

## C.14 Utilities and Service Systems

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This section addresses the environmental setting and impacts to utility and service systems from the proposed Project and the alternatives identified in Section B, Description of Proposed Project/Action and Alternatives. This analysis focuses on the capacities and capabilities of existing utility and service systems and examines how the proposed Project would affect these systems. Sections C.14.1 and C.14.2 describe the environmental and regulatory utility and service system setting, respectively. Section C.14.3 provides analysis and discussion of utility and service system impacts resulting from the proposed Project. Also included in Section C.14.3 are the analyses of the alternatives and proposed mitigation. Section C.14.4 provides an analysis of cumulative impacts.

For the purposes of this analysis, potential impacts are analyzed for the area traversed by the corridor of proposed Project and alternatives, including the Cities of Santa Clarita, Lancaster, and Palmdale; the unincorporated communities of Leona Valley, Agua Dulce, Forrest Park, and Bouquet Canyon in Los Angeles County; National Forest System (NFS) lands; and BLM lands.

### C.14.1 Affected Environment

This analysis examines utility and service systems provisions for the proposed Project route. Because government agencies have recently categorized data pertaining to utility systems (including their location, capacity, and type) as sensitive critical infrastructure information, public access to these data is generally restricted for security reasons. As such, only information that is readily and publicly accessible is presented in this section. While additional data would provide a better picture of the existing utilities in the Project area, in large part, this level of detail is unnecessary for the level of analysis needed to determine the impacts generated by the Project.

The proposed Project and alternatives area is served by utility and service systems in Los Angeles County and within the Cities of Santa Clarita, Lancaster, and Palmdale. In addition, Project activities would occur on NFS lands. A variety of local purveyors in these areas provide and maintain utility and service system facilities associated with electricity, water, stormwater and wastewater, solid waste, and natural gas. Municipally operated lines provide sewer services in each of the jurisdictions. Similarly, stormwater flows are conveyed by the flood control facilities of each respective jurisdiction. Underground Service Alert (also known as USA or “Dig Alert”), a non-profit organization supported by utility firms, provides specific information on the location of underground utilities to contractors upon request, prior to construction. Table C.14-1 summarizes the public services and utilities providers serving the Project area.

Water service is provided to jurisdictions in the Project area by a variety of water purveyors generally through the public works or utilities departments of the jurisdictions shown in Table C.14-1. Local supplies and the California Aqueduct system provide potable water for the Project route. Sewer services, stormwater, and wastewater conveyance facilities are supplied by each jurisdiction as listed in Table C.14-1. Additionally, each jurisdiction provides waste management services through regional landfills and permitted disposal facilities. Table C.14-2 lists the total and remaining capacities of solid waste facilities serving the Project area.

<b>Table C.14-1. Utility and Service Providers by Jurisdiction</b>	
<b>Jurisdiction</b>	<b>Utility or Service System Provider*</b>
City of Santa Clarita	<p><b>Natural Gas</b>– Southern California Gas Company  <b>Electricity</b>– Southern California Edison  <b>Water</b> – Newhall County Water District; Santa Clarita Water Company, Valencia Water Company, and Castaic Lake Water District; Central Basin Municipal Water District  <b>Wastewater</b> – Los Angeles County Sanitation District  <b>Solid Waste</b> – Chiquita Canyon Landfill/Consolidated Disposal Service; Antelope Valley Recycling and Disposal Facility/Waste Management, Inc.  <b>Landfills Used</b> – Chiquita Canyon Landfill</p>
City of Lancaster	<p><b>Natural Gas</b>– Southern California Gas Company  <b>Electricity</b>– Southern California Edison  <b>Water</b> – Los Angeles County Water Works; Antelope Valley-East Kern Water Agency  <b>Wastewater</b> – Los Angeles County Sewer Maintenance  <b>Solid Waste</b> – Lancaster Landfill/Waste Management, Inc.; Antelope Valley Recycling and Disposal Facility/Waste Management, Inc.  <b>Landfills Used</b> – Sunshine Canyon Landfill</p>
City of Palmdale	<p><b>Natural Gas</b>– Southern California Gas Company  <b>Electricity</b>– Southern California Edison  <b>Water</b> – Palmdale Water District; Antelope Valley-East Kern Water Agency  <b>Wastewater</b> – Los Angeles County Sanitation District  <b>Solid Waste</b> –Antelope Valley Public Landfill I/Waste Management, Inc.  <b>Landfills Used</b> – Antelope Valley Public Landfill I</p>
Los Angeles County	<p><b>Natural Gas</b> – Southern California Gas Company  <b>Electricity</b> – City of Los Angeles Department of Water and Power; Southern California Edison  <b>Water</b> – Los Angeles County Department of Public Works; City of Los Angeles Department of Water and Power; Antelope Valley-East Kern Water Agency; Central/West Basin Municipal Water District; Calleguas Municipal Water District, Camrosa Water District, Casitas Municipal Water District - Castaic Lake Water Agency, Central Basin Municipal Water District; Las Virgenes Municipal Water District, Metropolitan Water District of Southern California  <b>Wastewater</b> – Los Angeles County Sanitation District  <b>Solid Waste</b> – Chiquita Canyon Landfill/Consolidated Disposal Service; Antelope Valley Recycling and Disposal Facility/Waste Management, Inc.; Lancaster Landfill/Waste Management, Inc.; Angeles Western Paper Fibers MRF&amp;Transfer Station/General Recycling Services; Commerce Refuse-to-Energy Facility/Sanitation Districts of Los Angeles County; Bradley Landfill &amp; Recycling Center/Waste Management, Inc., Scholl Canyon Landfill/Sanitation Districts of Los Angeles County; Sunshine Canyon Landfill/BFI Waste Systems of North America, Inc.; Innovative Waste Control/Innovative Waste Control; Mission Road Recycling &amp; Transfer Station/Waste Management, Inc.; Nu-Way Live Oak Landfill/Waste Management, Inc.; Peck Road Gravel Pit/Peck Road Gravel Pit; United Waste Recycling &amp; Transfer, Inc./Athens Disposal Company; American Waste Transfer Station/Consolidated Disposal Service; Bel-Art Waste Transfer Station/Consolidated Disposal Service; Browning Ferris Industries Recycling &amp; Transfer Station/Browning Ferris Industries; Falcon Refuse Center, Inc./Browning Ferris Industries; Ray's Trash Box Service/Ray's Trash Box; Calabasas Landfill/Sanitation Districts of Los Angeles County.  <b>Landfills Used</b> – Antelope Valley Public Landfill I ; Azusa Land Reclamation Co. Landfill; Calabasas Landfill; Chiquita Canyon Landfill ; Puente Hills Landfill; Scholl Canyon Landfill; Sunshine Canyon Landfill; Simi Valley Landfill-Recycling Center  <b>Transformation Facilities (Waste-To-Energy) Used</b> – Commerce Refuse-To-Energy Facility; Southeast Resource Recovery Facility (SERRF)</p>

Sources: SCE, 2004; City of Santa Clarita, 2005; Los Angeles County Department of Public Works, 2005; Los Angeles County Sanitation Districts, 2005.  
 \*Not all information publicly available.

### **C.14.1.1 Solid Waste**

The private waste management services identified above provide each jurisdiction with solid waste disposal through the use of regional landfills and permitted treatment and disposal facilities. Table C.14-2 lists the total and remaining capacities of solid waste facilities serving the Project area.

<b>Table C.14-2. Solid Waste Capacity</b>				
Facility Name	Total Capacity (cubic yards)	Remaining Capacity (cubic yards)	Remaining Capacity (%)	Maximum Throughput (tons/day)
<b>Landfills</b>				
Antelope Valley Public Landfill I	6,480,000	2,978,143	46	1,400
Azusa Land Reclamation Co. Landfill	66,670,000	34,100,000	51	6,500
Calabasas Landfill	69,700,000	25,400,000	36	3,500
Chiquita Canyon Landfill	49,889,550	26,024,360	52	6,000
Puente Hills Landfill	106,400,000	20,200,000	19	13,200
Scholl Canyon Landfill	69,200,000	18,229,167	26	3,400
Sunshine Canyon Landfill Extension	23,720,000	16,000,000	67	6,600
Simi Valley Landfill-Recycling Center	43,500,000	9,473,131	22	3,000
<b>Transformation Facilities (Waste-to-Energy)</b>				
Commerce Refuse-To-Energy Facility	N/A	N/A	N/A	1,000
Southeast Resource Recovery Facility	N/A	N/A	N/A	N/A

Source: CIMMB, 2005.

### C.14.1.2 Water Supply

Approximately two-thirds of the water sources for southern California are located in northern California. The State Water Project (SWP) brings water to southern California, including water deliveries to the Castaic Lake Water Agency (CLWA), Metropolitan Water District of Southern California (MWD), Palmdale Water District, and Antelope Valley-East Kern Water Agency (AVEK), all of which supply the water providers used by each jurisdiction potentially affected by the proposed Project and alternatives (CLWA, 2005; Los Angeles County Department of Public Works, 2005; MWD, 2005; DWR, 2004). The State Water Project is a water delivery system of 29 reservoirs, 17 pumping plants, 5 power plants, and 660 miles of aqueducts and canals, operated by the California Department of Water Resources. The water suppliers listed above in Table C.14-1 supplement water from the SWP with groundwater and aquifer storage and recharge. Additionally, the ANF includes over 385 miles of streams and 6,765 acres of reservoirs, which also serve to provide water for southern California. The entirety of the ANF's watersheds serve as public water supplies, with water rights filed for 100 percent of the watersheds (USDA, 2004). This diverse mix of sources provides flexibility in managing supplies and resources in wet and dry years.

Table C.14-3 lists the primary water agencies providing water supplies to the jurisdictions potentially affected by the proposed Project and alternatives along with each agency's annual water entitlement under the SWP, the average annual SWP water used, and estimated groundwater supply.

Water Agency	Maximum Annual SWP Entitlement (acre-feet)	Annual SWP Entitlement Utilized (acre-feet)	Estimated Groundwater Supply Utilized (acre-feet)
Antelope Valley-East Kern Water Agency	138,400	97,566	0
Castaic Lake Water Agency	82,500	47,200	40,300
Palmdale Water District	21,300	14,697 – 16,401	10,300
Metropolitan Water District of Southern California	2,011,500	1,220,000	1,274,000

Source: DWR, 2004; AVEK, 2005; CLWA, 2005; PWD, 2005; PWD, 2006; MWD, 2003.

## C.14.2 Regulatory Framework

The following section presents the federal, State, regional and local utility and service system regulations, plans, and standards that are directly applicable to the proposed Project and alternatives.

### C.14.2.1 Federal

The 2005 Angeles National Forest Land Management Plan (Forest Plan) includes regulations related to utilities. However, all of these regulations are associated with the NFS lands used for utilities. The 2005 Forest Plan addresses utilities by discussing the demand for water in terms of maintaining a healthy and stable watershed and providing for utility and infrastructure uses through special-use authorizations. The Forest Plan emphasizes that special uses are only authorized when they cannot be reasonably accommodated on non-Forest System lands. However, none of the utility-related policies in the 2005 Forest Plan address the National Forest System’s demand on utilities or disruption of utility services. Forest Plan policies associated with the use of lands by utilities are analyzed in detail in Table C.9-3 (Consistency with Applicable Land Use Plans and Policies), in Section C.9 (Land Use).

### C.14.2.2 State

**Protection of Underground Infrastructure.** The responsibilities of utility operators working in the vicinity of utilities are detailed in Section 1, Chapter 3.1 “Protection of Underground Infrastructure,” Article 2 of California Government Code 4216-4216.9. This law requires that an excavator must contact a regional notification center at least two days prior to excavation of any subsurface installation. Any utility provider seeking to begin a project that may damage underground infrastructure can call Underground Service Alert, the regional notification center. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

**California Integrated Waste Management Board Solid Waste Policies, Plans, and Regulations.** The Integrated Waste Management Act of 1989 (PRC 40050 et. seq. or Assembly Bill (AB) 939, codified in PRC 40000), administered by the California Integrated Waste Management Board, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

### C.14.2.3 Local

**City of Santa Clarita General Plan: Public Services, Facilities, and Utilities Element.** The following goals within the City of Santa Clarita General Plan are applicable to the proposed Project:

- Goal 1: Work with utilities and other service providers to ensure adequate and safe public infrastructure and public services for City residents, including upgrading and expansion of existing deficient systems.

**City of Lancaster General Plan: Plan for Municipal Services and Facilities.** The following goals and specific policies relating to utilities and service systems, as contained in the City of Lancaster General Plan are applicable to the proposed Project:

- Goal 15: Provide a full range of municipal services and facilities at desired levels for urban and rural areas, as appropriate
- Policy 15.1.1. Promote continued coordination between the City of Lancaster and Local Service Providers.
- Policy 15.2.2. Minimize the generation of solid wastes as required by State Law (AB 939) through an integrated program of public education, source reduction, and recycling.

### C.14.3 Significance Criteria

Significant impacts to utilities and service systems would occur if any of the following would occur:

- Criterion UTL1: The proposed Project would substantially change the ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater
- Criterion UTL2: The proposed Project would require new or expanded water entitlements and resources to accommodate the demands of the proposed Project
- Criterion UTL3: Activities associated with the proposed Project are not able to adhere to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment
- Criterion UTL4: The proposed Project would result in a major reduction or interruption of existing utility systems or would cause a collocation accident.

### C.14.4 Applicant-Proposed Measures (APMs)

There are no APMs proposed by SCE within the PEA for utilities and service systems.

### C.14.5 Impact Analysis: Proposed Project/Action

#### **Ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater (Criterion UTL1)**

As the proposed Project would require large quantities of water and generate large quantities of waste in a manner that would affect service providers' existing capacities, the water treatment, wastewater treatment, and solid waste requirements of the Project are analyzed below under Impacts U-1, U-2, and U-3.

***Impact U-1: Construction and operational utility and service system demands would change the ability of water utilities and service system facilities to accommodate local demands.***

Approximately 5.82 acre-feet of water would be required during project construction for dust abatement and cleaning of construction equipment. The amount of water required depends on the length of access roads used, weather conditions, road surface conditions, and other site-specific conditions. The estimation of water

consumption includes the implementation of the air quality Mitigation Measure A-1a (Implement Fugitive Dust Control Plan) in Section C.2 (Air Quality) that specifies the use of soil binders on unpaved roads, staging areas and parking areas. This mitigation measure would reduce project water use substantially as the soil binder would generally only require a one time application rather than repeated, twice or three times daily, watering of the active unpaved roads, staging areas, and parking areas. Daily watering of the active construction areas will be required, and the water use estimate assumes that on average:

- 8,000 gallons of water will be consumed during the road work activities (including soil binder application)
- 2,000 gallons per day per tower site will be consumed during the tower site construction activities
- 2,000 gallons per day combined will be consumed at the marshalling and staging yards, and
- 4,000 gallons per day will be consumed during the site preparation construction activities at the Antelope Substation.

This amount of active site water use is assumed to be necessary to comply with the watering requirements of air quality Mitigation Measure A-1a (Implement Fugitive Dust Control Plan). Non-potable water would be used for dust control when available. The water use estimate also includes an estimate of the amount of water necessary to make the concrete used during project construction. The water use estimate is assumed to include the comparatively small amounts of water needed for sanitary and drinking purposes. The proposed Project would be constructed with insulators which do not require cleaning. Consequently, once constructed, the proposed Project would require negligible amounts of water for maintenance activities. As identified in Table C.14-1, the Project route is served by a variety of water sources that would supply the required water for the proposed Project. Dust suppression efforts are expected to occur on each day that grading activities take place.

The 5.82 acre-feet estimated for use during construction accounts for 0.0004 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for the proposed Project were to come from the water agency with the smallest entitlement, Palmdale Water District, proposed Project water use would constitute only 0.04 percent of the Water District's annual SWP entitlement utilized. It is anticipated, however, that water from each of the jurisdiction's water agencies would be used.

Water use during Project construction would be a minute fraction of the total water supply for the jurisdictions affected by the proposed Project and would not change the ability of the water suppliers identified in Table C.14-1 in serving the Project area demands. Therefore, the water demand for construction of the proposed Project would not be a significant impact (**Class III**) on the regional water supply, and no mitigation is recommended.

***Impact U-2: Construction and operational utility and service system demands would change the ability of solid waste utilities and service system facilities to accommodate local demands.***

Proposed Project construction would generate waste largely in the form of soil, concrete from existing foundations, utility line cable, and scrap metal/wood from the replacement of existing towers. The proposed Project would include the removal of 17.5 miles of existing 66-kV transmission line, including 119 existing 66-kV towers, foundations, and ancillary improvements. As described in Section B, Project Description, Table B.2-7 (Estimates of Construction Waste), proposed Project construction would result in a total of 2,620 tons of recyclable/disposable pounds of waste. All waste material would be disposed of in off-site landfills outside of NFS lands. Metal from the tower structures would be transported by truck or helicopter to staging areas for dismantling and hauled to a recycling plant. Removed conductor wiring would be transported to a material and equipment yard where it would be prepared for recycling. Soil and vegetative material, along with wood from

cribbing, sanitation waste, concrete waste, and other construction debris would be hauled off site for recycling or disposal at local landfills. Soil from drilling or excavation for new tower foundations would be screened and separated for use as backfill materials at the site of origin to the maximum extent possible. Spoils unsuitable for backfill use would be disposed of at appropriate disposal sites. As identified in Table C.14-2, the Project route is served by a variety of waste management agencies and landfills. Due to the number and capacity of landfills serving the Project area, capacity for materials generated from construction of the proposed Project would be available. Because the exact amount of material recycling is unknown, the total amount of waste requiring landfill disposal is unknown. Recycling activities would greatly reduce the quantity of construction-related materials transported to local landfills. Even if none of the waste material were recyclable, however, these 2,620 tons of waste would be disposed of over a period of 13 months. For all of the landfills described in Table C.14-2 except the Antelope Valley Public Landfill I and the Simi Valley Landfill-Recycling Center, this is less than each landfill's maximum throughput for a single day. As the waste generated by the proposed Project would occur over a 13-month period, the average daily waste exported off site would be approximately 10 tons per day of construction. This would be a minute fraction of the maximum daily throughput for any of the landfills identified in Table C.14-2. Therefore, construction waste generated by the proposed Project would not substantially affect the remaining capacities of local landfills to serve local demands. Although impacts would not be significant (**Class III**), to further reduce adverse effects, Mitigation Measure U-2 would ensure that maximum recycling activities would occur. Operation of the transmission line would not generate solid waste and would therefore not affect existing landfill capacities. Impacts to solid waste facilities would not be significant.

***Mitigation Measures for Impact U-2***

**U-2: Recycle Construction Waste.** To comply with the Integrated Waste Management Act of 1989, during Project construction SCE and/or its construction contractor shall recycle a minimum of 50 percent of the waste generated during construction activities. Following the completion of construction activities, SCE shall provide the CPUC and Forest Service with documentation from the recycling and landfill facilities used to show that the amount of waste recycled was 50 percent or more.

***Impact U-3: Construction and operational utility and service system demands would change the ability of stormwater and wastewater utilities and service system facilities to accommodate local demands.***

As discussed in Section C.8, Hydrology and Water Quality, the proposed Project would not significantly generate or increase stormwater runoff in a manner that would affect wastewater treatment. While the construction of new tower foundations and new footings would incrementally increase non-permeable surfaces along the proposed route, the existing footings and foundations would be removed and backfilled with soil, thus equaling the permeable surface area in the existing tower locations. The proposed Project would result in the removal of 119 existing towers, and replace them with approximately 117 new towers. There would be little total change in the amount of runoff resulting from the proposed Project. Wastewater generated during proposed Project construction would be limited to that generated by Project personnel and would be accommodated by portable toilets brought to staging areas for construction crews. These portable toilets would be emptied into septic tanks or municipal sewage systems. As indicated in Section B, Project Description, Table B.2-2 (Project Labor Force Requirements), the workforce necessary for construction of the proposed Project is anticipated to range from approximately 20 to 120 personnel, with an estimated average daily workforce of 50 personnel. Waste generated during Project construction is not expected to significantly impact the capacity of wastewater providers identified in Table C.14-1. As the ANF has no wastewater treatment

facilities, there would be no impacts on NFS lands. Because no new operational employees would be needed at the substation, operation of the proposed Project substation would not generate wastewater in amounts exceeding the capacity of local facilities. Therefore, generation of wastewater and stormwater as a result of the proposed Project would not result in a significant demand on stormwater or wastewater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area. This impact would not be significant and no mitigation is recommended (**Class III**).

**Requirements for new or expanded water entitlements and resources to accommodate construction and operational demands (Criterion UTL2)**

As discussed above in Impact U-1, during Project construction, water would be required for dust suppression and cleaning of construction equipment. The amount of water required would be largely dependent on site-specific conditions.

***Impact U-4: Construction and operational water supply demands would require new or expanded water entitlements or resources.***

As identified in Table C.14-1, the Project route is served by a variety of water sources that should adequately supply the required water. As described above, approximately 5.82 acre-feet of water would be used over the 13-month period of the Project. This would be a minute fraction of the total water supply of the Project area. Therefore, water used during construction would not substantially change the demands of the water suppliers identified in Table C.14-1, and would not require new or expanded water facilities, sources, or entitlements. The proposed Project would be constructed with insulators which do not require cleaning. Consequently, once constructed, the proposed Project would require negligible amounts of water for maintenance activities. Water demands of the proposed Project would not be significant and no mitigation is recommended (**Class III**).

**Construction and operational activities not in adherence to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment (Criterion UTL3)**

As described above under Impact U-2, construction activities would generate approximately 2,620 tons of waste and project operations would generate no waste. The disposal of waste generated during construction under the Integrated Waste Management Act of 1989 is discussed below, under Impact U-5. Project operations would not generate solid waste in excess of SCE's current operations in the area, and would not affect existing landfill capacities. Therefore, operation of the Project would not result in impacts to federal, State, and/or local laws, regulations, and/or standards relating to solid waste. Furthermore, as discussed in Section C.8, Hydrology and Water Quality, the proposed Project would not significantly generate or increase stormwater runoff. The proposed Project would not violate any federal, State, and/or local water quality standard or waste discharge requirement.

***Impact U-5: The amount of waste material recycled during construction activities would not adhere to State standards.***

As described in Section B, Project Description, and above, removed conductor wiring and metal from replaced tower structures would be dismantled and recycled. Soil from drilling or excavation would be screened and separated for use as backfill to the maximum extent possible. Other waste such as packing crates, spare bolts, and other construction debris would be hauled off site for recycling when possible. Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction would ensure the proposed Project's compliance with the Integrated Waste Management Act of 1989 and



Assembly Bill 939 by incorporating the maximum recycling efforts during Project construction. With the implementation of Mitigation Measure U-2 (Recycle Construction Waste), described above, this impact would be less than significant (**Class II**).

### **Construction activities resulting in a major reduction or interruption of existing utility systems or causing a collocation accident (Criterion UTL4)**

The proposed substation site and ROW have the potential to cross existing utility lines such as water, telecommunications, drainage/sewerage, and other electrical utility lines. While the proposed Project would follow the existing SCE 66-kV ROW, the expansion of this ROW from 50 to 180 feet in width on non-NFS lands and from 100 to 160 on NFS lands could result in the crossing or collocation of new towers on or adjacent to existing utility lines. However, as required by Section 1, Chapter 3.1 “Protection of Underground Infrastructure,” Article 2 of California Government Code 4216-4216.9, the SCE is required to contact a regional notification center at least two days prior to excavation of any subsurface installation. This activity would result in Underground Service Alert notifying the utilities that may have buried lines within 1,000 feet of the Project. Representatives of the utilities are required to mark the specific location of their facilities within the work area prior to the start of Project activities in the area. Overhead lines in the vicinity of the proposed Project ROW would also be identified for avoidance. Therefore, the Project would not result in reductions or interruptions of existing utility systems or cause a collocation accident. No impacts would occur.

## **C.14.6 Alternative 1: Partial Undergrounding of Antelope-Pardee Transmission Line**

### **C.14.6.1 Affected Environment**

Alternative 1 would place sections of the proposed 500-kV transmission line underground in specific high-impact segments of the proposed route. Alternative 1 would deviate from the proposed Project route in two locations, but modifications to the route would occur in the same jurisdiction as the proposed Project routes that would be replaced. Therefore, the affected utilities potentially impacted by this alternative would be identical to those presented for the proposed Project in Section C.14.1 (Affected Environment).

### **C.14.6.2 Impacts and Mitigation Measures**

#### **Ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater (Criterion UTL1)**

Construction of Alternative 1 would require approximately 26.7 acre-feet of water and generate approximately 171,848 tons of waste. However, relative to the service providers’ existing capacities, the water treatment, wastewater treatment, and solid waste requirements during construction and operation of this alternative would be minor.

During construction, water would be required for dust suppression and cleaning of construction equipment. The construction requirements for the overhead portion of Alternative 1 would be the largely the same as for the proposed Project, although fewer towers would be constructed both on and off NFS lands due to the inclusion of the underground portion of the alternative. Construction of the overhead portion of the alternative would take 10 months. Construction of the underground transmission facilities for Alternative 1 would require specialized procedures and equipment, as well as 29 months of construction. Consequently, as dust suppression activities would occur every day during construction of the underground portion of Alternative 1, an additional

19.18 acre-feet of water would be required for this alternative. Based on the watering estimates for dust abatement described in Mitigation Measure A-1a (Implement Fugitive Dust Control Plan) in Section C.2, Air Quality, Alternative 1 would require a total of 26.7 acre-feet of water during construction. This estimated water use accounts for 0.0019 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for Alternative 1 were to come from the water agency with the smallest entitlement, Palmdale Water District, this alternative's water use would constitute 0.18 percent of the Water District's annual SWP entitlement utilized. It is anticipated, however, that water from each of the jurisdiction's water agencies will be used.

Water use during the construction of Alternative 1 would be a minute fraction of the total water supply for the jurisdictions affected by the proposed Project and would not change the ability of the water suppliers identified in Table C.14-1 in serving the jurisdictions in the area. Therefore, the water demand for construction of Alternative 1 (Impact U-1) would not be a significant impact (**Class III**) on the regional water supply, and no mitigation is recommended.

Construction activities associated with Alternative 1 would generate waste largely in the form of soil, concrete from existing foundations, utility line cable, and scrap metal/wood from the replacement of existing towers. As with the water requirements described above for Alternative 1, waste generation during construction of the overhead segment of Alternative 1 would be the same as described for the proposed Project, but construction of the underground segment would generate additional waste due to the amount of trenching involved with underground construction and the associated soil removal. As described in Section B, Project Description, Table B.2-7 (Estimates of Construction Waste), construction of Alternative 1 would result in a total of 171,848 tons of waste. This waste would be disposed of over a period of 29 months, averaging 296 tons per workday. All waste material would be disposed of in off-site landfills outside of NFS lands. If all the waste would be transported to Antelope Valley Public Landfill I, this would constitute approximately 21 percent of the total daily maximum throughput. As identified in Table C.14-2, the route is served by a variety of landfills. While it is expected that waste would be disposed of at a number of the landfills identified in Table C.14-2, if only one landfill were used as a disposal site, the amount of waste generated by Alternative 1 could adversely affect the ability of the facility to provide solid waste disposal services to the surrounding area. Consequently, impacts to solid waste facilities (Impact U-2) could be significant, but would be mitigated to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure U-2 (Recycle Construction Waste), requiring recycling of at least 50 percent of waste during construction. This would halve the waste stream transported to landfill facilities. If only the Antelope Valley Public Landfill I were used for disposal, Mitigation Measure U-2 (Recycle Construction Waste) would reduce the waste transported to the landfill to approximately 10 percent of the maximum daily throughput of the facility. While this would still be a large amount of waste for the landfill coming from one source, this would be within the operating capacities of the landfill and would not substantially affect the ability of the landfill to serve its jurisdiction. Transport of this amount to the other landfills listed in Table C.14-2 would also be within the operating capacities of these landfills and would not affect their abilities to serve their jurisdictions. Operation of Alternative 1 would be identical to the proposed Project and would not generate solid waste and would therefore not affect existing landfill capacities.

As discussed in Section C.8, Hydrology and Water Quality, Alternative 1 would not significantly generate or increase stormwater runoff in a manner that would affect stormwater facilities. Wastewater generated during Alternative 1 construction would be limited to that generated by construction personnel and would be accommodated by portable toilets brought to staging areas for construction crews. Waste generated during construction by the construction workforce would not significantly impact the capacity of wastewater providers

identified in Table C.14-1 above. As the ANF has no wastewater treatment facilities, there would be no impacts on NFS lands. No new operational employees would be needed as a result of Alternative 1 construction. Therefore, generation of wastewater and stormwater as a result of Alternative 1 would not result in a significant demand on wastewater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area (Impact U-3). Impacts would not be significant (**Class III**) and no mitigation is recommended.

**Requirements for new or expanded water entitlements and resources to accommodate construction and operational demands (Criterion UTL2)**

As discussed above in Impact U-1, during construction, water would be required for dust suppression and cleaning of construction equipment and would be provided by a variety of water sources that should adequately supply the required water. Based on the estimates of watering for dust abatement in Mitigation Measure A-1a (Implement Fugitive Dust Control Plan) in Section C.2, Air Quality, Alternative 1 would require approximately 26.7 acre-feet of water. This estimated water use accounts for 0.0019 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for Alternative 1 were to come from the water agency with the smallest entitlement, Palmdale Water District, water use for this alternative would constitute only 0.18 percent of the Water District's annual SWP entitlement utilized. It is anticipated, however, that water from each of the jurisdiction's water agencies will be used. This would be a minute fraction of the total water supply for the jurisdictions in the area. Therefore, water used during construction would not substantially change the demands of the water suppliers identified in Table C.14-1, and would not require new or expanded water facilities, sources, or entitlements. Alternative 1 would be constructed with insulators which do not require cleaning. Consequently, once constructed, Alternative 1 would require negligible amounts of water for maintenance activities. Water demands of Alternative 1 (Impact U-4) would not be a significant impact and no mitigation is recommended (**Class III**).

**Construction and operational activities not in adherence to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment (Criterion UTL3)**

As described above under Criterion UTL1 in the description for Impact U-2, construction activities would generate approximately 171,848 tons of waste and operation of Alternative 1 would generate no waste. The disposal of waste generated during construction may not fulfill the goals of the Integrated Waste Management Act of 1989. Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by requiring recycling during construction. Furthermore, as discussed in Section C.8, Hydrology and Water Quality, Alternative 1 would not significantly generate or increase stormwater runoff, and would not violate any federal, State, and/or local water quality standard or waste discharge requirement. Consequently, potential conflicts of Alternative 1 with the Integrated Waste Management Act of 1989 (Impact U-5) would result in significant impacts, but implementation of Mitigation Measure U-2 (Recycle Construction Waste) would bring Alternative 1 into compliance and reduce impacts to less-than-significant levels (**Class II**).

**Construction activities resulting in a major reduction or interruption of existing utility systems or causing a collocation accident (Criterion UTL4)**

Alternative 1 generally follows the same route as the proposed Project, with the exception of the 7.5 miles of underground transmission line. While the underground portion of Alternative 1 on NFS lands would generally follow the route described for the proposed Project, the underground segment in Santa Clarita would differ

from the proposed Project route and would occur within city streets. This alternative route has the potential to cross existing utility lines such as water, telecommunications, drainage/sewerage, and other electrical utility lines. However, as required by Section 1, Chapter 3.1 “Protection of Underground Infrastructure,” Article 2 of California Government Code 4216-4216.9, the SCE is required to contact a regional notification center at least two days prior to excavation of any subsurface installation. Overhead lines in the vicinity of the proposed Project ROW would also need to be identified for avoidance. Actions taken to avoid utilities identified in accordance with California Government Code 4216-4216.9 would ensure that construction activities would not result in reductions or interruptions of existing utility systems or cause a collocation accident. No impacts would occur.

### **C.14.7 Alternative 2: Antelope-Pardee Relocation of Towers off Del Sur Ridge (East Mid-Slope)**

#### **C.14.7.1 Affected Environment**

This alternative would generally follow the proposed route, but would relocate approximately 12.4 miles of towers off the top of the Del Sur Ridge, placing the proposed 500 kV ROW on the east side of the ridge facing Bouquet Canyon between approximately Mile 5.7 and Mile 17.5 (Alternative 2 Mile 18.6). The route followed by Alternative 2 would be within the same jurisdictions as the proposed Project. Therefore, the affected utilities potentially impacted by this alternative would be identical to those presented for the proposed Project in Section C.1.1 (Affected Environment).

#### **C.14.7.2 Impacts and Mitigation Measures**

##### **Ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater (Criterion UTL1)**

Construction of Alternative 2 would require approximately 5.67 acre-feet of water and generate approximately 2,634 tons of waste. However, relative to the service providers’ existing capacities, the water treatment, wastewater treatment, and solid waste requirements during construction and operation of this alternative would be minor.

Based on the watering estimates for dust abatement described in Mitigation Measure A-1a (Implement Fugitive Dust Control Plan) in Section C.2, Air Quality, Alternative 2 would require a total of 5.67 acre-feet of water during construction. This estimated water use accounts for 0.0004 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for Alternative 2 were to come from the water agency with the smallest entitlement, Palmdale Water District, this alternative’s water use would constitute only 0.04 percent of the Water District’s annual SWP entitlement utilized. It is anticipated, however, that water from each of the jurisdiction’s water agencies will be used. Because water use during construction of Alternative 2 would be a minute fraction of the total water supply for the area, the demand for water under Alternative 2 would not change the ability of the water agencies to serve the jurisdictions in the area. Therefore, the water demand for construction of Alternative 2 (Impact U-1) would not be a significant impact (**Class III**) on the area water supply, and no mitigation is recommended.

Waste generated by construction activities associated with Alternative 2 would be largely the same as described for the proposed Project, generating approximately 14 more tons of waste than the proposed Project for a total of 2,634 tons of waste. Waste generated during construction of Alternative 2 would be the same types of waste

described for the proposed Project and would be disposed of in the same manner as for the proposed Project. All waste material would be disposed of in off-site landfills outside of NFS lands. Although the landfills in the area would be able to accommodate the volume of waste generated by Alternative 2, Mitigation Measure U-2 (Recycle Construction Waste) would reduce any impacts by requiring that 50 percent of waste would be recycled during construction of Alternative 2. Operation of Alternative 2 would be identical to the proposed Project and would not generate solid waste and would therefore not affect existing landfill capacities. Impacts to solid waste facilities (Impact U-2) would not be significant (**Class III**) and no mitigation is recommended.

Generation of wastewater and stormwater as a result of Alternative 2 in a manner that would affect stormwater facilities or wastewater treatment would be the same as described for the proposed Project and would not result in a significant demand on stormwater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area (Impact U-3). As the ANF has no wastewater treatment facilities, there would be no impacts on NFS lands. Impacts would not be significant (**Class III**) and no mitigation is recommended.

### **Requirements for new or expanded water entitlements and resources to accommodate construction and operational demands (Criterion UTL2)**

As discussed above under Criterion UTL1 for Impact U-1, water required for dust suppression and cleaning of construction equipment would be largely the same as described for the proposed Project, requiring approximately 0.15 less acre-feet of water for a total of 5.67 acre-feet of water required. This estimated water use accounts for 0.0004 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for Alternative 2 were to come from the water agency with the smallest entitlement, Palmdale Water District, water use for this alternative would constitute only 0.04 percent of the Water District's annual SWP entitlement utilized. It is anticipated however, that water from each of the jurisdiction's water agencies will be used. This would be a minute fraction of the total water supply for the jurisdictions in the area. Therefore, water used during construction would not substantially change the demands of the water suppliers identified in Table C.14-1, and would not require new or expanded water facilities, sources, or entitlements. Alternative 2 would be constructed with insulators which do not require cleaning. Consequently, once constructed, Alternative 2 would require negligible amounts of water for maintenance activities. Water demands of Alternative 2 would not be a significant impact and no mitigation is recommended (**Class III**).

### **Construction and operational activities not in adherence to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment (Criterion UTL3)**

As described above under Criterion UTL1 in the description for Impact U-2, construction activities would generate approximately 2,634 tons of waste and project operations would generate no waste. The disposal of waste generated during construction may not fulfill the goals of the Integrated Waste Management Act of 1989. Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by requiring recycling during construction. Furthermore, as discussed in Section C.8, Hydrology and Water Quality, Alternative 2 would not significantly generate or increase stormwater runoff, and would not violate any federal, State, and/or local water quality standard or waste discharge requirement. Consequently, potential conflicts of Alternative 2 with the Integrated Waste Management Act of 1989 (Impact U-5) would

result in significant impacts, but implementation of Mitigation Measure U-2 (Recycle Construction Waste) would bring this alternative into compliance and reduce impacts to less-than-significant levels (**Class II**).

#### **Construction activities resulting in a major reduction or interruption of existing utility systems or causing a collocation accident (Criterion UTL4)**

Alternative 2 would follow generally the same route as the proposed Project, but would relocate most of the towers off the top of Del Sur Ridge on NFS lands, roughly from Mile 5.7 to Mile 17.5 (Alternative 2 Mile 18.6). This alternative has the potential to cross existing utility lines such as water, telecommunications, drainage/sewerage, and other electrical utility lines. Overhead lines in the vicinity of the proposed Project ROW would also need to be identified for avoidance. Actions taken to avoid utilities identified in accordance with California Government Code 4216-4216.9 would ensure that construction activities would not result in reductions or interruptions of existing utility systems or cause a collocation accident. No impacts would occur.

### **C.14.8 Alternative 3: Antelope-Pardee Single-Circuit 500-kV Towers between Haskell Canyon and Pardee Substation**

#### **C.14.8.1 Affected Environment**

This alternative is a minor variation of the proposed Project and would include constructing single-circuit 500-kV towers between Haskell Canyon and the Pardee Substation (Mile 20.3 to 25.6), rather than constructing double-circuit 500-kV towers and removing the existing single-circuit 500-kV towers. The route followed by Alternative 3 would be the same as the proposed Project route. Alternative 3 would differ in how it affects utilities from the proposed Project only in the amount of waste disposed of as Alternative 3 would not remove the existing single-circuit 500-kV towers. Therefore, with the exception of impacts to solid waste facilities, the affected utilities potentially impacted by this alternative would be identical to those presented for the proposed Project in Section C.14.1 (Affected Environment).

#### **C.14.8.2 Impacts and Mitigation Measures**

##### **Ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater (Criterion UTL1)**

Construction of Alternative 3 would require the same amount of water as the proposed Project, but would generate 629 fewer tons of waste. Relative to the service providers' existing capacities, the water treatment and wastewater treatment requirements during construction and operation of this alternative would be identical to those described for the proposed Project. Water use during construction of Alternative 3 would be a fraction of the total water supply for the jurisdictions affected by the alternative and would not change the ability of the water suppliers serving the area demands. Therefore, the water demand for construction of the proposed Project would have a less-than-significant impact (**Class III**) on the regional water supply (Impact U-1), with no mitigation required. As the ANF has no stormwater facilities or wastewater treatment facilities, there would be no impacts on NFS lands. As generation of wastewater and stormwater as a result of Alternative 3 would not result in a significant demand on stormwater facilities outside of NFS lands and would not affect existing capacities of wastewater treatment plants serving the area (Impact U-3), impacts would not be significant and no mitigation is recommended (**Class III**).

Waste generated by construction activities associated with Alternative 3 would generate approximately 1,991 tons of waste, approximately 629 tons of waste less than the proposed Project. Waste generated during

construction of Alternative 3 would be the same types of waste described for the proposed Project and would be disposed of in the same manner as for the proposed Project. All waste material would be disposed of in off-site landfills outside of NFS lands. This waste would be disposed of over a period of 13 months, averaging 7.7 tons of waste per workday. If all the waste would be transported to the landfill with the smallest capacity and maximum daily throughput, Antelope Valley Public Landfill I, this would constitute approximately 0.6 percent of the maximum daily throughput for the facility. As identified in Table C.14-2, the route is served by a variety of landfills and it is expected that the waste would be disposed of at a number of the landfills identified. Consequently, impacts to solid waste facilities (Impact U-2) would not be significant (**Class III**). Mitigation Measure U-2 (Recycle Construction Waste), provided above for the proposed Project, however, would ensure that Alternative 3 would comply with the Integrated Waste Management Act of 1989 and further reduce impacts to solid waste facilities. Operation of Alternative 3 would be identical to the proposed Project and would not generate solid waste and would therefore not affect existing landfill capacities.

### **Requirements for new or expanded water entitlements and resources to accommodate construction and operational demands (Criterion UTL2)**

As discussed above, water required for dust suppression and cleaning of construction equipment would be identical to the proposed Project. Water used during construction would not substantially change the demands of the water suppliers identified in Table C.14-1, and would not require new or expanded water facilities, sources, or entitlements (Impact U-4). Once constructed, Alternative 3 would require only small amounts of water for maintenance activities. Water demands of Alternative 3 would not be a significant impact and no mitigation is recommended (**Class III**).

### **Construction and operational activities not in adherence to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment (Criterion UTL3)**

As described above in Criterion UTL1 for Impact U-2, construction activities would generate approximately 1,991 tons of waste and operation of Alternative 3 would generate no waste. The disposal of waste generated during construction may not fulfill the goals of the Integrated Waste Management Act of 1989. Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by requiring recycling during construction. Stormwater and wastewater would be identical to the proposed Project and would not significantly generate or increase stormwater runoff or violate any federal, State, and/or local water quality standard or waste discharge requirement. As described above under Impact U-2, however, the amount of waste material to be recycled may not fulfill the goals of the Integrated Waste Management Act of 1989. Consequently, potential conflicts of Alternative 3 with the Integrated Waste Management Act of 1989 (Impact U-5) would result in significant impacts, but implementation of Mitigation Measure U-2 (Recycle Construction Waste) would bring this alternative into compliance and reduce impacts to less-than-significant levels (**Class II**).

### **Construction activities resulting in a major reduction or interruption of existing utility systems or causing a collocation accident (Criterion UTL4)**

The route followed by Alternative 3 would be identical to the proposed Project route. This alternative has the potential to cross existing utility lines such as water, telecommunications, drainage/sewerage, and other electrical utility lines. Actions taken to avoid utilities identified in accordance with California Government Code 4216-4216.9 would ensure that construction activities would not result in reductions or interruptions of existing utility systems or cause a collocation accident. No impacts would occur.

## **C.14.9 Alternative 4: Antelope-Pardee Re-Routing of New Right-of-Way along Haskell Canyon**

### **C.14.9.1 Affected Environment**

This alternative would follow the proposed Project route to approximately Mile 17.5, north of Haskell Canyon Road. At this point, the transmission line would proceed in a southerly direction as the proposed Project route shifts to the west-southwest. Traveling in a new ROW on NFS lands within the ANF, the transmission line would continue in a southerly direction for approximately 1.3 miles, crossing approximately 0.3 miles of private land in-holdings (non-NFS), before leaving the ANF. Once leaving the Forest, the transmission line would again proceed in a southerly direction before entering the existing Pardee-Vincent 500-kV ROW, where it would head west and rejoin the proposed Project route at approximately Mile 20.6 (proposed Project Mile 20.3). The route followed by Alternative 4 would be located within the same jurisdictions as the proposed Project. Therefore, the utility agencies potentially impacted by Alternative 4 would be the same as those presented for the proposed Project in Section C.14.1 (Affected Environment).

### **C.14.9.2 Impacts and Mitigation Measures**

#### **Ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater (Criterion UTL1)**

Construction of Alternative 4 would require approximately 6.0 acre-feet of water and generate approximately 2,630 tons of waste. However, relative to the service providers' existing capacities, the water treatment, wastewater treatment, and solid waste requirements during construction and operation of this alternative would be minor.

Based on the watering estimates for dust abatement described in Mitigation Measure A-1a (Implement Fugitive Dust Control Plan) in Section C.2, Air Quality, Alternative 4 would require a total of 6.0 acre-feet of water during construction. This estimated water use accounts for 0.0004 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for Alternative 4 were to come from the water agency with the smallest entitlement, Palmdale Water District, this alternative's water use would constitute only 0.04 percent of the Water District's annual SWP entitlement utilized. It is anticipated, however, that water from each of the jurisdiction's water agencies will be used. Because water use during construction of Alternative 4 would be a minute fraction of the total water supply for the area, the demand for water under Alternative 4 would not change the ability of the water agencies to serve the jurisdictions in the area. Therefore, the water demand for construction of Alternative 4 (Impact U-1) would not be a significant impact (**Class III**) on the area water supply, and no mitigation is recommended.

Construction activities associated with Alternative 4 would be largely the same as described for the proposed Project, generating approximately 10 more tons waste than the proposed Project for a total of 2,630 tons of waste. Waste generated during construction of Alternative 4 would be the same types of waste described for the proposed Project and would be disposed of in the same manner as for the proposed Project. All waste material would be disposed of in off-site landfills outside of NFS lands. This 2,630 tons of waste would be disposed of over a period of 13 months, averaging approximately 10 tons of waste per workday. If all the waste would be transported to the landfill with the smallest capacity and maximum daily throughput, Antelope Valley Public Landfill I, this would constitute approximately 0.7 percent of the maximum daily throughput for



the facility. As identified in Table C.14-2, the route is served by a variety of landfills, and it is expected that the waste would be disposed of at a number of the landfills identified. Consequently, impacts to solid waste facilities (Impact U-2) would not be significant (**Class III**). Mitigation Measure U-2 (Recycle Construction Waste), provided above for the proposed Project, however, would ensure that Alternative 4 would comply with the Integrated Waste Management Act of 1989 and further reduce impacts to solid waste facilities. Operation of Alternative 4 would be identical to the proposed Project and would not generate solid waste and would therefore not affect existing landfill capacities.

Generation of wastewater and stormwater as a result of Alternative 4 would be the same as described for the proposed Project and would not result in a significant demand on stormwater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area (Impact U-3). As the ANF has no stormwater facilities or wastewater treatment facilities, there would be no impacts on NFS lands. Impacts would not be significant and no mitigation is recommended (**Class III**).

#### **Requirements for new or expanded water entitlements and resources to accommodate construction and operational demands (Criterion UTL2)**

As discussed above under Criterion UTL1 for Impact U-1, approximately 6.0 acre-feet of water would be required for dust abatement and cleaning of construction. Water used during construction would not substantially change the demands of the water suppliers identified in Table C.14-1, and would not require new or expanded water facilities, sources, or entitlements (Impact U-4). Alternative 4 would be constructed with insulators which do not require cleaning. Consequently, once constructed, Alternative 4 would require negligible amounts of water for maintenance activities. Water demands of Alternative 4 would not be a significant impact and no mitigation is recommended (**Class III**).

#### **Construction and operational activities not in adherence to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment (Criterion UTL3)**

As described above under Criterion UTL1 for Impact U-2, construction activities would generate approximately 2,630 tons of waste and operation of Alternative 4 would generate no waste. The disposal of waste generated during construction may not fulfill the goals of the Integrated Waste Management Act of 1989. Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by requiring recycling during construction. Stormwater and wastewater would be identical to the proposed Project and would not significantly generate or increase stormwater runoff or violate any federal, State, and/or local water quality standard or waste discharge requirement. As described above under Impact U-2, however, the amount of waste material to be recycled may not fulfill the goals of the Integrated Waste Management Act of 1989. Consequently, potential conflicts of Alternative 4 with the Integrated Waste Management Act of 1989 (Impact U-5) would result in significant impacts, but implementation of Mitigation Measure U-2 (Recycle Construction Waste) would bring this alternative into compliance and reduce impacts to less-than-significant levels (**Class II**).

#### **Construction activities resulting in a major reduction or interruption of existing utility systems or causing a collocation accident (Criterion UTL4)**

The route followed by Alternative 4 would largely be the same as the proposed Project route with the exception of the portion of the route through Haskell Canyon. The potential for the alternative to cross existing utility lines such as water, telecommunications, drainage/sewerage, and other electrical utility lines would be

the same as for the proposed Project. Consequently, impacts would also be the same. Actions taken to avoid utilities identified in accordance with California Government Code 4216-4216.9 would ensure that construction activities would not result in reductions or interruptions of existing utility systems or cause a collocation accident. No impacts would occur.

## **C.14.10 Alternative 5: Antelope-Pardee Sierra-Pelona Re-Route**

### **C.14.10.1 Affected Environment**

Alternative 5 would involve an entirely separate route than the proposed Project. The alternative would begin at Antelope Substation, and would traverse BLM land, the ANF, NFS lands outside of the ANF, the City of Lancaster, the City of Palmdale, the City of Santa Clarita, and unincorporated Los Angeles County, including through the unincorporated communities of Leona Valley, Agua Dulce, Forrest Park, and Bouquet Canyon.

### **C.14.10.2 Impacts and Mitigation Measures**

#### **Ability of water treatment, wastewater treatment, or solid waste facilities to adequately supply water and accommodate solid waste and wastewater (Criterion UTL1)**

Construction of Alternative 5 would require approximately 8.6 acre-feet of water and generate approximately 4,605 tons of waste. However, relative to the service providers' existing capacities, the water treatment, wastewater treatment, and solid waste requirements during construction and operation of this alternative would be minor.

Based on the watering estimates for dust abatement described in Mitigation Measure A-1a (Implement Fugitive Dust Control Plan) in Section C.2, Air Quality, Alternative 5 would require a total of 8.6 acre-feet of water during construction. This estimated water use accounts for 0.0006 percent of the total annual SWP entitlements utilized by the water agencies providing water for the jurisdictions affected by the proposed Project, AVEK, CLWA, Palmdale Water District, and MWD. Even if water used for Alternative 5 were to come from the water agency with the smallest entitlement, Palmdale Water District, this alternative's water use would constitute only 0.06 percent of the Water District's annual SWP entitlement utilized. It is anticipated, however, that water from each of the jurisdiction's water agencies will be used. Because water use during construction of Alternative 5 would be a minute fraction of the total water supply for the area, the demand for water under Alternative 5 would not change the ability of the water agencies to serve the jurisdictions in the area. Therefore, the water demand for construction of Alternative 5 (Impact U-1) would not be a significant impact (**Class III**) on the area water supply and no mitigation is recommended.

Construction activities associated with Alternative 5 would generate waste largely in the form of soil, concrete from existing foundations, utility line cable, and scrap metal/wood from the replacement of existing towers. As described in Section B, Project Description, Table B.2-7 (Estimate of Construction Waste), construction of Alternative 5 would result in approximately 4,605 tons of waste. This waste would be disposed of over a period of 16 months, averaging approximately 14 tons per workday. All waste material would be disposed of in off-site landfills outside of NFS lands. If all the waste would be transported to Antelope Valley Public Landfill I, this would constitute approximately one percent of the total daily maximum throughput. As identified in Table C.14-2, the route is served by a variety of landfills, of which, Antelope Valley Public Landfill I is the smallest. It is expected that a variety of landfills would be used to dispose of waste during construction of this alternative, and that any of these landfills would be able to accommodate this waste without affecting the ability of these landfills to serve local demands. Impacts would not be significant (**Class**

**III).** However, to comply with the Integrated Waste Management Act of 1989 and further reduce impacts, Mitigation Measure U-2 (Recycle Construction Waste) provided below would ensure that maximum recycling activities would occur. Operation of the transmission line would not generate solid waste and would therefore not affect existing landfill capacities. Impacts to solid waste facilities would be less than significant.

Generation of wastewater and stormwater as a result of Alternative 5 would be the same as described for the proposed Project with regard for the potential to increase runoff from the creation of new impervious areas. Although Alternative 5 would be 11.6 miles longer than the proposed Project, this extended length is attributed to the segment of Alternative 5 that is situated within the existing Vincent-Pardee ROW. Transmission towers for Alternative 5 would replace existing transmission towers for 18.4 miles in the Vincent-Pardee ROW. The first 18.8 miles of Alternative 5 would introduce a minimal amount of new impervious areas in the form of concrete transmission tower footings; however, neither construction nor operation and maintenance of Alternative 5 would alter the existing drainage pattern or significantly increase surface runoff. As the NFS has no stormwater facilities or wastewater treatment facilities, there would be no impacts on NFS lands where traversed by Alternative 5. Consequently, construction and operation of Alternative 5 would not result in a significant demand on stormwater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area (Impact U-3). Impacts would not be significant and no mitigation is recommended (**Class III**).

**Requirements for new or expanded water entitlements and resources to accommodate construction and operational demands (Criterion UTL2)**

As discussed above under Criterion UTL1 for Impact U-1, approximately 8.6 acre-feet of water would be required for dust abatement and cleaning of construction equipment. Water used during construction would not substantially change the demands of the water suppliers identified in Table C.14-1, and would not require new or expanded water facilities, sources, or entitlements (Impact U-4). Alternative 5 would be constructed with insulators which do not require cleaning. Consequently, once constructed, Alternative 5 would require negligible amounts of water for maintenance activities. Water demands of Alternative 5 (Impact U-4) would not be a significant impact and no mitigation is recommended (**Class III**).

**Construction and operational activities not in adherence to federal, State, and/or local laws, regulations, and/or standards relating to solid waste and wastewater treatment (Criterion UTL3)**

As described above under Criterion UTL1 for Impact U-2, construction activities would generate approximately 4,605 tons of waste and operation of Alternative 5 would generate no waste. The disposal of waste generated during construction may not fulfill the goals of the Integrated Waste Management Act of 1989. Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by requiring recycling during construction. Stormwater and wastewater impacts would be the same as the proposed Project and would not significantly generate or increase stormwater runoff or violate any federal, State, and/or local water quality standard or waste discharge requirement. As described above under Impact U-2, however, the amount of waste material to be recycled may not fulfill the goals of the Integrated Waste Management Act of 1989. Consequently, potential conflicts of Alternative 5 with the Integrated Waste Management Act of 1989 (Impact U-5) would result in significant impacts, but implementation of Mitigation Measure U-2 (Recycle Construction Waste) would bring this alternative into compliance and reduce impacts to less-than-significant levels (**Class II**).

### Construction activities resulting in a major reduction or interruption of existing utility systems or causing a collocation accident (Criterion UTL4)

Although Alternative 5 would follow a route through a variety of developed areas and would have the potential to cross existing utility lines such as water, telecommunications, drainage/sewerage, and other electrical utility lines, actions taken to avoid utilities identified in accordance with California Government Code 4216-4216.9 would ensure that construction activities would not result in reductions or interruptions of existing utility systems or cause a collocation accident. While this alternative would remove a single-circuit 500-kV transmission line and replace it with a double-circuit 500-kV transmission line, normal construction planning would ensure that there would be no loss of electrical service. No impacts would occur.

#### C.14.11 No Project/Action Alternative

Under the No Project/Action Alternative, the proposed transmission line and substation upgrades would not be implemented; therefore, the impacts associated with the proposed Project and alternatives described in Sections C.14.5 through C.14.11 above would not occur. As a result, the No Project/Action alternative would not impact the capacities of utility facilities that manage water, solid waste, wastewater, or stormwater drainage. Additionally, the No Project/Action Alternative would result in no utility collocation impacts.

However, as identified in Section B.4.8.2, in the absence of the Project, other actions would occur. SCE would need to accommodate the power load by upgrading existing transmission infrastructure or building new transmission facilities along a different alignment. Construction methods, resulting impacts, and regulatory requirements associated with other transmission projects would be similar to those identified for the Project; as such, impacts to utility providers would be expected to be similar to that identified for the Project.

#### C.14.12 Impact and Mitigation Summary

Table C.14-4 presents a summary of the impacts and proposed mitigation measures for utilities and service systems.

Impact	Impact Significance					
	Proposed Project	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
U-1: Construction and operational utility and service system demands would change the ability of water utilities and service system facilities to accommodate local demands.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
U-2: Construction and operational utility and service system demands would change the ability of solid waste utilities and service system facilities to accommodate local demands.	Class III	Class II	Class III	Class III	Class III	Class III
	U-2	U-2	U-2	U-2	U-2	U-2
U-3: Construction and operational utility and service system demands would change the ability of stormwater and wastewater utilities and service system facilities to accommodate local demands.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
U-4: Construction and operational water supply demands would require new or expanded water entitlements or resources.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
U-5: The amount of waste material recycled during construction activities would not adhere to State standards.	Class II	Class II	Class II	Class II	Class II	Class II
	U-2	U-2	U-2	U-2	U-2	U-2

Class I = Significant and unavoidable impact; Class II = Significant but mitigated to a less-than-significant level; Class III = Less-than-significant impact; Class IV = Beneficial impact.

\* Please see Section C.2.5, Air Quality, Proposed Project/Action, Mitigation Measure A-1a (Implement Construction Fugitive Dust Control Plan).

## C.14.13 Cumulative Effects

### C.14.13.1 Geographic Scope

The geographic scope for the analysis of cumulative impacts associated with utilities and service systems is northern Los Angeles County. This is defined as the geographic scope or the cumulative impact area as it roughly encompasses the areas and jurisdictions served by the utility and service providers. These utilities and service systems are provided predominantly by service providers to both incorporated and unincorporated areas of the north County, as well as within NFS lands, and are distributed locally.

### C.14.13.2 Existing Cumulative Conditions

Past and ongoing development and population growth within northern Los Angeles County have impacted and will continue to impact the capacities of utility providers. As described in Section B.5.4, Forecast Population Growth, northern Los Angeles County, including the Cities of Lancaster, Palmdale, and Santa Clarita and unincorporated Los Angeles County, has experienced a 56 percent increase in population and a 37 percent increase in employment between 1990 and 2005. Residential and commercial development has increased during this period as well. As the population increases through an indirect and direct influence of development, public utilities need to expand to serve the growing population. In addition, continued development creates more infrastructure requiring utility service. Existing conditions, Section C.14.1 (Affected Environment), describe the available utility resources serving the north County and immediate project area.

Although development in the ANF has been limited to recreational facilities and a few private inholdings, utilities and service systems on NFS lands, such as SCE and LADWP transmission lines, water pipelines, and other utility infrastructure built to accommodate new recreation facilities, can contribute to the cumulative impact of the proposed Project and alternatives on the ANF.

During construction and operation, should combined activities from other projects, occur at the same time as proposed Project construction and operation, cumulative impacts could occur to utilities as a result of an increase in the demand placed on providers of water, solid waste, stormwater, and wastewater facilities. Although the geographic scope for the analysis of cumulative impacts associated with utilities and service systems includes more projects than are identified in Tables B.5-1 and B.5-2, the projects identified in these tables are the most relevant to the proposed Project, so the cumulative analysis focuses solely on these projects. The increase in demand resulting from implementation of the projects listed in these tables could directly reduce the available capacities of the utilities serving the area.

### C.14.13.3 Cumulative Impact Analysis

The potential for the utilities and service systems impacts of the proposed Project described in Sections C.14.5 through C.14.11 to combine with the effects of other past, present, and reasonably foreseeable future projects within the geographic scope of the cumulative analysis are described below.

- **Construction and operational utility and service system demands would change the ability of water utilities and service system facilities to accommodate local demands (Impact U-1).** During construction of the proposed Project and alternatives, water would be required for dust suppression and cleaning of construction equipment. The proposed Project and alternatives would be constructed with insulators which do not require cleaning. Consequently, once constructed, the proposed Project and alternatives would require negligible amounts of water for maintenance activities. As described above in Sections C.14.5 through C.14.11, for the proposed Project, as well as all of the alternatives, the water required for construction would be well within the capacities of the water agencies providing water to the jurisdictions affected by the proposed transmission line. The Project's incremental

contribution to the overall water needs of the north County would not be significant. However, in addition to the proposed Project or alternatives combining with the demands being placed on water service providers from past projects, the following ongoing and proposed projects in the area would also combine to result in a strain on water supply infrastructure and the provision of water.

- Meadow Peak Project
- Copper Hill Project
- North Park
- Tesoro del Valley
- Somerset Ridge
- Anaverde/Remington Project
- Burnham Property
- Bank of America
- Fox Field Industrial Park
- Royal Equestrian Estates
- Country Colony Estates
- Gateway Village
- Rye Canyon Self-Storage
- Highridge Crossing
- Northpark
- Re/Max Building
- Boston Scientific
- North Valencia II
- Baywood Lane Apartments
- Sonrisa Residential
- Riverpark Project
- Town Center Mall Project
- Synergy “The Keystone” Project
- Porta Bella
- Center Pointe Residential Project
- Center Point Business Park Implementation
- Newhall Land Residential Project
- Jules Swimmer Residential Project
- Henry Mayo Hospital Master Plan
- Golden Triangle Apartment Complex
- Penlon Residential Project
- Centex Golden Valley Road Residential Project
- Master’s College Master Plan
- Ritter Ranch Community Plan
- City Ranch Specific Plan
- Joshua Ranch Residential Development
- 61 unnamed residential projects; and
- 3 unnamed industrial projects.

Although all of the ongoing and future projects listed above have been anticipated for in a general sense in the planning documents for their appropriate jurisdictions, the General Plans for these jurisdictions identify that water supplies for the region are limited and that growth will put substantial strain on the ability of water agencies to provide water to the local jurisdictions. Consequently, the combination of the projects listed above along with the proposed Project or any of the alternatives is considered a cumulatively significant impact (**Class I**) to water providers. As the incremental contribution of the proposed Project and alternatives to this impact would not be significant and as this significant impact affects the entire northern Los Angeles County, no reasonable mitigation can be recommended.

- **Construction and operational utility and service system demands would change the ability of solid waste utilities and service system facilities to accommodate local demands (Impact U-2).** As described above in Sections C.14.5 through C.14.11, solid waste generated during proposed Project construction would be within the capacities of local landfills for the proposed Project and all of the alternatives except Alternative 1. Mitigation Measure U-2 (Recycle Construction Waste) would be required to reduce the impact of Alternative 1 to be less-than-significant and would further reduce the solid waste generation impacts in the proposed Project and all of the other alternatives, Project operations would not generate solid waste and would not further affect existing landfill capacities. Therefore, the Project’s incremental contribution to the capacities of solid waste utilities and infrastructure is not significant. The ongoing and proposed residential, commercial, and industrial projects listed above under the Cumulative Impact discussion for Impact U-1, however, are anticipated to substantially increase demands on local waste facilities. As described above, the planning documents for the jurisdictions in the region have anticipated the growth being implemented in these projects, but acknowledge that there is a short supply of land and adequate locations for development of solid waste facilities that cannot readily meet the demands of projected growth. Consequently, the combined effect of all cumulative projects on solid waste facilities would be cumulatively significant (**Class I**). As the incremental contribution of the proposed Project and alternatives to this impact would not be significant and as this significant impact affects the entire northern Los Angeles County, no reasonable mitigation can be recommended.
- **Construction and operational utility and service system demands would change the ability of stormwater and wastewater utilities and service system facilities to accommodate local demands (Impact U-3).** As

described above in Sections C.14.5 through C.14.11, generation of wastewater and stormwater as a result of the proposed Project and alternatives would not result in a significant demand on stormwater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area. Therefore, the Project's incremental contribution to stormwater and wastewater infrastructure would be minimal. The ongoing residential, commercial, and industrial projects listed above in the Cumulative Analysis of Impact U-1 are anticipated to substantially increase demands on stormwater and wastewater facilities. As described above in the Cumulative Analysis for both Impact U-1 and Impact U-2, the planning documents for the jurisdictions affected recognize that stormwater and wastewater facilities will need to be expanded to accommodate this growth. The combined effect of all the cumulative projects listed above would place substantial demands on existing stormwater and wastewater infrastructure systems serving the area, leading to cumulatively significant impacts (**Class I**). As the incremental contribution of the proposed Project and alternatives to this impact would not be significant and as this significant impact affects the entire northern Los Angeles County, no reasonable mitigation can be recommended.

- **Construction and operational water supply demands would require new or expanded water entitlements or resources (Impact U-4).** As described above under the Cumulative Analysis of Impact U-1, the proposed Project's and alternatives' need for water would be a minute fraction of the total water supply of the Project area. Therefore, water used during construction would not substantially change the demands of the water suppliers, and would not require new or expanded water facilities, sources, or entitlements. Therefore, the Project's contribution to the overall need for new or expanded water entitlements or resources is not significant. As described for the Cumulative Analysis of Impact U-1, however, given the rapid pace of past, present, and future growth in the north County, the combined need for new and/or expanded water entitlements and resources would require new or expanded water entitlements and resources. The acquisition and expansion of water entitlements and resources for the growing jurisdictions would be considered cumulatively significant (**Class I**). As the incremental contribution of the proposed Project and alternatives to this impact would not be significant and as this significant impact affects the entire northern Los Angeles County, no reasonable mitigation can be recommended.
- **The amount of waste material recycled during construction activities would not adhere to State standards (Impact U-5).** Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction of the proposed Project and all of the alternatives would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by incorporating the maximum recycling efforts during Project construction. Therefore, the Project's incremental contribution to this impact would not be significant. Also, given that the requirements of the Integrated Waste Management Act of 1989 and Assembly Bill 939 would apply to all development projects in the north County listed above under the Cumulative Analysis for Impact U-1, the combined effect of all cumulative projects would not be significant (**Class III**).

#### C.14.13.4 Cumulative Effects on National Forest System Lands

The potential for the utilities and service systems impacts of the proposed Project described in Sections C.14.5 through C.14.11 to combine with the effects of other past, present, and reasonably foreseeable future projects on NFS Lands are described below.

- **Construction and operational utility and service system demands would change the ability of water utilities and service system facilities to accommodate local demands (Impact U-1).** As described in Sections C.14.5 through C.14.11, neither the proposed Project nor any of the alternatives would change the ability of water agencies to accommodate local water demands. Because the nature of projects on the NFS lands are largely recreational or infrastructure related to maintaining or improving the natural conditions within the Forest and are not utility intensive projects such as residential, commercial, or industrial projects, the past, ongoing, and future projects on the NFS lands combined with the proposed Project or alternatives would not substantially affect water suppliers. While the projects described above under the Cumulative Analysis of Impact U-1 would impact water supply for the jurisdictions around the ANF, the NFS lands would not be specifically impacted. Consequently, impacts on NFS lands would not be significant (**Class III**) and no mitigation is recommended.
- **Construction and operational utility and service system demands would change the ability of solid waste utilities and service system facilities to accommodate local demands (Impact U-2).** As described above in Sections C.14.5 through C.14.11, solid waste generated during proposed Project construction would be within the capacities of local landfills for the proposed Project and all the alternatives except Alternative 1. Mitigation Measure U-2 (Recycle Construction Waste) would be required to reduce the impact of Alternative 1 to be less-than-significant and would further reduce the solid waste generation impacts for the proposed Project and all of the

other alternatives, Transmission line operations would not generate solid waste and would not further affect existing landfill capacities. Therefore, the incremental contribution of the proposed Project or alternatives to the capacities of solid waste utilities and infrastructure is not significant. While the combined projects listed above would impact solid waste facilities utilized by the jurisdictions around the ANF, the National Forest System lands would not be specifically impacted. As the solid waste generated by activities on NFS lands is a considerably smaller volume than the residential, commercial, and industrial projects listed above, the combined effect of the proposed Project or alternatives and NFS lands on solid waste facilities would not be significant (**Class III**) and no mitigation is recommended.

- **Construction and operational utility and service system demands would change the ability of stormwater and wastewater utilities and service system facilities to accommodate local demands (Impact U-3).** As described above in Sections C.14.5 through C.14.11, generation of wastewater and stormwater as a result of the proposed Project and alternatives would not result in a significant demand on stormwater facilities serving the area and would not affect existing capacities of wastewater treatment plants serving the area. As the NFS lands in this area have no wastewater or stormwater facilities, they would not be affected by these increased demands on facilities. Additionally, as the stormwater and wastewater generated on NFS lands is considerably less than the residential, commercial, and industrial uses listed above, the combined effect of the proposed Project or alternatives and projects on NFS lands would not place substantial demands on existing wastewater infrastructure systems serving the area. Impacts would not be significant (**Class III**) and no mitigation is recommended.
- **Construction and operational water supply demands would require new or expanded water entitlements or resources (Impact U-4).** As described above under the Cumulative Analysis of Impact U-1, the proposed Project's and alternatives' need for water would be a minute fraction of the total water supply of the Project area. Therefore, water used during construction would not substantially change the demands of the water suppliers, and would not require new or expanded water facilities, sources, or entitlements. Therefore, the Project's contribution to the overall need for new or expanded water entitlements or resources is not significant. While the National Forest Service lands include watersheds which are necessary for the health and availability of water supply within the area, it is not anticipated that these lands would be affected by new or expanded water entitlements or resource facilities. Additionally, because the nature of projects on NFS lands are largely recreational or infrastructure related to maintaining or improving the natural conditions within the Forest and are not utility intensive projects such as residential, commercial, or industrial projects, the past, ongoing, and future projects on NFS lands combined with the proposed Project or alternatives would not substantially affect water suppliers. While the projects described above under the Cumulative Analysis of Impact U-1 require new or expanded water entitlements or resources, NFS lands would not be specifically impacted. Consequently, impacts on NFS lands would not be significant (**Class III**) and no mitigation is recommended.
- **The amount of waste material recycled during construction activities would not adhere to State standards (Impact U-5).** Recycling efforts required by Mitigation Measure U-2 (Recycle Construction Waste) during construction of the proposed Project and all of the alternatives would ensure compliance with the Integrated Waste Management Act of 1989 and Assembly Bill 939 by incorporating the maximum recycling efforts during Project construction. Therefore, the Project's incremental contribution to this impact would not be significant. Also, given that the requirements of the Integrated Waste Management Act of 1989 and Assembly Bill 939 also apply to NFS lands in the project area, the combined effect of all cumulative projects would not be significant (**Class III**).