extent for the analysis of cumulative traffic and transportation impacts is defined as the area up to one half mile from the proposed Project.

### Existing Cumulative Conditions

Although the character of the area along the Project route is largely agricultural and rural in nature, residential development is increasing, particularly around the City of Palmdale, associated with the Ritter Ranch and Anaverde specific plan areas. It is anticipated that the roadways in this area will continue to experience increased levels of traffic congestion as additional future residential developments are approved and implemented

### Cumulative Impact Analysis

The potential for traffic and transportation impacts of the proposed Project and Options A and B described in Section C.12.4 to combine with the effects of other projects within the geographic scope of the cumulative analysis are described below.

- **Closure of roads to through traffic or reduction of travel lanes would result in substantial congestion (Impact T-1).** The residential development in the Palmdale area has contributed to congestion on area roadways that would be crossed by the proposed Project and Options A and B. There are currently approximately 10 development projects scheduled within one-half mile of the proposed Project route, all of which are currently under construction and would likely be at least partially occupied when construction of the Project begins. Traffic associated with these future residential developments would contribute to congestion on area roadways. Temporary roadway congestion resulting from lane closures associated with construction of the proposed Project or Options A or B would combine with congestion resulting from past, present and future residential development to create a temporary cumulative significant impact (**Class I**).
- **Construction traffic would result in congestion on area roadways (Impact T-2).** Traffic volumes on most study area roadways are generally low to moderate. Residential development in the area has contributed to congestion on area roadways that would likely be traveled by construction-related traffic associated with Project activities. There are currently approximately 40 development projects scheduled within one-half mile of the proposed Project route, approximately 10 of which are currently under construction and would likely be at least partially occupied when construction of the proposed Project or Options A or B begins. Mitigation Measure T-2a (Prepare Construction Transportation Plan) would reduce the number of construction-related vehicles required for Project activities, therefore reducing the potential for Project-related construction traffic to substantially contribute to a cumulative impact; therefore impacts would be less than significant (**Class II**).
- **Construction activities could temporarily interfere with emergency response (Impact T-3).** Road and lane closures resulting from the proposed Project and Options A and B could interfere with emergency response vehicles by lengthening the response time required for emergency vehicles passing through the construction zone. Congestion on area roadways from past, present, and future development could also lengthen the response time required for emergency vehicles in the area. If one or more of the future projects planned in the area within one-half mile of the proposed Project and Options A and B were to require road or lane closures on the same days that the proposed Project would require road and/or lane closures, cumulatively significant impacts would occur. However, implementation of Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures) include measures to reduce significant impacts from construction activities on emergency response to less-than-significant levels (**Class II**).
- **Construction activities could temporarily disrupt transit bus routes (Impact T-4).** Road and lane closures resulting from the proposed Project and Options A and B could disrupt bus service passing through the construction zone. If other projects required the use of the same public ROW at the same time as Project activities, the regulatory agency responsible for issuing the encroachment permit would ensure that work within a public road would not occur simultaneously with the Project to avoid cumulatively considerable impacts (**Class III**).
- **Construction activities could temporarily disrupt rail traffic (Impact T-5).** Overhead stringing activities that would require short-term closures of these lines could disrupt rail traffic. Potential impacts would include schedule delays and interrupted service. Mitigation Measure T-5 (Avoid Disruption of Rail Traffic) is proposed to reduce impacts to less-than-significant levels. Any potential conflict from other projects would also be required to be designed to avoid rail traffic disruption. Therefore, impacts would not be cumulatively considerable (**Class III**).

- **Construction activities could temporarily impede pedestrian movements and bike paths (Impact T-6).** Road and lane closures resulting from the proposed Project and Options A and B could interfere with pedestrian and bicycle paths crossing through the construction zone. Impacts from the proposed Project and Options A and B would be temporary, short term, limited to a small localized area, and reduced by Mitigation Measures T-1a (Prepare Traffic Control Plans) and T-1b (Restrict Lane Closures), and would therefore not be cumulatively considerable (**Class III**).
- **Construction activities would conflict with planned improvements to SR-14 (Impact T-7).** The proposed Project would conflict with the new travel lane if it were to place structures within the existing or planned SR-14 ROW. Mitigation Measure T-7 (Avoid Conflicts with Planned Improvements to SR-14) would eliminate the potential for a conflict with the new connector road. Furthermore, any potential conflict from other projects would also be required to be designed to avoid conflicts with the connector road. Therefore, impacts would not be cumulatively considerable (**Class III**).
- **Construction vehicles and equipment could damage road ROWs (Impact T-8).** Any damage to area road ROWs caused by construction of the proposed Project or Options A or B would be repaired within two months of completion of construction activities and therefore would not be cumulatively considerable (**Class III**).
- **Transmission structures could present an aviation hazard (Impact T-9).** The proposed Project and Options A and B would include construction of towers up to 188 feet above the ground surface, which would be below the 200-foot guidelines set by the FAA, which could affect aviation activities within the study area. Similar to the Project, any future project would be required to adhere to FAA Air Traffic Division guidelines. Therefore, impacts would not be cumulatively considerable (**Class III**).
- **Construction activities could be inconsistent with transportation plans (Impact T-10).** The proposed Project would not be inconsistent with any applicable transportation plans. Constructing structures near SR-14 could conflict with planned improvements; however, such conflict would be prevented through implementation of Mitigation Measure T-7 (Avoid Conflicts with Planned Improvements to SR-14). In addition, future projects that may conflict with planned improvements would be required to implement similar measures. Therefore, impacts would not be cumulatively considerable (**Class III**).

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

There are no additional feasible mitigation measures that could be imposed on the proposed Project or Options A and B to further reduce its contribution to cumulative traffic and transportation impacts. All feasible mitigation measures have been recommended to mitigate the traffic and transportation impacts described in Section C.12.

#### **E.4-5.11 Visual Resources**

The following section discusses the incremental effects of the proposed Project and Options A and B in conjunction with past, existing, and future projects (identified in Tables E-1-3 and E-1-4) to create significant cumulative impacts to landscape character, scenic vistas, and visual resources.

#### **Geographic Extent**

The geographic extent for the analysis of cumulative impacts related to visual resources that would be impacted by the proposed Project and Options A and B are defined by viewsheds. Any current or future project that is expected to occur within approximately five miles of the proposed Project and Options A and B, or alternative alignments, are included in the geographic scope. Viewsheds of the Project are extensive, given the expansiveness of the desert and mountain landscapes traversed, general lack of vegetative screening, and large numbers of people who reside in Tehachapi, Rosamond, and Kern County, plus in the communities of Lancaster and Palmdale, and unincorporated Los Angeles County. Viewsheds can easily extend beyond five miles (background viewing distance) in the Antelope Valley, but considering that the road system is laid out on

a one-mile square-grid, all views to the proposed Project can also be seen in foreground and middleground from other vantage points.

A wide range of existing, cumulative visual conditions occur within this geographic extent, mainly due to the multiple types of land uses that are traversed by the proposed and alternative routes. Dramatic visual changes to the natural landscape character have been occurring due to rapid development of housing tracts and population growth in incorporated areas (i.e., Cities of Lancaster and Palmdale) and the unincorporated Antelope Valley area of Los Angeles County, leading to high-density residential/suburban landscape character. Dramatic visual changes to the natural landscape character have been occurring with development of agricultural fields and scattered rural residential “ranchettes” in the unincorporated areas of Kern and Los Angeles Counties that would be traversed by or adjacent to the Project, leading to intensive-agricultural landscape character. Additionally, dramatic visual changes have occurred in the Tehachapi Wind Resource Area with development of wind farms, substations, transmission lines, roads, and maintenance facilities, changing natural-appearing mountain landscapes into industrial-character landscapes. Dramatic visual changes to the natural landscape character have been occurring with development of industrial manufacturing facilities at Cal Cement and Monolith near Segment 3.

Past and ongoing development has impacted existing landscape character, scenic vistas, and inherent visual resources. The siting of new residential, commercial, and industrial land uses is often located in existing natural-appearing open space areas, and has also extended across existing agricultural fields, especially in northern Los Angeles County near Lancaster and Palmdale. For example, the Ritter Ranch and Anaverde developments that are currently under construction are located in former open space areas, and these developments are currently, and will continue to dramatically alter visual resources. At Ritter Ranch and Anaverde, relatively undeveloped valleys and hillsides are currently being developed into high-density suburban housing tracts. Past development within Los Angeles and Kern Counties has already altered existing landscape character, scenic vistas, and visual resources and permanently precluded open space, natural-appearing landscapes. Consequently, the impacts of additional development projects that encroach and permanently alter existing landscape character, scenic vistas, and visual resources would be cumulatively considerable.

### **Cumulative Impact Analysis**

Cumulative impacts to visual resources could possibly occur as a result of construction and operation of the proposed Project and Options A and B, plus projects listed in Tables E-1-3 and E-1-4 (and shown in Figures E.1-1a and E.1-1b) if they occupy the same field of view. Cumulative visual impacts depend on the degree to which the viewshed is altered, visual access to scenic resources is impaired, landscape character is changed, or the Project’s visual contrast is increased. It is also possible that a cumulative visual impact could occur if a viewer’s perception was that the general quality of an area was diminished by the proliferation of visible structures, even if the structures were not all within the same field of view. Such a perception could occur as an accumulated impression of visual impacts in the landscape, for instance, while traveling along a road and seeing many new housing developments and/or many new transmission lines.

A cumulative visual impact would be considered significant if it added to significant visual impacts of the Project or resulted in the conditions identified in Section C.11.4.1 Criteria for Determining Significance. During and after construction of projects identified in Tables E-1-3 and E-1-4, the construction, operation, and maintenance of the Antelope Transmission Project, Segments 2 and 3 would create cumulative visual impacts within Project viewsheds, as described below for each significance criteria:

- **The Project Would Substantially Degrade Scenic Vistas, Existing Visual Character, or Quality of the Site and Its Surroundings (Criterion VIS1).** The overall visual change at the PCT, PCT Trailhead, and nearby roads would be significant, but mitigable, and implementation of mitigation measures would reduce visual impacts as seen from KOP-2 (Impact V-2). No other projects are proposed in the vicinity of the PCT or Trailhead, and no cumulative visual impacts would occur there. Implementation of the proposed Project and Option A and B, or one of its alternatives, would result in significant, unavoidable cumulative visual impacts to scenic vistas, substantial cumulative degradation of existing scenic vistas, landscape character, or quality of the site and its surroundings (Impacts V-7 and V-10). Similarly, when projects described in Tables E-1-3 and E-1-4 are developed, visual impacts of these other projects in close proximity to the proposed Project also would cumulatively result in visual impacts to existing scenic vistas, landscape character, or quality of the site and its surroundings (Impacts V-7 and V-10). Implementation of this Project would combine with visual effects of existing 66-kV, 220-kV, 500-kV, and 1000-kV transmission lines in affected viewsheds, and would cumulatively result in increased structure sizes and additional transmission lines that would cause a significant increase in structure prominence and industrial character (Impacts V-1 and V-7 through V-15). Implementation of the Antelope-Pardee 500-kV Transmission Project would cause an additional cumulative, significant increase in structure prominence and industrial character. Existing transmission lines in existing utility corridors have created structure prominence and industrial character in previously natural-appearing landscapes, resulting in significant cumulative visual impacts. Introduction of the proposed Project would result in additional visual impacts. All of these increases in would be “cumulatively considerable.”

Implementation of the proposed Project or Option A or B would result in visual impacts and adverse landscape character changes at the single-family residence on Avenue L in the City of Lancaster (Impact V-7). Construction and operation of the proposed Project would require removal of this residence. No current or future projects have been proposed in the vicinity of the Project that would contribute to a cumulative impact to this residence. However, cumulative visual impacts from construction and operation of the proposed Project and Options A and B would remain significant, unavoidable (**Class I**) visual impacts.

Implementation of the proposed Project or Option B would result in visual impacts and adverse landscape character changes at one uninhabited and three inhabited single-family residences along Elizabeth Lake Road in unincorporated Los Angeles County (Impact V-10). Construction and operation of the proposed Project would require removal of these four residences. No current or future projects have been proposed in the vicinity of the Project that would contribute to a cumulative impact to these four residences. However, cumulative visual impacts from construction and operation of the proposed Project and Options B would remain significant, unavoidable (**Class I**) visual impacts.

With the proposed Project, numerous and extensive visual impacts would occur on mountainous terrain crossed by Segment 2 in unincorporated Los Angeles County, City of Lancaster, and City of Palmdale with construction or re-construction of access and spur roads (Impacts V-8 through V-15). Accumulating the visual effects of on-going highway realignment/re-construction of Elizabeth Lake Road, on-going and planned development of Ritter Ranch and Anaverde, visual effects would be cumulatively significant and unavoidable (**Class I**) (Impacts V-10 through V-13).

Development of residential subdivisions in valleys and on hillsides within the viewshed of and in the cities of Lancaster and Palmdale (as listed in Tables E-1-3 and E-1-4) would combine with visual impacts of the proposed Project or Options A or B to disrupt the natural-appearing landscape character and severely affect the viewshed setting, resulting in significant, unavoidable (**Class I**) cumulative visual impacts (Impacts V-11 through V-13).

Regarding short-term visual impacts associated with the proposed Project, construction activities could combine with similar impacts of the Antelope-Pardee 500-kV Transmission Project and other on-going projects in the same field of view, resulting in the following short-term, significant, unavoidable (**Class I**) cumulative visual impacts. Construction activities would result in the temporary presence of equipment, materials, and workforce at work sites along the transmission line routes and at the substations. Vehicles, heavy equipment, helicopters, facility components, and workers would be visible during construction and operation of laydown areas, creation of new access/spur roads, construction of new towers, and installation of conductors. Most of this construction activity would be visible from public roadways and nearby private properties.

Regarding long-term visual impacts, those associated with the Project would combine with similar impacts of the Antelope-Pardee 500-kV Transmission Project and other on-going projects in the geographic extent, and would result in the following long-term, significant, but mitigable (**Class II**) cumulative visual impacts: new transmission

line facilities would add new, contrasting visual elements to the existing landscape and degrade views from numerous vantage points, including key observation positions analyzed in this study. The combined effect of the proposed Project with other planned developments (see Tables E-1-3 and E-1-4) would result in permanent changes to the landscape, all of which would be cumulatively significant, unavoidable (**Class I**) visual impacts.

- **Conflict with applicable city, county, State, or federal plans, policies, regulations, or standards for the protection of visual resources (Criterion VIS2).** No federal lands would be crossed by the proposed Project or Options, and therefore no federal visual resource management regulations or standards apply. The Antelope Transmission Project Segments 2 and 3 would not conflict with any applicable city, county, State, or federal plans, policies, regulations, or standards for the protection of visual resources. The CPUC encourages, but does not require, SCE to comply with local plans and policies. Prior to start of construction, therefore, adherence to county and local planning goals, policies, and objectives for visual resources is not required. Given that SCE would obtain all necessary permits from State and local agencies, no conflicts with applicable visual resource policies were identified. Therefore, as described in Table C.11-4, conflicts of the proposed Project with applicable visual resource policies would be anticipated to be less than significant (**Class III**). However, implementation of Mitigation Measure V-16 (Local Agency Approvals [Miles S3-0.0 to S3-35.2 and S2-0.0 to S2-21.6]) has been recommended to ensure Project consistency with visual resource policies, regulations, and standards.
- **Creation of a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS3).** The only new sources of light potentially affecting nighttime views would be area-lighting at the two new and two existing substations, and with implementation of mitigation measures V-17b, V-17c, and V-17d, visual impacts of new sources of light would be reduced to a level of significant, but mitigable visual impacts. However, other planned developments described in Tables E-1-3 and E-1-4 would contribute new sources of light that would adversely affect nighttime views, including new street lighting at all subdivisions, planned developments, commercial developments, and civic developments, including Ritter Ranch and Anaverde. Glare can be a visual resource impact. However, because new lattice steel towers and tubular steel poles would be surface coated with appropriate colors, finishes, and textures to most effectively blend the structures with the visible backdrop landscape (Mitigation Measure V-1e) and conductors would be constructed of non-reflective and non-refractive materials (MM V-17a), glare impacts would be reduced to a level of significant, but mitigable (**Class II**) visual impacts.

The visual glare effects of existing developments have resulted in, and other planned developments described in Tables E-1-3 and E-1-4 would result in, permanent changes to the landscape that would include glare, such as reflections off windows in buildings, glare off vehicle windshields, and glare off highly reflective materials such as mirrors, chrome, polished stone, and other polished materials, and the resulting visual effects would be cumulatively significant and unavoidable (**Class I**).

- **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway (Criterion VIS4).** The route of the proposed Project and Options A or B is not visible from the Angeles Crest Highway, which is the only State scenic highway in the vicinity. None of the alternatives investigated by this EIR are visible from the Angeles Crest Highway. Therefore, there is no impact to visual resources of a State scenic highway, and no mitigation would be required for the Antelope Transmission Project, Segments 2 and 3. Criterion VIS 4 was dropped from further discussion in Section C.11 Visual Resources Report, because the Project would not contribute to cumulative impacts to the visual resources of a State scenic highway. Likewise, none of the planned projects described in Tables E-1-3 and E-1-4 would damage scenic resources within a State scenic highway.

**Short-term.** Short-term cumulative impacts may occur if other projects in close proximity (within the geographic extent) are constructed at the same time as the proposed Project, specifically projects in Tables E-1-3 and E-1-4. In these cases, construction activities and/or equipment associated with more than one project may be visible within the same field of view and at the same time, and therefore would create significant, unavoidable (**Class I**) impacts to the visual environment.

**Long-term.** Taking into consideration the impacts of the proposed Project, and in conjunction with all past, present and reasonably foreseeable actions within the geographic scope of the particular impact, as a result, visual impacts to the landscape from construction and operation of the proposed Project are cumulatively



considerable. Significant, unavoidable (**Class I**) long-term cumulative visual impacts would occur along the proposed Project route (and its alternatives) for the reasons given above in Section E-4.5.11 and also in Section C.11.5.3.

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

The only feasible mitigation measure for the proposed Project and other existing or future transmission lines in the area (which would create large, industrial-appearing lattice steel structures in the landscape) is to place the conductors underground in the relatively flat terrain of the Antelope Valley. There are no feasible additional mitigation measures, other than those listed in Section C.11.4 that could be imposed on the Project or its alternatives to reduce its contribution to the cumulative visual effects. No additional mitigation measures are recommended to reduce cumulative impacts to landscape character, scenic vistas, and visual resources.

### **E-4.5.12 Population and Housing**

The following analyzes the proposed Project and Options A and B with regard to whether a particular impact of the proposed Project or Options A or B could combine with similar effects of other projects (identified in Tables E-4-3 and E-4-4) to create cumulative population or housing impacts.

#### **Geographic Extent**

The geographic extent for the analysis of cumulative impacts on Population and Housing is Los Angeles County and Kern County. This is defined as the geographic extent or the cumulative impact area because potential workers, available housing, and population are located within both Los Angeles County and Kern County and would be affected by the proposed Project or Options A or B and those projects identified in Tables E-4-3 and E-4-4. Therefore, proposed Project cumulative impacts would be on population and housing resources within both Los Angeles County and Kern County.

#### **Existing Cumulative Conditions**

Past development and population growth within both Los Angeles County and Kern County have impacted the population and housing demand. As the population increases through an indirect and direct influence of development, housing demands and workforce expands to serve the growing population and development needs. In addition, continued development creates more infrastructure and development affecting employment opportunities. Section C.13.1, Affected Environment, describes existing population, housing, and employment conditions within the Counties.

Development of the proposed Project and Options A and B in conjunction with the projects described in Tables E-4-3 and E-4-4, and the overall continued development of Los Angeles County and Kern County would continue to result in the potential for impacts to residential structures from displacement issues and increased housing demand.

#### **Cumulative Impact Analysis**

- **The proposed Project would require the removal of residential housing structures (Impact P-1).** Due to the ROW necessary for construction and operation of the proposed Project and Options A and B, it is anticipated that residences within the ROW would need to be purchased and removed by SCE. As discussed in Section C.13.4.2.2, Project Impacts and Mitigation Measures, the Project would traverse an existing residence in the City of Lancaster along Avenue L (Mile S2-2.2) that is located within an olive orchard. However, Mitigation Measure L-2 (Re-locate Project ROW to Avoid Residence), as identified in Section C.8, Land Use, would be required to avoid permanent impacts to the residence in the City of Lancaster. The proposed easement would traverse a

minimum of three existing residences in unincorporated Los Angeles County along Cherry Tree Lane (Mile S2-7.4), and would require the displacement and relocation of at least these three residences for construction and operation of the Project. The removal of these housing units as a result of the proposed Project is considered a significant and unavoidable impact of the Project (Class I). Therefore, Impact P-1 would be significant and unavoidable (Class I).

However, because both Los Angeles County and Kern County are currently experiencing rapid growth and development, development projects avoid being sited in areas where removal of residences would be necessary. Because residential/commercial development occurs along private land, public infrastructure projects are normally the only developments that encroach on these areas that could require relocation. Where feasible, public infrastructure projects are planned and sited to avoid or minimize residential/commercial displacement. However, due to various factors (including but not limited to the type of project, engineering, planning, fiscal limitations, etc.), displacement is required. Therefore, although the implementation of the proposed Project would have a significant unavoidable impact related to residential relocation, its overall contribution to the combined effects of cumulative projects would not be significant. Impacts associated from removal of housing due to all of the cumulative projects in the area would not be cumulatively significant (Class III) as new housing is built regularly to accommodate demand and projected population growth (as shown in Tables C.13-1 and C.13-2)

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

No mitigation measures have been identified to reduce cumulative population and housing impacts. As discussed in Section C.13.4.2.2, Project Impacts and Mitigation Measures, Mitigation Measure L-2 (Re-locate Project ROW to Avoid Residence) has been proposed to avoid permanent impacts to the single-family residence located on Avenue L in the City of Lancaster (see Section C.8.4). However, a minimum of three residences would continue to be removed along Cherry Tree Lane in unincorporated Los Angeles County. As such, overall Project impacts would remain significant, but cumulative impacts are considered less than significant due to new housing built regularly to accommodate demand and projected population growth for the Project area.

## **E.62 Effects Found Not to be Significant**

CEQA requires that an EIR be prepared when a Lead Agency determines that it can be fairly argued, based on substantial evidence, that a project may have a significant effect on the environment (CEQA Sections 21080[d], 21082.2[d]). Based upon this requirement and in consultation with appropriate State and federal agencies with jurisdiction over resources affected by the proposed Project, the CPUC determined that an EIR for the proposed Project should be prepared. In making this determination, the CPUC initially determined the proposed Project could result in significant impacts to the following eleven environmental issues:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Paleontology
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Agriculture
- Noise
- Traffic and Transportation
- Visual Resources

These eleven issue areas were noted as being the areas of key environmental concern in the proposed Project's Preliminary Environmental Assessment (PEA) prepared by SCE, dated September 30, 2005, and are discussed in detail in Section C of this Draft EIR. No other resources or issues that could be significantly affected by the proposed Project were identified during the 30-day public scoping period for the proposed Project (April 27 through May 26, 2006), or in written responses to the PEA.

In addition to addressing potentially significant environmental effects, CEQA requires that an EIR briefly explain the reasons why certain effects associated with a proposed Project have been determined not to be significant, and thus not discussed in detail in the EIR (CEQA Section 21100[c]). Appendix G of the State CEQA Guidelines (the Initial Study checklist) contains a list of environmental resources and issues to be evaluated when a Lead Agency conducts preliminary environmental review of a project. In conducting the preliminary environmental review of the proposed Project, the CPUC determined that the proposed Project would have either no impacts or less-than-significant impacts to the following resources and issues:

- Hazards and Hazardous Materials – emission or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- Hazards and Hazardous Materials – result in a safety hazard due to the project’s vicinity to a public or private airport or within an airport land use plan
- Hazards and Hazardous Materials – impair or interfere with an adopted emergency response or evacuation plan
- Mineral Resources - loss of availability of a known mineral resource or locally important mineral resource recovery site
- Public Services – require the expansion or construction of new fire protection, police protection, schools, parks, or other public facilities
- Utilities and Service Systems – exceed wastewater treatment requirements or require new water entitlements
- Utilities and Service Systems – require the expansion or construction of new water, wastewater, stormwater drainage, or solid waste facilities
- Utilities and Service Systems – exceed wastewater or landfill capacities
- Utilities and Service Systems – conflict with federal, State, or local statutes and regulations related to solid waste

Brief descriptions of these resources and issues, and the reasons why the proposed Project would not have significant impacts related to these resources or issues are provided below. The issues discussed herein in Section E are not discussed in Section C (Environmental Analysis) of this EIR.

### **E.62.1 Hazards and Hazardous Materials**

#### **CEQA Checklist Topics**

Hazards and hazardous materials impacts associated with a proposed Project may be potentially significant if they would:

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

#### **Environmental Setting**

The proposed transmission line and associated infrastructure, including existing and proposed substation facilities, are situated largely through undeveloped and open space areas. Substations One and Two would both

be situated on undeveloped desert land. Segment 3B would cross through areas of open space, very low density residential, and farmland used for irrigation crops or grazing. Segment 2 would cross through open space, grassland, and some areas of low-density residential. Antelope Substation is situated in an outlying area of the City of Lancaster consisting of undeveloped grassland. Vincent Substation is situated in a rural area consisting of low density residential. No known contamination is present at the existing or proposed substation construction areas or along the proposed transmission line route.

### Impacts

The proposed transmission line route would traverse a portion of a 110-acre property owned by the Antelope Valley Union High School District (AVUHSD). This site is currently planned for the establishment of a planned school currently designated as High School #10. The proposed transmission line would be situated adjacent to the planned school site for approximately 0.1 mile and it would traverse the site for approximately 0.2 miles, between proposed Mile S2-9.3 and S2-9.5. As described in Section C.6, any unexpected hazardous materials, such as contaminated soils, encountered during construction of the proposed Project would be removed, treated, and disposed of off site, thus resulting in a positive impact. Any potential spills of hazardous materials during construction or operation of the proposed Project would be related to mishandling or equipment leaks. With the implementation of the mitigation measures described in Section C.6, mishandling and leaking would be minimized, if not completely avoided. Any potential spill that would occur accidentally would be relatively small, as the primary hazardous materials associated with construction would be fuels and lubricants used by construction equipment and vehicles, which would be present in limited quantities. In the case of an accidental spill, immediate clean up of the contaminated area would be required to restore existing environmental conditions. The proposed Project is not situated within one-quarter mile of any other existing or proposed school sites. No significant impacts would occur.

The proposed Project would not introduce or result in safety hazards related to aircraft operations at existing airports or airstrips. The proposed Project is not located within the landing or approach zones of any airports or airstrips. Substations One and Two, which would be situated among existing wind energy developments, would be significantly smaller (in height as well as overall area) than the multiple existing wind turbine towers in the area. In addition, along the proposed transmission line route, the majority of new towers would be adjacent to existing transmission line corridors, which do not currently represent an aviation hazard. The proposed Project would not include changes to the size or character of the transmission infrastructure that would result in hazards to aircraft aviation. Therefore, although public and private airstrips and airports exist throughout the Antelope Valley and within the general vicinity of the proposed Project, construction of the proposed Project would not interfere with aircraft operations or conflict with any airport land use plans. As a result, no safety hazards would be introduced to people residing or working in the Project area due to proximity to an airstrip or an airport.

The proposed Project is not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. As described in Section C.12 (Traffic and Transportation), the potential for construction activities to temporarily interfere with emergency response vehicle routes would be mitigated to a less-than-significant level. The proposed Project would include installation of standard and commonly used transmission line infrastructure, which would be constructed in largely sparsely developed areas, or alongside existing transmission line infrastructure. The proposed Project would be similar to and consistent with existing infrastructure and would not impair implementation of or physically interfere with an emergency response or evacuation plan.

The proposed Project is not expected to expose people or structures to significant risk of loss, injury, or death involving wildland fires during construction or operation. SCE is required to design the transmission line in accordance with safety requirements of the CPUC's General Order 95, Rules for Overhead Electric Line Construction, which includes fire safety. Construction crews would be required to work within the stipulations of documents governing compliance with regional environmental, storm water pollution prevention, and fire prevention criteria. During operation, electrical arcing from power lines can represent a fire hazard; however, this phenomenon is more prevalent for lower voltage distribution lines since these lines are typically on shorter structures and in much greater proximity to trees and vegetation. Fire hazards from high-voltage transmission lines are greatly reduced through the use of taller structures and wider ROWs. Further, transmission line ROWs are cleared of trees to control this hazard. Fire hazards due to a fallen conductor from an overhead line are minimal due to system protection features. Overhead high voltage transmission lines include system protection designed to safeguard the public and line equipment. These protection systems consist of transmission line relays and circuit breakers that are designed to rapidly detect faults and cut-off power to avoid shock and fire hazards. This equipment is typically set to operate in 2 to 3 cycles, representing a time interval range from 2/60 of a second to 3/60 of a second. No significant impacts would occur.

Aggressive aerial firefighting can sometimes be constrained in close proximity to transmission lines because firefighting aircraft may not be able to operate at as low of an altitude as they might if transmission lines are not present. This can reduce the effectiveness of aerial drops of water and fire retardant. This is primarily a concern in areas of hilly or mountainous terrain, such as portions of Segment 2. Because the proposed Project is located adjacent to in very close proximity to existing transmission corridors (i.e., Midway-Vincent and Antelope-Vincent), potential constraints on aerial firefighting are not expected to change substantially from existing conditions. Therefore, this impact is not considered significant.

## **E.62.2 Mineral Resources**

### **CEQA Checklist Topics**

Mineral resources impacts associated with a proposed Project may be potentially significant if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State; or
- Result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan or other land use plan.

### **Environmental Setting**

The proposed Project would be located within Kern County, Unincorporated Los Angeles County, the City of Palmdale, and the City of Lancaster along a generally undeveloped ROW with no identified nearby mineral resource areas. The California Geological Survey classifies lands according to the presence or absence of significant sand, gravel, or stone deposits that are suitable as sources of aggregate. These areas, called Mineral Resource Zones (MRZ) are defined as follows (DOC, 1983):

- **SRZ:** Scientific Resources Zone containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance.
- **MRZ-1:** Mineral Resource Zone where adequate information indicates that no significant mineral deposits are present or likely to be present.

- **MRZ-2:** Mineral Resource Zone where adequate information indicates that significant mineral deposits are present, or there is a high likelihood for their presence and development should be controlled.
- **MRZ-3:** Mineral Resource Zone where the significance of mineral deposits cannot be determined from the available data.
- **MRZ-4:** Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.

## Impacts

The project ROW is not located within a MRZ as defined by the California Department of Conservation (DOC, 2001). According to the designations described above, the proposed project would not be located in an area where either significant mineral deposits are present or there is a high likelihood for their presence. Therefore, the proposed project would not be located in an area containing rare or unique rocks or minerals, or where there is an indication that significant mineral deposits are present would not permanently precluded from access or change the availability of any mineral resources. The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State. No impacts would occur.

The project would not result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan. According to the Los Angeles County General Plan, Special Management Area Map, the proposed project is not located in an area designated as containing locally important mineral resources (City of Lancaster, 1994; City of Palmdale, 1993; Kern County, 2004; Los Angeles County, 1990). No impacts would occur.

## E.6.2.3 Public Services

### CEQA Checklist Topics

Implementation of a proposed Project may have potentially significant impacts on public services if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or create the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: (1) fire protection; (2) police protection; (3) schools; (4) parks; or (5) other public facilities.

### Environmental Setting

#### Fire Protection

The Los Angeles County Fire Department (LACFD) provides fire protection for the proposed Project in unincorporated areas of Los Angeles County and has contracts to provide fire protection for the Cities of Lancaster and Palmdale (LACFD, 2005). The Kern County Fire Department provides fire protection for the portions of the proposed Project route in unincorporated Kern County (Kern County Fire Department, 2006).

#### Police Protection

The Los Angeles County Sheriff's Department (LACSD) provides police protection for the proposed Project route in the Cities of Lancaster and Palmdale as well as the unincorporated areas of Los Angeles County

(LACSD, 2005a; LACSD, 2005b; LACSD, 2006). The Kern County Sheriff's Department provides police protection for the proposed Project route in unincorporated Kern County (Kern County Sheriff's Department, 2006).

### **Schools**

Two schools have been identified along the proposed Project route: Monroe Continuation High School in unincorporated Kern County and Del Sur School in the City of Lancaster. Additionally, a proposed school site is located along the proposed Project route northwest of Ritter Ranch. The Lancaster Elementary School District (LESF) serves the incorporated and unincorporated areas of the High Desert Region, including the City of Lancaster. In addition, the Antelope Valley School District (AVSD) serves the Lancaster and Palmdale areas (SCE, 2004). The City of Palmdale is also served by Palmdale School District and Westside Union School District (City of Palmdale, 2006). The portion of unincorporated Kern County traversed by the proposed Project is served by the Tehachapi Unified School District, Southern Kern Unified School District, and the Kern Union High School District (Kern County Board of Education, 2003a; Kern County Board of Education, 2003b).

### **Parks**

The proposed Project would traverse Ritter Ranch Park in Segment 2 and the PCT in Segment 3. Section C.8 (Land Use and Public Recreation), provides a full description of recreation areas in the vicinity of the proposed Project area.

### **Other Public Facilities**

A variety of transportation-related public facilities are in the vicinity of the proposed Project route, including the Fantasy Haven Airport, Lloyd's Landing Airstrip, Acton/Vincent Grade Metrolink Station Park and Ride Lot, however, none of these are traversed by the proposed Project. Section C.10 (Traffic and Transportation) provides a full description of transportation-related facilities affected by the proposed Project.

### **Impacts**

Long-term impacts to public services are usually associated with population growth in an area, which increases the demand for a particular service and necessitates the expansion of existing facilities or construction of new facilities. However, the proposed Project would not result in a population increase, as discussed in Section C.13 (Population and Housing). Therefore, the proposed Project would not increase any demands on schools, parks, or other public facilities, or lower the level of service for fire protection or police protection.

## **E.6.2.4 Utilities and Service Systems**

### **CEQA Checklist Topics**

Utilities and service systems impacts associated with a proposed Project may be potentially significant if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Require new or expanded water supply entitlements;
- Exceed existing wastewater capacities supplied by the project area's wastewater treatment provider(s);
- Exceed existing, permitted landfill capacity due to construction or operation; or
- Conflict with federal, State, or local statutes and regulations related to solid waste.

### Environmental Setting

Utility and service system facilities associated with electricity, domestic (potable) water, wastewater, solid waste, and natural gas are typically provided and maintained by a variety of local purveyors, including cities, counties, special districts, water agencies, and private companies. Natural gas for the jurisdictions affected by the proposed Project, including the Cities of Lancaster and Palmdale and unincorporated portions of Los Angeles and Kern County, is provided by Southern California Gas Company. Electricity is provided to the jurisdictions by Southern California Edison. Water is supplied to the jurisdictions by Antelope Valley-East Kern Water Agency, Palmdale Water District, and Metropolitan Water District of Southern California (SCE, 2004). Wastewater treatment for these jurisdictions is provided by the Los Angeles County Sanitation District and the Kern Sanitation Authority (SCE, 2004; Kern County Waste Management Department, 2006). Solid waste disposal is provided by Waste Management, Inc., and is transported to a variety of landfills in the area including the Lancaster Landfill, Antelope Valley Recycling and Disposal Facility, and Antelope Valley Public Landfill I (SCE, 2004).

### Impacts

Long-term impacts to utilities and service systems are usually associated with population growth in an area, which increases the demand for particular utilities and necessitates the expansion of existing facilities or construction of new facilities. However, the proposed Project would not result in a population increase, as discussed in Section C.13 (Population and Housing) and so operation would not result in any increased demand for utilities and service systems. Construction activities would require water and would generate solid waste and wastewater. As wastewater generated by construction would be limited to that generated by construction personnel and would be accommodated by portable toilets which would be emptied into municipal sewage systems or septic systems, wastewater generation would not exceed wastewater treatment requirements, nor would it require the construction or expansion of wastewater treatment facilities. The construction of new tower foundations and new footings would incrementally increase non-permeable surfaces along the proposed route, but would not increase stormwater runoff such that it would require the construction or expansion of stormwater drainage facilities. Water would be required for dust control as well as for concrete and drinking water for construction personnel and is estimated to require 18.66 acre-feet of water, but this would be a minute fraction of the water supply for the area and would not require any new water treatment facilities nor would it require the acquisition or expansion of water entitlements. Solid waste generated by construction activities would consist largely of soil and vegetative material, along with wood from cribbing, sanitation waste, concrete waste, and other construction debris. The amount of waste generated would also be a minute fraction of the capacities of the landfills serving the proposed Project area and would not exceed any landfill capacities nor would it conflict with any statutes or regulations associated with solid waste. Consequently, any impacts to utilities and service systems could be adverse, but would be less than significant (**Class III**).



**Table E-4-3. Cumulative Projects List: Notable Approved and Reasonably Foreseeable Transmission and Wind Energy Projects**

Map ID	Project Name	Project Description and Location	Status
PdV Wind	PdV Wind Energy Project (formerly "Manzana")	The PdV Wind Energy Project is proposed to be developed on portions of a 6,275.1-acre area in the South Tehachapi Mountains, in an unincorporated area of Kern County. The project would be located about 40 miles southeast of Bakersfield and 20 miles northwest of Edwards Air Force Base. The project would generate up to 300 MW, consisting of 107 to 300 wind turbines. The total disturbance of the project would not exceed more than 5% of the total Project area (i.e., 313.75 acres).	Application is under review by the Kern County Planning Department.
NA	Aero Energy Wind Project	This is a 120-acre wind project located in unincorporated Kern County near Tehachapi-Willow Springs Road (Township 11 N, Range 14 W, Sections 3, 4, 9, and 10). It would consist of 42 wind turbines with Mitsubishi 1000A generators. The towers would be 60 meters tall.	Application is under review by the Kern County Planning Department.
Pine Tree	Pine Tree Wind Project	Proposed energy generation facility consisting of 80 wind turbine generators, rated at 1.5 MW each, a 10-mile transmission line, and an electrical substation. This project would be located in the southern Sierra Nevada Mountains, approximately 12 miles north of Mojave, California and six miles west of State Route 14. The project would provide up to 120 MWs to the City of Los Angeles (enough energy to power approx. 56,000 homes per year).	EIR certified on August 4, 2005, by LADWP Board of Commissioners. Scheduled to be on line in May 2006.
Segment 1	Antelope Transmission Project: Segment 1	Construction of a new 25.6-mile 500-kV transmission line between SCE's existing Antelope and Pardee Substations. This project would provide transmission capacity for wind energy projects that are expected to develop in Kern and northern Los Angeles Counties. This project includes modifications to Antelope and Pardee Substations and the expansion of Antelope Substation. Segment 1 would construct a 500-kV single-circuit transmission line initially energized at 220 kV to serve the existing transmission needs. As energy demand increases, the line would be upgraded to operate at 500 kV.	Draft EIR/EIS submitted on July 2006
Segment 4	Tehachapi Transmission Project: Segment 4	Tear down and rebuild the portion of existing Antelope-Magunden No. 2 single-circuit 230-kV transmission line between Antelope substation and the new Cottonwind/Substation 5.	Filing expected in March 2007 for an in-service date of December 2010
Segment 5	Tehachapi Transmission Project: Segment 5	Construct a new single-circuit 500-kV transmission line on existing ROW to replace the existing Antelope-Vincent 230-kV and a portion of the existing Antelope-Mesa 230-kV transmission line between Antelope and Vincent substations.	Filing expected in March 2007 for an in-service date of December 2010
Segment 6	Tehachapi Transmission Project: Segment 6	Construct a new single-circuit 500-kV transmission line on existing ROW to replace the portion of existing Rio Hondo-Vincent No. 2 230-kV transmission line between Vincent and the Angeles National Forest.	Filing expected in March 2007 for an in-service date of December 2010
Segment 7	Tehachapi Transmission Project: Segment 7	Construct a new 500-kV transmission line on existing ROW to replace the remaining portion of the existing Antelope-Mesa 230-kV transmission line between Vincent and Mesa substations.	Filing expected in March 2007 for an in-service date of December 2010
Segment 9	Tehachapi Transmission Project: Segment 9	Construct a new single-circuit 500-kV transmission line from Antelope to Tehachapi Substation No. 1 on new ROW.	Filing expected in June 2007 for an in-service date of June 2012
Segment 10	Tehachapi Transmission Project: Segment 10	Construct a new double-circuit 230-kV transmission line to replace the existing single-circuit 230-kV transmission line from Antelope to Cottonwind substation, and to expand the Cottonwind substation.	Filing expected in June 2007 for an in-service date of June 2012
Segment 11	Tehachapi Transmission Project: Segment 11	Construct a second new single-circuit 500-kV transmission line from Vincent to Mesa substations.	Filing expected in June 2007 for an in-service date of June 2012

<b>Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route</b>				
Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
<b>City of Tehachapi</b>				
1	Ref. No. 7	Anytime Fitness Center	9,994 square foot gym located on the west side of Capital Hills Parkway between Magellan Drive and Challenger Drive	Approved Feb. 2006
1	Ref. No. 8	Ben Franklin	10,000 square foot retail structure on north side of Challenger Drive between Zurich Street and Vienna Street	Approved Feb. 2006
1	Ref. No. 9	Amak Center	18,250 square foot mixed-use retail center on north side of Magellan Drive between Capital Hills Parkway and Zurich Street	Pending City approval
1	Ref. No. 12	Tehachapi Hospital	54,147 square foot hospital facility located north of existing City limits at end of Voyager Drive	Pending City approval
2	Ref. No. 1	Home Depot	139,099 square foot building located south and adjacent to HWY 58, west of North Mill Street	Approved and under construction
2	Ref. No. 11	Phased Mini Storage Facility	76,150 square foot storage center located on North Mill St. west of the Tehachapi Municipal Airport	Approved May 2004
2	Ref. No. 15	Primo Auto. Center	9,900 square foot auto related complex located on South Mill Street, north of Union Pacific Railroad	Pending City approval
3	Ref. No. 2	Tehachapi Junction	22,400 square foot mixed-use commercial center located at the southeast corner of Tehachapi Blvd. and Tucker Road.	Approved and under construction
3	Ref. No. 3	Tehachapi Garden Office Park	12,451 square foot mixed-use commercial center located north of Tehachapi Blvd. and east of Tucker Road	Project Approved June 2006
3	Ref. No. 4	Orchard Shopping Center	42,003 square foot mixed-use commercial center located at the southwest corner of Tucker Road and Conway Ave.	Approved and under construction
3	Ref. No. 5	Jones Development	18,298 square foot mixed-use commercial center located at the southeast corner of Tucker Road and Valley Blvd.	Approved and under construction
3	Ref. No. 6	Sail Thru Car Wash	3,700 square foot drive thru car wash located east and adjacent to Tucker Road	Approved April 2005
3	Ref. No. 13	Amber Oaks	72,620 square foot mini storage and commercial space located on Tehachapi Blvd. just west of Mountain View Ave.	Approved. Phase I complete and Phase II underway
3	Ref. No. 14	Mini Storage	39,000 square foot storage facility located south and adjacent to Conway Ave., west of Tucker Rd.	Pending City approval
3	TM 6461	Residential Development	24 single-family lots and 2 medium density residential lots located on the north side of Valley Blvd., east of Las Colinas St. and west of Griffin St.	Project on hold. Pending City approval
4	TM 6360	Residential (senior) Development	11 lots on 1.03 acres located on the north east corner of South Mill St. and D St.	Map recorded. Project under construction
5	Ref. No. 10	Primo Plaza	7,090 square foot retail center on southeast corner of Tehachapi Blvd. and Hayes St.	Approved June 2006
6	TPM 11353	Commercial Development	Request to subdivide 24 acres into 16 Light Industrial properties. Located south and adjacent to Tehachapi Blvd., east of Dennison Rd.	Pending City approval
6	TM 5812	Residential Development	211 lots on 61.27 acres located on the east side of Dennison Road across from Tehachapi High School	Map recorded. Project under construction
6	TM 6554	Residential Development	89 residential lots on 17.5 acres located north of Valley Blvd. and west of Dennison Rd.	Approved June 2006
7	TPM 11385	Commercial Development	Request to subdivide 20.9 acres into 5 Light Industrial properties. Located on the southwest corner of Tehachapi Blvd. and Steuber Rd.	Pending City approval
8	TM 6212	Residential Development	110 lots on 30.04 acres located south of the Valley Blvd. Extension, north of Pinon Road and east of Curry Rd.	Project Complete

**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
8	TM 6218	Residential (senior community) Development	286 residential lots, 2 condominium lots (142 units), 1 recreational facility, and 7 homeowner lots located south of Valley Blvd., north on Pinon St., west of Tehachapi High School	Approved June 2006. Map recorded.
8	TM 6248	Residential Development	30 lots on 7.5 acres located on the southeast corner of South Robinson St. and East D St.	Project approved and map recorded.
8	TM 6506	Residential/Commercial Development	75 single-family lots on 20.26 acres and 9.89 acres available for commercial use. Located east of Curry St. and north of Valley Blvd.	Pending City approval.
8	TM 6909	Residential Development	89 residential lots on 25 acres located north of Valley Blvd. and south of Holly Dr.	Pending City approval.
8	TM 6723	Residential Development	173 residential lots on 55 acres located south of Valley Blvd. and north of Pinon St.	Pending City approval.
9	TM 4927	Residential Development	28 lots on 6.64 acres located north and adjacent to Cherry Lane and south of Valley Blvd.	Map recorded. Project under construction
9	TM 6216	Residential Development	384 lots on 122.7 acres located south of Pinon St., west of Curry St., and north of Highline Rd.	Project broken into 5 phases. All approved and under construction
9	TM 6507	Residential Development	96 condominium lots on 10.5 acres located north of Pinon St. and west of Applewood Dr. extension	Approved Sep. 2006
9	TM 6508	Residential Community Development	188 residential lots and 4 open space lots located north of Highline Rd. and east of Tucker Rd.	Pending City approval
9	TM 6714	Residential Development	75 residential lots on 24 acres located north of Pinon St. and south of Cherry Lane	Pending City approval.
9	TM 6668	Residential Development	18 residential lots on 5 acres located north of Pinon St. and east of Fig Dr.	Pending City approval.
9	TM 6928	Residential Development	144 residential lots on 44 acres located south of Pinon St. and east of Tucker Rd.	Pending City approval
10	TM 6062	Heritage Oaks West and East	125 lots on 51 acres located on south side of Pinon Street, west of Dennison Road and east of Curry St.	Map recorded. Project under construction
10	TM 6215	Residential Development	136 lots on 31.7 acres located north of Highline Rd., south of Pinon St. and east of Curry St.	Map recorded. Project under construction
10	TM 6497	Residential Development	60 lots located north of Highland Rd. and west of Dennison Rd.	Pending City approval.
<b>Kern County</b>				
1	NA	Clearview Ranch	Project includes 750 residential units on 126 acres, 20 acres for commercial use, and 80 acres of open space reserve	Proposed, not approved
<b>City of Lancaster</b>				
1	TTM 046250	Residential Development (Del Sur Ranch)	Subdivide 880 acres into 2,469 single-family lots, park, 1 commercial lot, and 2 school lots. Project is bounded by 90 <sup>th</sup> & 105 <sup>th</sup> St. West, Avenue G to Avenue H-8	Approved
1	TTM 060610	Residential Development	580 single-family lots on 156 acres located on the east side of 100 <sup>th</sup> St. West between Avenue H and I	In process
1	TTM 060620	Residential Development	240 single-family lots on 63 acres at the southeast corner of Avenue I and 100 <sup>th</sup> Street West	In process
2	TTM 047583	Residential Development	Subdivide 40 acres into 136 single-family lots, 3 open space lots. Located on the southeast corner of 90 <sup>th</sup> Street West and Avenue I	Approved
2	TTM 047771	Residential Development	Subdivide 80 acres into 289 single-family lots and 3 open space lots located on the northeast corner of 90 <sup>th</sup> Street West and Avenue I	Approved

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
2	TTM 062762	Residential Development	150 single-family lots on 40 acres at the southwest corner of 80 <sup>th</sup> St. West and Avenue I	In process
3	TTM 046192	Residential Development	Subdivie 180 acres into 631 single-family lots, located south of Avenue H between 80 <sup>th</sup> St. and 90 <sup>th</sup> St. West	Approved
3	TTM 060878	Residential Development	157 single-family lots on 39.8 acres at the northeast corner of Avenue G-8 and 85 <sup>th</sup> St. West	Approved
3	TTM 060879	Residential Development	63 single-family lots on 17.7 acres at the northeast corner of Avenue G-8 and 80 <sup>th</sup> St. West	Approved
4	TTM 062758	Residential Development	121 single-family lots on 30 acres located on the southwest corner of 60 <sup>th</sup> St. West and Avenue H	In process
4	TTM 062759	Residential Development	655 single-family lots on 160 acres at the southwest corner of 50 <sup>th</sup> St. West and Avenue H	In process
5	TTM 062979	Residential Development	88 single-family lots on 20 acres located at the southwest corner 45 <sup>th</sup> St. West and Jackman	Approved
6	TTM 060294	Residential Development	97 single-family lots on 30 acres in the northeast corner of 65 <sup>th</sup> St. West and Avenue J	Approved
6	TTM 061038	Residential Development	41 single-family lots on 10 acres located west of 60 <sup>th</sup> St. West, just north of Avenue J	Approved
6	TTM 061118	Residential Development	32 single-family lots on 9.98 acres at the northwest corner of Avenue J and 62 <sup>nd</sup> St. West	Approved
6	TTM 062757	Residential Development	650 single-family lots on 160 acres at the southeast corner of 70 <sup>th</sup> St. West and Avenue J	In process
7	TTM 062332 (tied with 062604)	Residential Development	1,200 active senior adult residences on 70 acres located at the northwest corner of 75 <sup>th</sup> St. West and Avenue K	In process
7	TTM 062604 (tied with 062332)	Residential Development	Senior adult residences on 100 acres between Ave. L and K-4 and 75 <sup>th</sup> St. and 80 <sup>th</sup> St. West	In process
8	Tentative Parcel Map 060938	Residential Development	Create 2 single-family lots from 4.79 acres, north of Avenue L and 650 feet east of 85 <sup>th</sup> Street West	Approved
8	TTM 053641	Residential Development	Subdivide 20 acres into 61 single-family lots in the southwest corner of 75 <sup>th</sup> St. West and Avenue L-8	Approved, construction 94% complete
8	TTM 060057	Residential Development	300 single-family lots on 120 acres located at the southeast corner of Avenue L-8 and 80 <sup>th</sup> St. W.	Approved
8	TTM 062403	Residential Development	205 single-family lots on 64.22 acres at the southeast corner of 80 <sup>th</sup> St. West and Avenue L	Approved
8	TTM 062925	Residential Development	223 single-family lots on 78 acres at the northwest corner of 80 <sup>th</sup> St. West and Avenue M	In process
8	TTM 066062	Residential Development	124 single-family lots on 40 acres at the southeast corner of 85 <sup>th</sup> St. West and Avenue L-8	In process
9	TTM 044439	Residential Development	Subdivide land into 23 single-family lots from 8 acres. Located on the southwest corner of Avenue L-12 and 70 <sup>th</sup> St. West	Approved, map recorded, construction not started
9	TTM 045474	Residential Development	Subdivide 60 acres into 180 single-family lots on the northwest corner of 65 <sup>th</sup> St. West and Avenue L-8	Approved, Construction 30% complete
9	TTM 054369	Residential Development	Subdivide 10 acres into 31 single-family lots in the southwest corner Avenue L and 70 <sup>th</sup> St. West	Approved, Map recorded, construction not started

**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
9	TTM 054370	Residential Development	Subdivide 70 acres into 207 single-family lots located on the northwest corner of Ave. L-8 and 70 <sup>th</sup> St. West	Approved, map recorded, construction not started
9	TTM 061989	Residential Development	56 single-family lots on 20.25 acres at the southwest corner of 67 <sup>th</sup> St. West and Avenue L	Approved
9	TTM 065509	Residential Development	245 single-family lots on 80 acres located at the southeast corner of 75 <sup>th</sup> St. West and Avenue L	In process
9	TTM 066802	Residential Development	118 single-family lots on 40 acres at the northeast corner of 70 <sup>th</sup> St. West and Avenue L-8	In process
10	TTM 053229	Residential Development	Subdivide 483 acres into 1,594 single-family lots, 1 school, 1 park located at 70 <sup>th</sup> Street West and Avenue K	Approved
10	TTM 060450	Residential Development	296 single-family lots on 80.5 acres located on the westside of 60 <sup>th</sup> St W., 660 ft south of Ave. K	Approved, construction in progress
10	TTM 061680	Residential Development	77 single-family lots on 20.25 acres at the southwest corner of 60 <sup>th</sup> St. West and Avenue K	Approved
11	Tentative Tract Map (TTM) 039910	Residential Development	Subdivide lands into 112 single-family lots located on the southwest corner of Avenue L and 55 <sup>th</sup> Street West	Approved, Construction 86% complete
11	TTM 053642	Residential Development	Subdivide 40 acres into 156 single-family lots located at the northeast corner of Avenue K-8 and 60 <sup>th</sup> St. West	Approved
11	TTM 060524	Residential Development	41 single-family lots on 10 acres located at 60 <sup>th</sup> St. West, just south of future Ave. K-8	Approved, map recorded, construction not started
11	TTM 060811	Residential Development	39 single-family lots on 10 acres northeast corner of 60 <sup>th</sup> St. W. and future Ave. K-12	Approved, map recorded, construction 15% complete
11	TTM 060889	Residential Development	85 single-family lots on 25 acres at the northeast corner of Avenue L and 60 <sup>th</sup> St. West	Approved, construction 35% complete
11	TTM 061040	Residential Development	58 single-family lots on 15 acres at the northeast corner of 55 <sup>th</sup> St. West and Avenue K-14	Approved
11	TTM 061041	Residential Development	40 single-family lots on 15 acres at the northeast corner of 55 <sup>th</sup> St. West and Avenue L	Approved
11	TTM 061600	Residential Development	33 single-family lots on 7.5 acres located approx. 640 feet east of 60 <sup>th</sup> St. West and south of Ave. K-12	Approved
12	TTM 054275	Residential Development	Subdivide 40 acres into 156 single-family lots located at the southeast corner Avenue J-8 and 65 <sup>th</sup> St. West	Approved, Construction 92% complete
12	TTM 054276	Residential Development	Subdivide 15 acres into 63 single-family lots on the acres northeast corner of Ave K and future 62 <sup>nd</sup> St. West	Approved, Map recorded, construction not started
12	TTM 054401	Residential Development	Subdivide 63 acres into 261 single-family lots at the northeast corner of Avenue K and 60 <sup>th</sup> St. West	Approved, construction 93% complete
12	TTM 060034	Residential Development	106 single-family lots on 27 acres located at the southeast corner of Avenue J and 60 <sup>th</sup> St. W.	Approved
12	TTM 060502	Residential Development	76 single-family lots on 18 acres at the northwest corner of Avenue K and 62 <sup>nd</sup> St. West	Approved, construction 76% complete
12	TTM 060885	Residential Development	49 single-family lots on 12.51 acres located on the west side of 60 <sup>th</sup> St. West, approximately 290 ft south of Avenue J-8	Approved

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
12	TTM 061042	Residential Development	86 single-family lots on 20 acres at the northeast corner of 60 <sup>th</sup> St. West and Avenue K-4	Approved
12	TTM 061542	Residential Development	22 single-family lots on 5 acres at the southwest corner of 56 <sup>th</sup> St. West and Avenue J-12	Approved
12	TTM 061677	Residential Development	58 single-family lots on 15 acres at the southwest corner of 57 <sup>th</sup> St. West and Avenue K	Approved
12	TTM 061678	Residential Development	58 single-family lots on 14 acres at the southeast corner of 57 <sup>th</sup> St. West and Avenue K	In process
12	TTM 061679	Residential Development	60 single-family lots on 20.15 acres at the southeast corner of 55 <sup>th</sup> St. West and Avenue K	Approved
12	TTM 061734	Residential Development	19 single-family lots on 5 acres, located just north of Avenue J-12, and just west of 60 <sup>th</sup> St.	Approved
12	TTM 061992	Residential Development	21 single-family lots on 5.58 acres at the southwest corner of 60 <sup>th</sup> St. West and Avenue J-12	Approved
12	TTM 062409	Residential Development	36 single-family lots on 10 acres at the northeast corner of 65 <sup>th</sup> St. West and Avenue K	Approved
12	TTM 064922	Residential Development	88 single-family lots on 20 acres at the northwest corner of 60 <sup>th</sup> St. West and Avenue K-12	In process
13	Tentative Parcel Map 061707	Residential Development	Create 2 parcels from 36.13 acres, located on the northwest corner of 50 <sup>th</sup> Street West and Avenue J-8	Approved
13	TTM 060987	Residential Development	42 single-family lots on 10 acres at the southwest corner of 52 <sup>nd</sup> St. W. and Ave. J.	Approved
13	TTM 061489	Residential Development	152 single-family lots on 36.13 acres at the northwest corner of 50 <sup>th</sup> St. West and Avenue J-8	Approved
13	TTM 061490	Residential Development	73 single-family lots on 20 acres at the northeast corner of 55 <sup>th</sup> St. West and Avenue J-8	Approved
13	TTM 061554	Residential Development	20 single-family lots on 5 acres at the northeast corner of 55 <sup>th</sup> ST. West and Avenue J-4	Approved
13	TTM 061920	Residential Development	108 single-family lots on 41 acres at the northeast corner of 55 <sup>th</sup> St. West and Avenue K	Approved
14	TTM 047609	Residential Development	Subdivide 20 acres into 88 single-family lots located on the north side of Avenue K and 945 ft east of 50 <sup>th</sup> St. West	Approved, construction 75% complete
14	TTM 054197	Residential Development	Subdivide 80 acres into 104 single-family lots located at the southeast corner of Avenue J and 50 <sup>th</sup> Street West	Approved, construction 51% complete
14	TTM 060126	Residential Development	20 single-family lots on 4.99 acres located between 46 <sup>th</sup> Street W. & 47 <sup>th</sup> St. West, 660 feet north of Avenue J-8	Approved
14	TTM 060434	Residential Development	39 single-family lots on 10 acres located at the northeast corner of 50 <sup>th</sup> St. West & Avenue k	Approved, construction 31% completed
14	TTM 060435	Residential Development	38 single-family lots on 10 acres at the northwest corner of 45 <sup>th</sup> St. West and Avenue K	Approved, construction 55% completed
15	Condition Use Permit 05-08	Commercial Development	12.5 acres on the northwest corner of Avenue J and 40 <sup>th</sup> St. West	In process
15	TTM 060428	Residential Development	94 single-family lots on 25 acres at the southwest corner 40 <sup>th</sup> ST. West and Avenue J-6	Approved, map recorded, construction has not started
15	TTM 061535	Residential Development	240 single-family lots on 57.6 acres at the southeast corner of 45 <sup>th</sup> St. West and Avenue J	Approved
15	TTM 061921	Residential Development	77 single-family homes on 20.6 acres at the northeast corner of 40 <sup>th</sup> St. West and Avenue J	Approved

**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
15	TTM 062841	Residential Development	60 single-family lots on 10 acres at the northeast corner of 40 <sup>th</sup> St. West and Newgrove	Approved
15	TTM 063346	Residential Development	37 single-family lots on 9.15 acres located at the southwest corner of 37 <sup>th</sup> St. West and Avenue J-4	Approved
15	TTM 065186	Residential Development	74 single-family lots on 17.5 acres at the northeast corner of 42 <sup>nd</sup> St. West and Avenue J	In process
16	TTM 060291	Residential Development	66 single-family lots on 20.72 acres located on the south side of Ave. K-4 west of 35 <sup>th</sup> St. West	In process
16	TTM 060427	Residential Development	77 single-family lots on 21 acres at the northeast corner of 40 <sup>th</sup> St. West and Avenue J-12	Approved, construction 27% completed
16	TTM 060430	Residential Development	82 single-family lots on 22.5 acres at the south side of 37 <sup>th</sup> Street West & Avenue J-11	Approved
16	TTM 060664	Residential Development	39 single-family lots on 8 acres between Ave. K and K-4, 200 feet east of Buena Vista Way	Proposed
16	TTM 061681	Residential Development	58 single-family lots on 15 acres at the southeast corner of 36 <sup>th</sup> St. West and Avenue J-8	Approved
16	TTM 061875	Residential Development	39 single-family lots on 10 acres located on the north side of Avenue K, approximately 330 feet east of 36 <sup>th</sup> St. West	Approved
16	TTM 062121	Residential Development	120 single-family lots on 20.2 acres located at the northwest corner of 40 <sup>th</sup> West and Avenue K	In process
16	TTM 062578	Residential Development	87 single-family lots on 20.1 acres located on the west side of 40 <sup>th</sup> St. West and Avenue J-12	Approved
17	TTM 062331	Mixed Use	43,647 square feet of commercial development and 67 condo/townhomes on 9 acres. Located at the southeast corner of 30 <sup>th</sup> St. West and Avenue K	In process
17	Preliminary Review 05-22	Residential Development	67 unit apartment located at 32 <sup>nd</sup> St. West and Avenue K-4	Preliminary review
18	TTM 053190	Residential Development	Subdivide 18 acres into 73 single-family lots on the southeast corner Avenue J and 60 <sup>th</sup> Street West	Approved, construction 29% complete
18	TTM 060574	Residential Development	29 single-family lots on 10 acres located in the southwest corner of 40 <sup>th</sup> St. W. and Avenue K-12	Approved
18	TTM 061538	Residential Development	35 single-family lots on 20.3 acres at the southwest corner of 35 <sup>th</sup> St. West and Ave. L-4	Approved
18	TTM 061915	Residential Development	33 single-family lots on 20 acres at the northwest corner of 35 <sup>th</sup> St. West and Avenue L-8	Approved
18	TTM 062214	Residential Development	26 single-family lots on 14.5 acres at the northeast corner of 40 <sup>th</sup> and Avenue L-4	In process
18	TTM 062215	Residential Development	24 single-family lots on 12.7 acres at the northeast corner of 40 <sup>th</sup> St. West and Avenue L-8	Approved
19	Tentative Parcel Map 062803	Residential Development	Create 2 parcels from 2.2 acres on the northwest corner of 21 <sup>st</sup> St. West and Ave. L-4	Approved
19	TTM 047394	Residential Development	Subdivide 5 acres into 8 single-family lots acres between 22 <sup>nd</sup> and 23 <sup>rd</sup> St. West and 334 feet south of Avenue L	Approved, Construction 86% complete
19	TTM 047414	Residential Development	Subdivide 5 acres into 8 single-family lots between Avenue L and L-4 and 22 <sup>nd</sup> and 23 <sup>rd</sup> west	Approved, map recorded, construction not started
19	TTM 054286	Residential Development	Subdivide 5 acres into 19 single-family lots located 600 ft west of 25 <sup>th</sup> St. W. between K-12 and K-14	Approved
19	TTM 054411	Residential Development	Subdivide 3.7 acres into 15 single-family lots on the south side of Ave. K-8, approximately 770 feet east of 30 <sup>th</sup> St. W.	Approved

<b>Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route</b>				
Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
19	TTM 061733	Residential Development	18 single-family lots on 10 acres at the northeast corner of 27 <sup>th</sup> St. West and Avenue L-4	Approved
19	TTM 061905	Residential Development	18 single-family lots on 4.22 acres at the southeast corner of 27 <sup>th</sup> St. West and Avenue K-8	Approved
19	TTM 062326	Residential Development	14 single-family lots on 3.74 acres located on the south side of Avenue K-8 approximately 580 feet east of 30 <sup>th</sup> St. West	Approved
20	TTM 054384	Residential Development	Subdivide 10 acres into 17 single-family lots at the southeast corner 35 <sup>th</sup> St. W. and future Ave L-10	Approved
20	TTM 061555	Residential Development	27 single-family lots and 1 open space lot on 18.25 acres at the northeast and southeast corner of 40 <sup>th</sup> St. West and Avenue M	In process
20	TTM 062520	Residential Development	11 single-family lots on 6.8 acres at the northeast corner of 37 <sup>th</sup> St. West and Avenue M	In process
20	TTM 062845	Residential Development	63 single-family lots on 37.02 acres at the northwest corner of 32 <sup>nd</sup> St. and Avenue M	Approved
21	Conditional Use Permit 03-12	New religious facility	5,525 square foot religious center on 4.6 acres on west side of 30 <sup>th</sup> Street West, 1,000 feet south of Avenue L-8	Approved
21	Conditional Use Permit 05-14	School	36,000 square feet of new school buildings located at 42145 30 <sup>th</sup> Street West	Approved
21	TTM 048699	Residential Development	7 single-family lots on 7.9 acres southeast corner of 27 <sup>th</sup> Street West and Ave L-8	Approved
21	TTM 060844	Residential Development	8 single-family lots on 9.4 acres southwest corner of 27 <sup>th</sup> St. West and Ave. L-8	Approved
21	TTM 062247	Residential Development	4 single-family lots on 5.03 acres located at the southeast corner of 28 <sup>th</sup> St. West and Avenue L-10	Approved
21	TTM 062998	Residential Development	15 single-family lots on 10.63 acres at the northeast corner of Avenue M and 32 St. West	Approved
22	TTM 053253	Residential Development	Subdivide 40 acres into 64 single-family lots on the northwest corner of 30 <sup>th</sup> Street West and Ave M-8	Approved, construction 24% complete
22	TTM 060108	Residential Development	17 single-family lots on 10.58 acres located on the northeast corner Avenue M-6 and 35 <sup>th</sup> St. West	Approved
22	TTM 061033	Residential Development	50 single-family lots on 31 acres at the southwest corner of Avenue M and 30 <sup>th</sup> St. West	Approved
22	TTM 061123	Residential Development	67 single-family lots on 40 acres at the southwest corner of Avenue M-8 and 35 <sup>th</sup> St. West	Approved, construction 69% complete
22	TTM 062492	Residential Development	15 single-family lots on 10 acres at the northwest corner of 35 <sup>th</sup> St. West and Avenue M-8	Approved
22	TTM 064249	Residential Development	9 single-family lots on 5 acres at the southwest corner of 32 St. West and Avenue M-4	Approved
22	TTM 064752	Residential Development	8 single-family lots on 5 acres at Avenue M-4 and 35 <sup>th</sup> St. West	In process
23	TTM 060198	Residential Development	Residential Planned Development for 72 single-family lots on 40 acres located on the southeast corner of Ave. M-8 and 45 <sup>th</sup> St. W.	Approved
23	TTM 060348	Residential Development	162 single-family lots in a residential planned development located on 74.48 acres at the northeast corner of 40 <sup>th</sup> St. West and Avenue N	Approved
23	TTM 061342	Residential Development	15 single-family lots on 4.72 acres at the southeast corner of 45 <sup>th</sup> St. W. and Ave. M-12.	Approved
23	TTM 062664	Residential Development	30 single-family lots on 17 acres located on the southeast corner of 40 <sup>th</sup> St. West and Avenue M-4.	Approved
23	TTM 063247	Residential Development	11 single-family lots on 7.23 acres at the northwest corner 42 <sup>nd</sup> St. West and Avenue N.	Approved



**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
<b>City of Palmdale</b>				
1	TTM 60408	Residential Development	Subdivide 20 acres into 48 single-family lots. Located east of 55 <sup>th</sup> Street West between Ave M-12 and Ave N.	Approved 6/16/05
1	TTM 060732 VAR 04-02	Residential Development	Subdivide 9.8 acres into 28 single-family lots. Located on the southeast corner of 20 <sup>th</sup> Street West and Quick Street.	Approved 3/18/04
1	TTM 54339	Residential Development	Subdivide land into 83 lots. Located on the southeast corner of Avenue M and 70 <sup>th</sup> Street West.	Recorded Map
2	TTM 061794	Residential Development	Subdivide 10 acres into 16 single-family lots. Located south of Avenue M-8 and west of 70 <sup>th</sup> Street West.	Submitted 11/2004, remains incomplete
2	TTM 060431	Residential Development	Subdivide approximately 75 acres into 176 single-family lots. Located on the north side of Ave M-8 between 70 <sup>th</sup> and 75 <sup>th</sup> Streets West.	Approved 8/11/04
2	TT 47933 Unit 3 Parent TR 46394	Residential Development	Subdivide land into 86 lots. Located south of Rancho Vista Boulevard at Resort Way	Recorded Map
2	TTM 54301	Residential Development	Subdivide land into 180 lots. Located on the northwest corner of Ave. M-8 and 65 <sup>th</sup> Street West.	Recorded Map
2	TTM 53990	Residential Development	Subdivide land into 25 lots. Located between Ave. M-8 and Ave. M-12, just east of 55 <sup>th</sup> Street West.	Recorded Map
3	TTM 061874	Residential Development	Subdivide 15 acres into 23 lots. Located on the southwest corner of Avenue N and 60 <sup>th</sup> Street West.	Submitted 4/2004, remains incomplete
4	TT 52489	Residential Development	Subdivide land into 21 lots. Located on the north side of Ave. N-8 and east side of 55 <sup>th</sup> Street West.	Recorded Map
4	TT 52490	Residential Development	subdivide land into 21 lots. Located on the northwest corner of Ave. N-8 and 55 <sup>th</sup> Street West.	Recorded Map
4	TT 54075	Residential Development	Subdivide land into 25 lots. Located on the north side of Avenue N-8 and 626 feet west of 55 <sup>th</sup> Street West.	Recorded Map
4	Pre-Application 3-06-7	Commercial Development	Develop a .58-acre parcel into 1 building totaling 3,198 square feet for a fast-food restaurant use. Located on the southwest corner of Ave. N and 50 <sup>th</sup> Street West.	Proposed, not approved
4	SPR 7-05-4	Carl's Jr.	Develop a .63 acre parcel into a commercial restaurant use totaling 2,260 square feet. Located on the southwest corner of 50 <sup>th</sup> Street West and Avenue N.	Approved 9/1/05
5	TTM 60209	Residential Development	Subdivide 20.5 acres into 41 single-family lots. Located on the southwest corner of Avenue M and 70 <sup>th</sup> Street West.	Approved 8/11/04
5	TT 47935 Unit 5 Parent TR 46394	Residential Development	Subdivide land into 107 lots. Located south of Rancho Vista Boulevard and Resort Way.	Recorded Map
6	TTM 061941	Residential Development	Subdivide 60 acres into 150 single-family lots. Located on the west side of 25 <sup>th</sup> Street East, south of the alignment of Joshua Hills Drive	Approved 3/2/06
6	VTT 51606	Residential Development	Subdivide land into 59 lots. Located south of Elizabeth Lake Road and west of 40 <sup>th</sup> Street West (Planning Unit 5D – Ritter Ranch).	Recorded Map
7	CUP 05-09	LA County Fire Station No. 136	1-acre parcel into a fire station (No. 136) totaling 9,199 square feet. Located on the northeast corner of Bolz Road and Town Center Drive.	Approved 7/19/05
7	SPR 1-02-1	Park	Develop 3.37 acres into a park-use with one building (restroom facilities). Located on the northwest corner of Towncenter Drive and Bolz Ranch Road.	Approved 2/20/03
8	TTM 060050	Residential Development	Subdivide 30.08 acres into 65 single-family lots with 2 detention basin lots. Located south of Vista Point Dr. and west of Westcliff St.	Submitted 8/2004, remains incomplete
8	CUP 04-14 / TPM 062432	Commercial Development	Develop 5 acres into a commercial shopping center totaling 39,950 square feet. Located at Rancho Vista Boulevard and Town Center Drive.	Approved 6/16/05

<b>Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route</b>				
Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
9	TTM 062490	Residential Development	Subdivide 12.03 acres into 1 condominium lot. Located on the south side of Rancho Vista Blvd., east of Tilbury Street.	Submitted 2/2005, remains incomplete
9	TTM 51224	Residential Development	Subdivide 31.5 acres into 120 single-family lots and 1 retention basin lot. Located between Boxleaf Road and Desert Lawn Drive, south of UPRR.	Approved 3/30/04
9	TTM 54387	Residential Development	Subdivide 8.93 acres into 35 single-family lots. Located on the northeast corner of Mesquite and Dianron Road	Approved 5/6/04
9	TT 66868 & SPR 4-06-3	Residential Development	Construct 280 condominium units and subdivide 23.8 acres into 20 condominium lots. Located south of Rancho Vista Blvd., west of Tilbury Drive	Submitted 4/2006, remains incomplete
10	VTT 52200 TE	Joshua Ranch Residential Development	Encompassing 793 acres, this residential community includes 539 single-family residential lots. Joshua Ranch also includes a community park, a system of hiking and equestrian trails, and 500 acres of open space. Located north and adjacent to Elizabeth Lake Road, and south of (partially adjacent to) the California Aqueduct (between 35 <sup>th</sup> St. West and 50 <sup>th</sup> St. West).	Tract map has been submitted and is pending approval.
11	TTM 063145	Residential Development	Subdivide 50.56 acres into 240 lots and 2 parks. Located at Parkview Drive and Westland Drive	Approved 6/7/2006
11	VTTM 51508-03	Residential Development (Ritter Ranch)	Subdivide 92.322 acres into 4 lots. Located south of Elizabeth Lake Road and east of Ranch Center Drive (within the Ritter Ranch Specific Plan)	Approved 6/7/2006
11	VTT 51605**	Residential Development (Ritter Ranch)	Subdivide land into 125 lots. Located south of Elizabeth Lake Road and west of 40 <sup>th</sup> Street West (Planning Unit 5V – Ritter Ranch)	Recorded Map
11	TTM 062695 (SPA 05-02)	Land Use change and subdivision	Request to change land use designation from school to single-family residence on 11.85 acres and subdivide land into 42 lots. Located on the southwest corner of Entrar Ave. and Ave. N-8	Approved 10/24/05
11	VTT 51607	Residential Development (Ritter Ranch)	Subdivide land into 82 lots. Located south of Elizabeth Lake Road west of 50 <sup>th</sup> Street West (Planning Unit 5D – Ritter Ranch)	Recorded Map
11	VTT 52093	Residential Development (Ritter Ranch)	Subdivide land into 106 lots. Located on the southeast corner of Westland Drive and Parkview Drive (Planning Unit 5W – Ritter Ranch)	Recorded Map
11	VTT 52116	Residential Development (Ritter Ranch)	Subdivide land into 53 lots. Located southwest of Westland Drive and Parkview Drive (Ritter Ranch)	Recorded Map
12	Pre-App 1-06-8	Residential Development	Subdivide 10 acres into 16 single-family lots. Located on the northeast corner of Rancho Vista Boulevard and 20 <sup>th</sup> Street West	Proposed, not approved
12	Pre-App 2-06-1	Residential Development	Subdivide 2.5 acres into 4 lots. Located on the southwest corner of 20 <sup>th</sup> Street West and Avenue O-12	Proposed, not approved
12	Pre-App 2-06-11	Residential Development	Subdivide 2.5 acres into 8 lots. Located on 22 <sup>nd</sup> St. West, just south of Rancho Vista Blvd.	Proposed, not approved
12	SPR 10-03-2	Residential Development	Develop 12.03 acres into 4 apartment buildings. Located south of Rancho Vista Boulevard and east of Tilbury Drive	Approved 7/12/04
12	Pre-Application 3-06-4	Residential Development	Develop 12.97 acres into a church use to include a pre-school and multi-purpose room consisting of 6 buildings totaling 121,797 square feet. Located on the northeast corner of 25 <sup>th</sup> Street West and Rancho Vista Blvd.	Proposed, not approved
12	CUP 00-10	Highland Church	Develop 4.67 acres into a church consisting of 2 buildings totaling 50,305 square feet. Located at Rancho Vista Boulevard and 21 <sup>st</sup> Street West.	Approved 5/15/01
13	TT 43689 (Parent TR 25144)	Residential Development	Subdivide land into 45 lots. Located southwest of Avenue P and 11 <sup>th</sup> Street West	Recorded Map

**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
13	TT 43690 (Parent TR 25144)	Residential Development	Subdivide land into 62 lots. Located south of Avenue P and east of 15 <sup>th</sup> Street West	Recorded Map
13	TT 43691 (Parent TR 25144)	Residential Development	Subdivide land into 37 lots. Located south of Avenue P and east of 15 <sup>th</sup> Street West	Recorded Map
13	SPR 1-05-1 Maj Mod	Commercial Development	Modify previously approved Site Plan Review (SPR) 1-05-1 to include two outparcels. Located at the northeast corner of Rancho Vista Blvd. and 10 <sup>th</sup> Street West	Approved 11/17/05
13	SPR 1-05-1	Commercial/ Restaurant Development	Modification to building and site to include the division of the building into lease spaces and the addition of two outparcels for retail and restaurant use. Located on the northeast corner of Rancho Vista Blvd. and 10 <sup>th</sup> Street West	Approved 3/3/05
14	SPR 3-06-2	Commercial Development	Develop 1.28 acres into a restaurant use totaling 6,796 square feet. Located at 1225 W. Rancho Vista Blvd.	Submitted 3/8/06, remains incomplete
14	CUP 01-15 Major Modification	Commercial Development	Construct a three-story, 104 unit hotel totaling 46,956 square feet on 2.04 acres. Located at Avenue O-8 and 10 <sup>th</sup> Street West.	Approved 11/24/03
14	CUP 06-01	Commercial Development	Develop a restaurant use totaling 6,000 square feet on 1.2 acres. Located south of Avenue O-8 at the AV Mall.	Approved 3/2/06
14	SPR 1-04-1	Commercial Development	Develop 1.84 acres into a retail/office building totaling 25,080 square feet. Located on the northwest corner of Avenue O-8 and 10 <sup>th</sup> Street West	Approved 2/17/05
14	SPR 10-04-1	Commercial Development	Develop approximately 4 acres into a five commercial buildings totaling 43,250 square feet. Located on 10 <sup>th</sup> Street West between Ave. O-8 and O-4.	Approved 3/2/06
14	CUP 03-03 TPM 27019 EIR 93-1	Commercial Development	Construct a 357,000 square foot shopping center consisting of 9 buildings on 35 acres and a subdivision into 9 parcels. Located on the southeast corner of Avenue O-4 and 10 <sup>th</sup> Street West	Approved 2/19/04 Ongoing
14	CUP 04-15	Cinemark	Construct a 46,500 square foot 12-screen theater on approximately 7.09 acres. Located at Mall Access Ring Road and 15 <sup>th</sup> Street West, south of Avenue O-8	Approved 9/29/04
14	CUP 04-16	Hilton Garden Inn	Develop a 107-room, 4-story hotel consisting of 70,139 square feet on approximately 2.54 acres. Located on the southwest corner of Ave. O-8 and Mall Access Ring Road	Approved 2/3/05
14	SPR 9-04-1	Commercial Development	Develop 1.32 acres into a restaurant use totaling 7,077 square feet. Located south of Ave. O-8 and west of State Route 14	Approved 1/26/05
15	CUP 04-25	Commercial Development	Develop 4.7 acres into a 80,264 square foot mini storage facility. Located north of Ave. O and east of 10 <sup>th</sup> Street West	Approved 6/28/05
16	SPR 2-06-6	Commercial Development	Develop .59 acres into an office building totaling 8,268 square feet. Located north of Ave. N on the west side of 11 <sup>th</sup> Street West	Submitted 2/22/06, remains incomplete
16	SPR 5-05-2	Commercial Development	Develop 1.22 acres into 2 commercial buildings (in 2 phases) totaling 15,986 square feet. Located at the northeast corner of Avenue M-14 and 11 <sup>th</sup> Street West	Approved 10/20/05
17	TPM 063294	Commercial Development	Subdivide 8.73 acres into 2 commercial lots. Located on the Southwest corner of Avenue O and Delta Lane.	Approved 9/1/05
18	TT 46037 Parent Tract TT 52646 Phase of Parent Tract	Residential Development	Subdivide land into 149 lots. Located on the west side of Division Street between Avenue O-4 and O-12	Recorded Map
18	CUP 05-29	Mini-Storage	A proposal to develop 4.15 acres into 11 mini-storage buildings totaling 74,048 square feet. Located on the south side of Rancho Vista Boulevard, east of 3 <sup>rd</sup> Street East	Submitted 12/05, remains incomplete

<b>Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route</b>				
Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
18	CUP 05-10 TPM 062693	Subdivision & Assisted Living	Subdivide 22.53 acres into one (1) lot of 3.67 acre and one (1) lot of 18.69 acres and will develop the 3.67 acre parcel into one building totaling 103,039 square feet. Located at Rancho Vista Boulevard and Fairway Drive.	Approved 10/6/05
18	TPM 060223	Commercial Development	Subdivide the property into 4 parcels and one remainder area. Located on the northwest corner of Sierra Highway and Rancho Vista Boulevard (Avenue P)	Approved 11/20/03
19	Pre-Application 2-06-2	Commercial Development	4.58 acres into a mini-mart and gasoline station consisting of 1 building totaling 22,220 square feet. Located on the southeast corner of Rancho Vista Boulevard and 10 <sup>th</sup> Street East	Proposed, not approved
20	TTM 063211	Residential Development	Subdivide 6.65 acres into 25 single-family lots. Located on the west side of 20 <sup>th</sup> Street West and north of Elizabeth Lake Road	Submitted 7/2005, remains incomplete
20	TTM 060313	Residential Development	Subdivide 8 acres into 20 single-family lots. Located on the southwest corner of Avenue S and Casa Verde Avenue	Approved 1/23/06
20	TTM 061660	Residential Development	Subdivide 5.1 acres into 25 single-family lots with 1 detention basin lot. Located on the northwest corner of Avenue Q-13 and 13 <sup>th</sup> Street East	Approved 1/20/05
20	TT 54058	Residential Development	subdivide land into 492 lots. Located on the south side of Ave. P-8 between 20 <sup>th</sup> Street West and 25 <sup>th</sup> Street West.	Recorded Map
20	TT 48014-01 TT 48014-02 (Parent TR 48014)	Residential Development	Subdivide land into: Phase 1 – 66 lots Phase 2 – 22 lots (90 lots total). Located at 15 <sup>th</sup> Street West and Avenue P-8.	Recorded Map
20	TT 46454	Residential Development	Subdivide 66 acres into 175 lots. Located southwest of Elizabeth Lake Road and 15 <sup>th</sup> Street West	Approved 9/16/04
21	Pre-App 8-05-3	Residential/ Commercial Development	Mixed-use project to include 520 residential units, 100,000 square feet of mixed-use, and 260,000 square feet of commercial on 60 acres. Located between Ave P-4 and Technology Drive on the west side of SR 14	Proposed, not approved
21	Pre-Application 3-06-13	Commercial Development	Develop 6.7 acres into a professional office complex consisting of 9 buildings totaling approximately 72,588 square feet. Located on the northeast corner of Trade Center Dr. and Ave. Q	Proposed, not approved
21	CUP 04-17 CUP 04-20 CUP 04-21	Commercial Development	A request to subdivide 23.34 acres into 5 buildings totaling 40,000 square feet to be utilized as a commercial use (retail, restaurant), request to construct a 91,545 square foot hotel, construct an 87,030 square foot movie theater on 23.74 acres. Located on the southeast corner of Ave. P-8 and 5 <sup>th</sup> St. West	04-17 & 04-21 submitted 10/13/04 CUP 04-20 Approved 12/16/04
21	CUP 05-12	Comfort Inn	A request to develop 1.5 acres into a hotel use consisting of one building totaling approximately 50,000 square feet. Located at Palmdale Blvd. and 5 <sup>th</sup> St. West	Approved 6/15/06
21	CUP 04-07	Commercial Development	Develop 1.26 acres into a medical / general office consisting of one (1) building totaling 27,000 square feet. Located on the south side of Ave. Q, west of 5 <sup>th</sup> Street West	Submitted 4/13/04, remains incomplete
21	SPR 3-05-3	Commercial Development	Construct 34,200 square foot medical office on 2.45 acres. Located on Ave. P-4 and 5 <sup>th</sup> Street West.	Submitted 3/29/05, remains incomplete
21	SPR 2-06-3	Commercial Development	Develop a restaurant use totaling 11,086 square feet on 2.51 acres. Located on the southeast corner of Technology Drive and 10 <sup>th</sup> Street West	Approved 6/1/06
21	TPM 65614	Commercial Development	Subdivide 3.12 acres into 2 commercial lots. Located on the northeast corner of Palmdale Blvd. and Trade Center Drive	Application submitted, no hearing date
21	CUP 05-03 SPA 05-03 / TPM 062502	Commercial Development	Develop 3.59 acres into two buildings (hotel / office use). Located at the northwest corner of Ave. Q and 5 <sup>th</sup> Street West	Approved 10/20/05

**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
21	SPR 1-02-2 Maj Mod	Commercial Development	Develop 3.12 acres into a 30,208 square foot retail uses. Located at 641 W. Palmdale Blvd.	Approved 6/2/05
21	SPR 6-03-1 TPM 060742	Commercial Development	Construct two (2) medical office buildings consisting of 56,000 square feet and to subdivide 5.52 acres into 2 parcels. Located on the northeast corner of 10 <sup>th</sup> Street West and Auto Center Drive	Approved 2/19/04
21	SPR 7-03-1	Commercial Development	Develop a medical office complex consisting of 108,746 square feet of building area. Located on the north side of Palmdale Blvd., between 5 <sup>th</sup> Street West and Trade Center Drive	Approved 7/9/03
21	SPR 6-04-2	Commercial Development	Develop 3.10 acres into a motorcycle dealership use to be completed in two phases. Located at 316 W. Avenue Q	Approved 8/5/04
21	SPR 8-05-1	Commercial Development	Develop a 5.5-acre parcel into a medical office complex (7 buildings) totaling 52,072 square feet. Located on the northeast corner of 10 <sup>th</sup> Street West and Auto Center Drive.	Approved 1/13/06
21	SPR 12-05-3	Commercial Development	Subdivide 4.59 acres into 3 commercial lots and construct a 46,095 square foot motel on 1.9 acres. Located on the southeast corner of 5 <sup>th</sup> Street West and Avenue Q	Approved 1/19/06
21	SPR 12-05-4 TPM 065576	Residential/ Commercial Development	Subdivide 5.33 acres into one (1) lot for condominium purpose and to develop a 69,880 square foot office warehouse use in five (5) buildings. Located on the south side of Commerce Avenue between Trade Center Drive and 5 <sup>th</sup> Street West	Approved 2/16/06
21	CUP 03-09 EIR 02-01	Palmdale Medical Center	Development of a 170 bed general hospital, medical office buildings and a senior housing / assisted living complex on 40 acres. Located on the northeast corner of Avenue Q-7 and Tierra Subida Avenue	Approved 10/7/04
21	SPR 5-01-1 Major Modification	Commercial Development	Construct 2 buildings totaling 30,520 square feet. Located at the northeast corner of Palmdale Boulevard and Trade Center Drive.	Approved 7/15/04
21	SPR 11-03-1	Kawasaki Dealership	Develop 2.04 acres into a retail use consisting of 2 buildings totaling 18,176 square feet. Located at Avenue Q and Carriage Way.	Approved 2/5/04
21	SPR 12-03-1	Hyundai Dealership	Develop 4 acres into an automobile dealership totaling 21,867 square feet. Located on the east side of Carriage Way, south of Auto Center Drive	Approved 2/19/04
22	TTM 061894	Residential Development (Ana Verde Master-Planned Community)	Subdivide 471.85 acres into 350 single-family lots, 3 detention basin lots, 1 school site, 1 fire station, 33 open space lots, and 13 natural open spaces. Located on the south side of Ave. S, west of Parkwood Drive (within the City Ranch Specific Plan)	Approved 3/25/05
22	VTT 51604**	Residential Development	Subdivide land into 126 lots. Located on the northeast corner of Westland Drive and Parkview Drive – Planning Unit 5W – Ritter Ranch	Recorded Map
22	TT 54116	Residential Development (Ana Verde)	Subdivide land into 53 lots. Located at Parkwood Drive and Magnolia (within the City Ranch Specific Plan)	Recorded Map
22	TT 54116-02	Residential Development (Ana Verde)	Subdivide land into 117 lots. Located at Parkwood Drive (within the City Ranch Specific Plan)	Recorded Map
22	TT 54117-03	Residential Development (Ana Verde)	Subdivide land into 81 lots. Located at Parkwood Drive and Greenbrier Street (within the City Ranch Specific Plan)	Recorded Map
22	TT 54117-04	Residential Development (Ana Verde)	Subdivide land into 126 lots. Located at Parkwood Drive and Greenbrier Street (within the City Ranch Specific Plan)	Recorded Map
22	CUP 05-26	LA County Fire Station # 139 (Ana Verde)	Develop 1.3 acres into a fire station totaling 7,092 square feet. Located south of Ave. S and just east of Bridge Road (within the City Ranch Specific Plan)	Submitted 11/16/05, remains incomplete

<b>Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route</b>				
Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
22	SPR 9-03-1	Norm Titcher Park	Develop 10 acres into a park use. Located at The Groves, east of Parkwood Drive.	Approved 12/4/03
22	SPR 9-03-2	Park	Develop 5 acres into a park use. Located at Greenbrier Street, west of Parkwood Drive	Approved 12/4/03
22	SPR 9-03-3	Park	Develop 2 acres into a bike staging area. Located at Mimosa Way and Avenue S.	Approved 12/4/03
23	Pre-App 12-05-4	Residential Development	Develop approximately 1,004 acres into a comprehensive planned residential development with 710 single-family homes. Located 1.2 miles west of SR-14 and south of Ave S.	Proposed, not approved
23	TT 54328	Residential Development	Subdivide 166 acres into 393 single-family residential lots. Located on the north side of Ave. S, between the east boundary of City Ranch Specific Plan and California Aqueduct.	Submitted 6/2004, remains incomplete
24	CUP 98-12	Waste Management Facility	A request for the City of Palmdale to accept and adopt minor changes to the previously approved L. A. County CUP 85162 permitting a landfill with a 54-acre refuse footprint on 94 acres. The applicant is further requesting a 25-acre increase in the footprint area to facilitate connection with the existing landfill and to add approximately 7 acres of ancillary facilities to the southeastern portion of the 94-acre site. Located on the unincorporated portion of Los Angeles County, adjacent and west of the existing landfill.	Submitted 11/1998, hearing July 2006
25	Pre-App 2-06-9	Residential Development	Subdivide 5 acres into 20 lots. Located south of Ave R-8, just West of 5 <sup>th</sup> St. East.	Proposed, not approved
25	SPR 2-05-3	Extra Space Mini-Storage	Develop 1.67 acres into a self-storage complex consisting of 3 buildings totaling 41,835 square feet. Located at 37352 Sierra Highway.	Approved 9/15/05
25	SPR 4-05-1	Secure Mini-Storage	Develop a personal storage facility (mini-warehouse) on 3.68 acres with eight (8) buildings totaling 61,455 square feet. Located at 37560 Sierra Highway.	Approved 1/5/06
26	Pre-App 12-05-3	Residential Development	Develop 4.93 acres into a senior apartment use totaling 214,750 sq. ft. Southeast corner of Ave R and Division Street	Proposed, not approved
26	SPR 6-04-1	Residential Development	Subdivide 4.76 acres into 76 condominium lots. Located on the southeast corner of Division St. and Ave R	Application withdrawn
26	TTM 060287 (PD) 04-02	Residential Development	Subdivide 93 acres into 373 single-family lots (Planned Development). Located on the northwest corner of 5 <sup>th</sup> Street East and Avenue R.	Submitted 1/2005, remains incomplete
26	TTM 62813	Residential Development	Subdivide 22.77 acres with 112 single-family residences and a community area. Located on the southwest corner of Avenue R and 5 <sup>th</sup> Street East.	Submitted 10/2005, remains incomplete
27	Pre-App 11-05-12	Residential Development	Construct apartment building consisting of three units totaling 3,040 square feet. Located 200 feet east of 5 <sup>th</sup> Street East and on the north side of Avenue Q-1.	Proposed, not approved
28	Pre-App 1-06-2	Residential Development	Subdivide approximately 2.3 acres into 7 single-family lots. Located 320 feet south of Avenue Q and to the east of 16 <sup>th</sup> Street East.	Proposed, not approved
29	Pre-App 11-05-8	Residential Development	Develop 3.5 acres into a multi-family use apartments consisting of 5 buildings totaling 72,184 square feet. Located north of Ave R on the west side of 15 <sup>th</sup> Street East.	Proposed, not approved
29	TTM 061895 (Parcel Map)	Residential Development	Subdivide 471.85 acres into 9 parcels. Located on the south side of Avenue S west of Ranch Center Drive.	Approved 2/3/05
30	TTM 64174	Residential Development	Subdivide 2.1 acres into 7 lots. Located south of Ave R, approximately 1,300 feet east of 20 <sup>th</sup> Street East.	Submitted 12/2005, remains incomplete
30	TTM 62333	Residential Development	A request to subdivide 7.18 acres into 22 lots and one detention basin. Located south of Ave R, 1,100 feet east of 20 <sup>th</sup> Street East.	Submitted 10/2005, remains incomplete
30	TTM 53921	Residential Development	Subdivide 30.17 acres into 40 single-family lots. Located south of Avenue N-8 and west of 55 <sup>th</sup> Street West.	Approved 1/15/04

**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
31	Pre-App 1-06-7	Residential Development	Develop 4.5 acres into 3 senior housing apartment buildings totaling 66,120 sq. ft. Locate on the northeast corner of Avenue R and 27 <sup>th</sup> Street East.	Proposed, not approved
31	TTM 64156	Residential Development	Subdivide 8.38 acres into a one lot subdivision (condominium). Located on the east side of 25 <sup>th</sup> Street East and south of Palmdale Boulevard.	Submitted 2/2006, remains incomplete
32	TTM 63551	Residential Development	Subdivide 2.95 acres into 11 lots. Located on 26 <sup>th</sup> Street East just north of Avenue S.	Submitted 12/2005, remains incomplete
33	TTM 63727	Residential Development	Subdivide 2.4 acres into 8 lots. Located southeast of 33 <sup>rd</sup> Street East and Southern Pacific Rail Road.	Submitted 11/2005, remains incomplete
34	TT 46157	Residential Development	Subdivide land into 22 lots. Located on the southwest corner of Avenue M-8 and 65 <sup>th</sup> Street West.	Recorded Map
35	TTM 53342 (Time Extension)	Residential Development	Subdivide 34.07 acres into 100 single-family lots with 1 open space lot. Located at Sandstone Court and 30 <sup>th</sup> Street West.	Approved 1/19/06
36	CUP 04-10 / GPA 04-06 / ZC 04-04 / TPM 061657 / TPM 061658 (see CUP 04-23)	Commercial Development	A request to amend the land use and zoning designations on 26.21 acres from single-family residential to commercial, to develop 192,669 square feet of commercial buildings, to subdivide one 13 acre parcel into 11 lots, and to subdivide the second 13 acre parcel into 10 lots. Located on the northeast and northwest corner of Tierra Subida and Avenue S.	Submitted 6/29/04, hearings on-going
37	CUP 06-04	Commercial Development	Develop an approximately 8 acre parcel into 6 commercial building totaling 75,638 square feet. Located on the northeast corner of Ave. Q-8 and 5 <sup>th</sup> Street West.	Approved 6/15/06
<b>Los Angeles County</b>				
1	TR50441	Residential Development	5 single-family lots on 2 acres located at 04537 West Avenue K8.	Inactive
2	TR53882	Residential Development	16 single-family lots on 3 acres located south of Avenue L8, between 45 <sup>th</sup> Street and 42 <sup>nd</sup> Street.	Pending
3	TR062832	Residential Development	19 single-family lots on 7 acres located northeast of Avenue M8 and 57 <sup>th</sup> Street.	Pending
4	PM26903	Commercial Development	5 acres of commercial development located on the corner of Avenue N and 50 <sup>th</sup> Street West.	Approved
5	TR45865	Residential Development	268 single-family lots on 887 acres located southwest of the Elizabeth Lake Road and Bouquet Canyon Road intersection.	Inactive
5	TR48552	Residential Development	46 single-family lots on 112 acres located north of Lost Valley Ranch Road and in the vicinity of 90 <sup>th</sup> Street West and 92 Street West.	Inactive
6	TR48722	Residential Development	88 single-family lots on 302 acres located north of Elizabeth Lake Road in the vicinity of 65 <sup>th</sup> Street and Godde Hill, just south of Avenue S.	Inactive
7	TR51521	Residential Development	159 single-family lots on 246 acres located 3½ miles north of interstate 14, just south of Avenue S in the vicinity of Shannon Valley Road.	Pending
8	TR060048	Residential Development	37 single-family lots on 40 acres located south of Habienda Drive and east of the 14 freeway.	Pending
8	TR45950	Residential Development	9 single-family lots on 10 acres located north of Avenue S4 and west of Camares Drive.	Inactive
8	TR48308	Residential Development	15 single-family lots on 17 acres located at the northeast corner of Tierra Subida Avenue and Hacienda Drive.	Approved
8	TR49361	Residential Development	7 single-family lots on 8 acres located south of Sierra Ancha Drive and east of Felicitas Avenue.	Inactive
9	TR48307	Residential Development	67 single-family lots on 83 acres located east of Highway 14, west of Barren Avenue and south of the California Aqueduct.	Pending
9	TR52934	Residential Development	28 single-family lots on 31 acres located at the southeast corner of Lakeview Drive and El Camino Drive.	Pending
10	TR060387	Residential Development	12 single-family lots on 14 acres located at 36005 52 <sup>nd</sup> Street East.	Pending

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
11	TR48763	Residential Development	11 single-family lots on 39 acres located along Mount Emma Road near 47 <sup>th</sup> Street.	Inactive
12	TR48842	Residential Development	15 single-family lots on 8 acres located east of Carson Mesa Road and the Angeles Forest Highway	Inactive
13	PM18114	Residential Development	5 single-family lots on 56 acres located south of Fatima Avenue near Tuckerway Ranch Road.	Recorded
13	PM20234	Residential Development	4 familt lots and 21 condo units on 41 acres located along Karak Road near Mountain Springs, west of Silma Street.	Approved
13	TR43196	Residential Development	22 single-family lots on 25 acres located north of Sierra Highway and west of Desert Road.	Approved
13	TR46714	Residential Development	11 single-family lots on 31 acres located between McEnnery Canyon Road and Clanfield Street about ¼ mile north of Highway 14 .	Recorded
13	TR49240	Residential Development (Star Point Ranch)	72 single-family lots on 220 acres located east of Starset Drive and west of Wild Hare Road.	Recorded
13	TR49601	Residential Development	72 single-family lots on 134 acres located east of Aspen Street and south of Hawk Free Court.	Recorded
13	TR53525	Residential Development	30 single-family lots on 60 acres located north of Kalman Street and east of Hacienda Road.	Pending
14	TR061708	Residential Development	10 single-family lots on 11 acres located on Sierra Highway just south of Galloping Way.	Pending
15	TR52637	Residential Development	10 single-family lots on 14 acres located near Santiago Road and Danny Drive.	Pending
16	TR52882	Residential Development	81 single-family lots on 29 acres located south of Kentucky Springs Road, between El Sastre Road and William Trail.	Approved
17	TR46647	Residential Development	9 single-family lots on 19 acres located north of Alison CanyonvRoad and Carson Mesa Road and east of Tindale Avenue.	Recorded
18	TR44443	Residential Development	20 single-family lots on 40 acres located east of Cedarcroft Road on both sides of Avenue Y8.	Recorded
18	TR54337	Residential Development	5 single-family lots on 80 acres located near Calmgarden Road and Silverset Road.	Pending
19	TR062702	Residential Development	5 single-family lots on 8 acres located north of Soledad Canyon Road near Polk Avenue.	Pending
20	TR47718	Residential Development	86 single-family lots on 199 acres located to the east of 31 <sup>st</sup> Street and to the west of Crown Valley Parkway in the vicinity of Tomales Road	Approved
21	TR48071	Residential Development	10 single-family lots on 30 acres located south of Bandell Street between Brinville Rd. and Sand Creek Drive.	Inactive
21	TR49370	Residential Development	8 single-family lots on 8 acres located on Crown Valley Road, north of Sierra Highway and west of Burro Road.	Inactive
21	TR49998	Residential Development	8 single-family lots on 12 acres located in the vicinity of Crown Valley Road and Kalman Street.	Inactive
21	TR52883	Residential Development	71 single-family lots on 108 acres located in the vicinity of Crown Valley Road and Dwight Lee Street, west of the termination of Westcoatt Street and north of Governor Mine Road.	Approved
22	TR060464	Residential Development	56 single-family lots on 84 acres located north of Cedral Street and to the west of Eager Road.	Pending
22	TR46101	Residential Development	10 single-family lots on 6 acres located on the corner of Banson Street and 41 <sup>st</sup> Street.	Pending
22	TR46104	Residential Development	10 single-family lots on 10 acres located at the corner of Crown Valley Road and Cedral Street	Inactive
22	TR46654	Residential Development	18 single-family lots on 31 acres located on the west side of Acklins Avenue, just south of Banson Street	Inactive
23	TR062985	Residential Development	16 single-family lots on 19 acres located at the northeast corner of Crown Valley Road and Banson Street	Pending
23	TR43526	Residential Development	135 single-family lots on 172 acres located between Crown Valley Road and Wisconsin Street, just north of Soledad Canyon Road	Recorded



**Table E-4-4. Cumulative Project List: Approved and Reasonably Foreseeable Projects Within Five Miles of the Proposed Project Route**

Map ID	Tract No.	Project Type / Name	Project Description and Location	Status
23	TR44363	Residential Development	14 single-family lots on 4 acres located in the northwest corner of Syracuse Avenue and Crown Valley Road	Inactive
23	TR45695	Residential Development	6 single-family lots on 8 acres located on Aliso Street just west of Crown Valley Road	Inactive
23	TR48391	Residential Development	10 single-family lots on 4 acres located at the corner of Syracuse Avenue and 2 <sup>nd</sup> Street	Inactive
24	TR46205	Residential Development	70 single-family lots on 120 acres located west of Escondido Canyon Road and north of Hubbard Road	Recorded
24	TR48230	Residential Development	80 single-family lots on 157 acres located north of Sacramento Street and Hubbard Road	Pending
24	TR48252	Residential Development	12 single-family lots on 25 acres located west of Escondido Canyon Road and bisected by Martinez Road	Inactive
24	TR48937	Residential Development	5 single-family lots on 5 acres located on Escondido Canyon Road, just north of Roberts Road	Inactive
24	TR48953	Residential Development	18 single-family lots on 114 acres located 2 miles south of Ward Road in the vicinity of Hubbard Road	Inactive
25	TR46712	Residential Development	5 single-family lots on 68 acres located north/northwest of Soledad Canyon Road near Arrastre Canyon Road	Recorded
26	TR49042	Residential Development	27 single-family lots on 54 acres located north of the 14 freeway at 06527 Valley Sage Rd.	Pending
27	TR46568	Residential Development	42 single-family lots on 225 acres located within the Angeles National Forest at 35100 Anthony Road	Approved
28	TR44434	Residential Development	50 single-family lots on 101 acres located at 10122 Sierra Highway in the unincorporated community of Agua Dulce	Inactive
29	TR50385	Residential Development (Agua Dulce Residential Project)	251 single-family lots on 849 acres, located in the unincorporated community of Agua Dulce. The project area is bordered by State Route 14 on the south/southeast and the Sierra Highway to the north.	Recorded
30	TR062358	Residential Development	21 single-family lots on 27 acres located south of Avenue R8 and north of Avenue S, near Felicitas Avenue	Pending

## Figure Links

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(Click to activate)

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**E-1A**

**Cumulative Map**

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**E-1B**

**Cumulative Map**

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