

C.10 Noise

This section addresses noise issues and impacts related to the proposed Project and each of the alternatives. Section C.10.1 provides a description of the affected environment for the proposed Project, where differences in the affected environment for each of the alternatives are described in Sections C.10.6 through C.10.11. Applicable noise regulations are described in Section C.10.2. Significance criteria and Applicant-Proposed Measures (APMs) are presented in Sections C.10.3 and C.10.4, respectively. Analyses of the proposed Project and alternatives impacts are presented in Sections C.10.5 through C.10.11 and the impact and mitigation summary and the cumulative effects of the proposed Project and alternatives are described in Sections C.10.12 and C.10.13, respectively.

C.10.1 Affected Environment

C.10.1.1 General Characteristics of Community Noise

To describe environmental noise and to assess impacts on areas sensitive to community noise, a frequency weighting measure that simulates human perception is customarily used. The frequency weighting scale known as A-weighting best reflects the human ear's reduced sensitivity to low frequencies and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. Decibels are logarithmic units that conveniently compare the wide range of sound intensities to which the human ear is sensitive. Figure C.10-1 illustrates typical ranges of common sounds heard in the community noise environment.

The community noise environment and the consequences of human activities cause noise levels to be widely variable over time. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour day-night period (Ldn). The Leq, or equivalent sound level, is a single value for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually one hour. The Ldn, or day-night average sound level, is equal to the 24-hour equivalent sound level (in dBA) with a 10 dBA penalty applied to nighttime sounds occurring between 10:00 p.m. and 7:00 a.m.

Community noise levels are usually closely related to the intensity of nearby human activity. Figure C.10-2 illustrates the typical noise levels of varying types of land use. Noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, the Ldn noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas (e.g., downtown Los Angeles), and levels up to 85 dBA occur near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse to public health.

The surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than what would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments are about seven decibels lower than the corresponding daytime levels. In rural areas away from roads and other human activity, the day-to-night difference can be considerably less. Areas with full-time human occupation that are subject to nighttime noise are often considered objectionable because of the likelihood of disrupting sleep. Noise levels above 45 dBA at night can result in the onset of sleep interference effects. At 70 dBA, sleep interference effects become considerable (USEPA, 1974).

Figure C.10-1. Typical Range of Common Sounds Heard in the Community Noise Environment
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Figure C.10-2. Typical Noise Levels of Varying Types of Land Use

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C.10.1.2 Noise Environment

A wide range of noise sources occur in the area of the proposed route, mainly due to the wide range of land uses that would be traversed. Ambient noise levels tend to be lowest (below 50 dBA) in the recreational and open areas of NFS lands and away from the highways and urban and suburban areas. Noise levels in the region are the highest (between 50 and 65 dBA) near transportation facilities such as McBean Parkway and Copper Hill Drive, and in the suburban area of Rancho Santa Clarita. Noise levels at the property lines of the existing substations have been measured to be approximately 50 dBA (Veneklasen Associates, 2005).

Southwest of the Antelope Substation and the northern most areas of the proposed route are within the western limit of the City of Lancaster. This area is typically rural or low density in nature and existing noise levels are generally low (55 dBA or less). Approximately 1.5 miles northeast of Antelope Substation is the General William J. Fox Airfield and approximately 3 miles southeast of the substation is a small private landing strip.

The unincorporated areas and communities through which the proposed transmission line would pass are predominantly open land or rural in nature. Existing noise levels result from distant roadway traffic and aircraft and are generally low. Noise levels within the NFS lands are very quiet (below 40 dBA) over very large areas and noisy in localized areas during periods of off-road recreational vehicle (ORV) use, shooting, or other activities.

The southwest portion of the proposed transmission line passes through and adjacent to the City of Santa Clarita, which consists of developed and developing suburban residential neighborhoods. While noise levels are higher here than those in the rural unincorporated areas, they are still generally low to moderate. Traffic on arterial roads and local streets is the major source of noise in the City of Santa Clarita.

C.10.1.3 Sensitive Receptors

Noise sensitive receptors are facilities or areas (e.g., residential areas, hospitals, schools, etc.) where excessive noise may convey annoyance. The primary noise sensitive receptors along the proposed Project route and near the substation areas are single and multi-family residences, as well as recreational users within the ANF. Other noise sensitive receptors in the vicinity of the proposed route include a motion picture studio, two elementary schools, a park, and a middle school. Table C.10-1, below, provides information about the stationary sensitive receptors along the proposed Project route, including a general description, nearest streets, nearest proposed Project milepost (Mile), and the approximate distance the receptor is from the proposed route. Figures C.10-3a and b provide a depiction of the relative locations of the sensitive receptors to the proposed Project route.

No.	Description of Receptor	Receptor Street Location	Nearest Route Mile	Distance from Route
1	1 SFR	W. Avenue J	0.0	800 ft.
2	1 SFR	Avenue K	1.6	200 ft.
3	1 SFR	Johnson Road and 110th Street W.	2.5	400 ft.
4	Veluzat Motion Picture Ranch	Near Haskell Canyon Road	18.6 – 20.3	Immediately Adjacent
5	20 SFR	Rock Canyon Drive, Glen Canyon Lane, Phantom Trail, Bridger Court, and Bruin Place	21.3	200 to 400 ft.
6	8 SFR and Mountainview Elementary School	Garnet Canyon Drive	21.7	SFR = 200 to 400 ft. Elementary School = 1,200 ft.

No.	Description of Receptor	Receptor Street Location	Nearest Route Mile	Distance from Route
7	53 SFR	Persimmon Lane, Laurel Place, Poplar Street, Tamarack Lane, Apricot Place, Seco Canyon Road, Coral Way, Red Cedar Place, Avocado Place and White Pine Place	19.8 – 22.2	200 to 400 ft.
8	Park	Mountain View Park	22.1	Route is through park
9	25 SFR	San Fancisquito Canyon Road, Copper Hill Drive and Medlar Drive	23.0	200 to 400 ft.
10	44 SFR	North Park Drive, Chervil Court, Angelica Place Esperanza Way, Castillo Lane, Valerio Court, Anacapa Lane, Landmark Lane and Memory Lane	23.1	200 to 400 ft.
11	8 MFR, Chesebrough County Park, North Park Elementary School, and Church	Abbey Glenn Place, Ashbrook Lane, Canterbury Court and McBean Parkway.	23.2	MFR = 150 ft. Park = 500 ft. School and Church = 1,000 ft.
12	28 SFR (under construction)	West of McBean Parkway	23.6	200 to 400 ft.
13	25 SFR	Ashwood Place, Shadylane Place, Falcon Crest Place, and Sky Crest Circle	23.8	200 to 400 ft.
14	Rio Norte Junior High School	Copper Hill Drive	24.0	2,000 ft.
15	40 SFR	English Rose Place, Promontory Lane, Astor Racing Court, Montevista Circle	24.3	200 to 400 ft.

Source: SCE, 2005 and Aspen, 2005.

Notes: SFR = single-family residence; MFR = multi-family residence.

C.10.2 Regulatory Framework

Regulating environmental noise is generally the responsibility of local governments. However, the U.S. Environmental Protection Agency (USEPA) once published guidelines on recommended maximum noise levels to protect public health and welfare (USEPA, 1974), and the State of California maintains recommendations for local jurisdictions in the General Plan Guidelines published by the Governor’s Office of Planning and Research (OPR, 1998). The following summarizes the federal and State recommendations and the local requirements.

C.10.2.1 Federal

There are no federal noise standards that directly regulate environmental noise. Table C.10-2 provides a summary of recommended noise levels for protecting public health and welfare with an adequate margin of safety. With regard to noise exposure and workers, the federal Occupational Safety and Health Administration (OSHA) establishes regulations to safeguard the hearing of workers exposed to occupational noise (29 CFR Section 1910.95, Code of Federal Regulations).

Figure C.10-3a. Noise Sensitive Receptor Locations (Northern Portion)

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Figure C.10-3b. Noise Sensitive Receptor Locations (Southern Portion)

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Effect	Maximum Level	Exterior or Interior Area
Hearing loss	$L_{eq}(24) < 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} < 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) < 55$ dB	Outdoor areas where people spend limited amounts of time, such as schoolyards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{dn} < 45$ dB	Indoor residential areas.
	$L_{eq}(24) < 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: USEPA, 1974

For NFS lands, the existing 2005 ANF Land Management Plan (Forest Plan) does not explicitly identify noise as an issue and does not suggest any specific noise strategies, standards, or regulations. However, the Plan does recognize the need to reduce conflicts between different types of recreational uses (USDA, 1987 and USDA, 2005). In a similar manner, the noise and disturbance associated with construction activities allowed through a Special Use authorization could represent a conflict with passive recreational activities or wildlife habitat values. The general direction provided in the Forest Plan is to coordinate and balance all of the uses within the Forest to maximize the output or benefit to all. Noise would be a consideration in this type of integrated planning.

C.10.2.2 State

The State of California requires each local government to perform noise surveys and implement a noise element as part of their general plan. Table C.10-3 shows the State guidelines for evaluating the compatibility of various land uses as a function of noise exposure.

C.10.2.3 Local

Each local government aims to protect its residents from intrusive noise. Many communities specifically restrict disturbing noises at night. The sections below summarize the applicable local rules and regulations that may apply to the Project.

City of Lancaster

The City of Lancaster has noise compatibility land use objectives that are in the Public Health and Safety Element of the Lancaster General Plan Policy Document (Lancaster, 1994). These objectives are presented in Table C.10-4. The City of Lancaster also has ordinances that regulate noise levels. The Health and Safety Ordinance identifies noise regulations in Chapter 8.24 of the City’s Municipal Code (Lancaster, 2005). The code includes a general prohibition against loud, unnecessary, and unusual noises (Section 8.24.030), and a general prohibition against performing construction activities between the hours of 8:00 p.m. and sunrise, and all day on Sundays (Section 8.24.040). In addition, the operation of loud construction activities (e.g., earth moving, jack hammering, drilling, etc.) is prohibited within 500 feet of an occupied dwelling from 8:00 p.m. until sunrise.

Table C.10-3. Land Use Compatibility for Community Noise Environment

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE – L _{dn} or CNEL (db)							
	50	55	60	65	70	75	80	
Residential - Low Density Single Family, Duplex, Mobile Home	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Residential - Multi-Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Transient Lodging - Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Auditorium, Concert Hall, Amphitheaters	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Sports Arena, Outdoor Spectator Sports	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable

	Normally Acceptable. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable. New construction or development should generally not be undertaken.

Source: OPR, 2003.

Land Use	Maximum Exterior CNEL	Maximum Interior CNEL
Rural, Single Family, Multiple Family Residential	65 dBA	45 dBA
Schools:		
Classrooms	65 dBA	45 dBA
Playgrounds	70 dBA	---
Libraries	---	50 dBA
Hospitals/Convalescent Facilities:		
Living Areas	---	50 dBA
Sleeping Areas	---	40 dBA
Commercial and Industrial	70 dBA	
Office Areas	---	50 dBA

Source: Lancaster, 1994.

Los Angeles County

The Noise Element of the Los Angeles County General Plan provides background information regarding noise and general policy guidance, but does not contain any numerical standards for the compatibility between land uses and noise levels (Los Angeles County, 1974). The Santa Clarita Valley Area Plan also provides a coordinated statement of public policy by the County of Los Angeles for use when making critical public decisions related to the future of the Santa Clarita Valley (Los Angeles County, 1990). The Noise Element of the Area Plan designates residential noise impact management areas to all residential areas within the designated 60 dB CNEL contour. Both the General Plan and the Area Plan do not have policies or guidelines directly applicable to the proposed Project.

The Los Angeles County Noise Control Ordinance is reflected in Chapter 12.08 of the County Code (Los Angeles County, 2005). The Ordinance identifies exterior noise standards for designated land use zones and time intervals (Section 12.08.390). The limits are derived from tabulated values that depend on the sensitivity of the land use, with adjustments to create a series of noise standards. The basic standards are presented in Table C.10-5, below.

Noise Zone	Designated Noise Zone Land Use (Receptor property)	Time Interval	Exterior Noise Level (dB)
I	Noise sensitive area	Anytime	45
II	Residential properties	10:00 pm to 7:00 am (nighttime)	45
		7:00 am to 10:00 pm (daytime)	50
III	Commercial properties	10:00 pm to 7:00 am (nighttime)	55
		7:00 am to 10:00 pm (daytime)	60
IV	Industrial properties	Anytime	70

Source: Los Angeles County, 2005.

For construction noise, the Noise Control Ordinance of Los Angeles County prohibits construction activities between weekday hours of 7:00 p.m. and 7:00 a.m. or at any time on Sundays or holidays (Section 12.08.440, Part A). The Ordinance (Section 12.08.440, Part B) also identifies maximum noise levels for mobile and stationary construction equipment as identified in Table C.10-6.

Time	Equipment Type ^a	Single-family Residential	Multi-family Residential	Semi-Residential/ Commercial
Daily, except Sundays and legal holidays, 7:00 am to 8:00 pm	Mobile	75 dBA	80 dBA	85 dBA
	Stationary	60 dBA	65 dBA	70 dBA
Daily, 8:00 pm to 7:00 am and all day Sunday and legal holidays	Mobile	60 dBA	65 dBA	70 dBA
	Stationary	50 dBA	55 dBA	60 dBA

Source: Los Angeles County, 2005.

^a Mobile equipment maximum noise levels are for nonscheduled, intermittent, short-term operations (less than 10 days); Stationary equipment maximum noise levels for repetitively scheduled and relatively long-term operations (periods of 10 days or more).

City of Santa Clarita

The City of Santa Clarita and the County of Los Angeles are jointly preparing a General Plan update that will govern the City and adjacent areas (SCE, 2004). An excerpt of the draft Land Use Compatibility Standards related to noise from the plan is presented in Table C.10-7. There are other standards and land use categories specified in the draft Community Health and Safety Chapter, but the categories summarized below are those most likely to be located in areas crossed by or adjacent to the proposed line route.

Land Use Category	Normally Acceptable CNEL or Ldn (dBA)	Conditionally Acceptable CNEL or Ldn (dBA)
Residential – Low density, single family, duplex, mobile homes	50-60	55-70
Residential – multi-family	50-65	60-70
Schools, libraries, churches, hospitals, nursing homes	50-70	60-70
Playgrounds, neighborhood parks	50-70	67.5-75

Source: SCE, 2004.

Specific limits for noise levels caused by activities within the City of Santa Clarita are set forth in the City’s Noise Limits Ordinance, which is in Chapter 11.44 of the City’s Municipal Code (Santa Clarita, 2005). The applicable limits are presented in Table C.10-8 and the clarifying text that accompanies the tabular data. Activities are not allowed to cause noise levels in the receiving zone in excess of these limits, except as provided elsewhere in the code section.

Region	Time	Sound Level dBA
Residential zone	Day	65
Residential zone	Night	55
Commercial and manufacturing	Day	80
Commercial and manufacturing	Night	70

Source: Santa Clarita, 2005.

In addition to these limits, the City of Santa Clarita Noise Ordinance also specifically regulates construction activities. Section 11.44.080 of the Municipal Code states that no person shall engage in any construction work, which requires a building permit from the City on sites within 300 feet of a residentially zoned property except between the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturday and that no work shall be performed on New Year’s Day, Independence Day, Thanksgiving, Christmas, Memorial Day, or Labor Day.

C.10.3 Significance Criteria

Noise impacts would be considered significant if the proposed Project would result in:

- Criterion NOI1: Noise levels in excess of standards established in the local general plan, noise ordinance, Forest Plan, or applicable standards of other agencies.
- Criterion NOI2: Sensitive receptors being exposed to excessive ground-borne vibration or ground-borne noise levels, or excessive ground-borne vibration or ground-borne noise levels are generated by activities related to the proposed Project.
- Criterion NOI3: A permanent and substantially higher level of ambient noise (an increase of more than five dBA) in the vicinity of sensitive receptors.
- Criterion NOI4: A substantial temporary or periodic increase in ambient noise levels in the vicinity of sensitive receptors above levels existing without the Project.

C.10.4 Applicant-Proposed Measures (APMs)

SCE has committed to implementing the two Applicant-Proposed Measures (APMs) presented in Table C.10-9 to reduce noise impacts associated with construction. APM NOI-1 would be implemented in the City of Lancaster portions of the Project and APM NOI-2 would be implemented in the unincorporated areas of Los Angeles County. These APMs are considered part of the proposed Project and implementation of these measures will be monitored by the CPUC and Forest Service during construction if the Project is approved.

Measure Number	SCE-Proposed Measure
APM NOI-1	Consistent with Section 8.24 of the City of Lancaster Municipal Code, within 500 feet of any occupied dwelling no construction will occur on Sundays, and no construction will occur between the hours of 8:00 p.m. and sunrise on all other days of the week. In the event that construction needed to occur outside the specified hours, a variance would need to be obtained.
APM NOI-2	Consistent with County Code (Section 12.08.440), no construction activities will occur in a residential area between 7:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays and holidays. In the event that construction needed to occur outside the specified hours, a variance would need to be obtained.

Source: SCE, 2004.

C.10.5 Impact Analysis: Proposed Project/Action

Construction Noise Description

Construction of the proposed Project would include the use of heavy equipment to build the proposed transmission line and substation upgrades as well as to remove and relocate existing transmission and sub-transmission lines. See Project Description (Section B) Table B.2-3 for the types of equipment that would be required to construct the proposed transmission line as well as to remove the existing line, and Table B.2-4 for the types of equipment that would be used to upgrade the Antelope and Pardee substations. Noise levels associated with these individual pieces of equipment would range between approximately 70-90 dBA (FTA, 1995). However, it is anticipated that the operation of heavy equipment would generate a combined maximum noise level of approximately 95 dBA at 50 feet from the construction activity (SCE, 2004). At 100 feet, these levels would be up to 89 dBA, and at 200 feet, 83 dBA. Average noise levels from construction would be lower because most equipment would not be operated steadily. At 50 feet, it is estimated that construction noise levels would average approximately 77 dBA. At 100 feet, these levels would average 71 dBA, and at 200 feet would average 65 dBA. These noise levels would diminish over additional distance and would be reduced further by intervening structures and topography. It is anticipated that no sources of ground-borne vibration would be expected to affect receptors outside of the work areas.

Construction would also cause noise off site, primarily from commuting workers and from trucks and helicopters bringing materials to the construction sites. Haul trucks would make trips to bring the lattice tower pieces, conductor line, and other materials to the construction sites and remove demolished tower debris and excavated material and wastes. The peak noise levels associated with passing trucks and commuting worker vehicles would be approximately 75 dBA at 50 feet.

Construction of the proposed Project would require the use of helicopters to erect towers and move materials and equipment in and out of Project areas that are in remote locations within NFS lands. Application of Mitigation Measure V-4b (Construct, Operate, and Maintain with Helicopters - see Section C.15, Visual Resources) would also require additional use of helicopters during construction, operation, and maintenance of the proposed transmission line. Public access would be restricted during helicopter use in designated areas within the NFS lands. The heavy-duty helicopters that would be used on NFS lands would generate noise levels of approximately 89 dBA at 200 feet (SCE, 2005). However, heavy-duty helicopters would only be used in remote areas where noise sensitive receptors do not exist. Light-duty helicopters would be used during the stringing phase of construction. Helicopter stringing activities would occur along the entire transmission line ROW and in the area of the helicopter staging area. It is anticipated that helicopter stringing activities would proceed at a rate of approximately 2,000 feet per day using four-hour days. Light-duty helicopters would generate noise levels of approximately 80 dBA at 200 feet (SCE, 2005).

The proposed daily construction schedule is 6:30 a.m. to 5:00 p.m. Monday through Saturday with no work on Sunday. Transmission line tower removal activities would proceed at a rate of approximately 2.5 to 3.2 days per transmission line tower, while construction of the 500-kV towers would take approximately 42 to 50 days per tower.

Operational Noise Description

The permanent noise sources that would occur under the proposed Project are limited to the corona effect of the transmission line, the new facilities associated with the modifications at the existing Antelope and Pardee substations, and the routine inspection and maintenance of the transmission line. Below is a summary of these permanent noise sources.

The noise from corona discharge and similar electrical phenomena associated with a high-voltage transmission line is heard as a crackling or hissing sound, which commonly varies with ambient meteorological conditions, such as humidity and rain. Corona discharge noise would typically be about 40 to 50 dBA near the edge of a transmission line ROW. For worst-case conditions, SCE estimates that the maximum Wet Conductor Generated Acoustic Power for the proposed transmission line would be approximately 56 dBA and the Heavy-Rain Generated Acoustic Power would be approximately 62 dBA at the edge of the transmission line ROW. However, conditions associated with the Heavy-Rain Generated Acoustic Power scenario include heavy rain that would produce noise levels that would mask any corona noise levels audible at a receptor location. Therefore, the Wet Conductor Generated Acoustic Power scenario is considered the worst-case scenario for corona discharge noise.

Noise from transformers and similar equipment at substations is usually a low-frequency humming sound. Noise from fans and ventilation equipment at substation site buildings also contribute to substation noise. These types of noises commonly range around 50-60 dBA at distances of approximately 100 feet. Upgrades to the Antelope and Pardee substations would not be expected to increase ambient noise conditions in the immediate vicinity of the substations (Veneklasen Associates, 2005).

Routine inspection and maintenance of the transmission lines would be accomplished with either ground access or occasional helicopter fly-over. The proposed Project would not require any additional personnel during operation of the new transmission facilities. Operation and maintenance of the proposed Project would involve a periodic inspection (e.g., once per year) via helicopter and truck. Maintenance of the transmission lines would be performed on an as-needed basis, and would include maintenance of access roads and erosion/drainage control structures. The light-duty helicopters and automobiles that would be used during inspection activities would generate noise levels of approximately 80 dBA at 200 feet and approximately 75 dBA at 50 feet, respectively.

Noise Levels in Violation of Local Standards (Criterion NOI1)

The proposed Project would be located within several local jurisdictions that regulate construction and long-term land use noise. Three of the four jurisdictions (i.e., City of Lancaster, Los Angeles County, and the City of Santa Clarita) have land use objectives or standards that apply to the proposed Project. However, on NFS lands, the applicable Forest Plan does not identify specific noise standards or regulations that would be applicable to the public. Therefore, noise impacts on NFS lands are assessed under the rules and standards applicable to unincorporated Los Angeles County in lieu of Forest standards as a means of determining significance. Impacts related to potential conflicts with local standards are described below.

Impact N-1: Construction noise levels would violate local standards.

The City of Lancaster, Los Angeles County, and the City of Santa Clarita have ordinances that specifically restrict construction activities during night-time hours. As described above, the proposed daily construction schedule is 6:30 a.m. to 5:00 p.m. Monday through Saturday with no work on Sunday. SCE has also committed to implementing APMs NOI-1 and NOI-2 (see Table C.10-9), which would require the Project to comply with the City of Lancaster and County of Los Angeles nighttime construction restrictions.

However, the Project as proposed would violate the City of Santa Clarita's nighttime construction restriction (Municipal Code Section 11.44.080), which requires a building permit from the City for construction on sites within 300 feet of a residentially zoned property, except between the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturday. Although a building permit may not be required from the City to construct the proposed Project, the ROW would be within 300 feet of several City of Santa Clarita residences in the vicinity of Mile 22.0. Mitigation Measure N-1a (see below) has been proposed to ensure that the proposed Project is consistent with the spirit of City of Santa Clarita Municipal Code Section 11.44.080.

In addition to nighttime construction noise restrictions, Los Angeles County has defined maximum construction noise levels for mobile and stationary construction equipment (see Table C.10-6). Maximum mobile construction noise levels are defined as 75 dBA at single-family residences, 80 dBA at multi-family residences, and 85 dBA at commercial uses. Mobile equipment activities are defined by the County as nonscheduled, intermittent, short-term operations (Los Angeles County, 2005). As described above, maximum construction activities are anticipated to be up to 95 dBA at 50 feet. For the purpose of this analysis, it is assumed that the 95 dBA maximum noise level would result from mobile construction equipment, such as back hoes, cranes, graders, loaders, helicopters, etc. Therefore, applying the general attenuation rule of a loss of 6 dBA with each doubling in distance, mobile construction equipment operations within 600 feet of single-family residences, 300 feet of multi-family residences, and approximately 170 feet of commercial uses may, depending on the equipment in use, generate noise levels in excess of the maximum levels defined by the County. Construction noise at closer distances to sensitive receptors, which would occur in several areas along the proposed route (see Table C.10-1), would violate the Los Angeles County standard. Mitigation Measure

N-1b (see below) would reduce the construction noise nuisance impacts in unincorporated areas of the Project ROW by providing advance notice of construction activities and tips on reducing noise intrusion; however, noise impacts from mobile equipment, especially from helicopters, the use of which would increase as a result of Mitigation Measure V-4b (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), would remain significant (**Class I**).

SCE has identified its intended use of an air compressor (see Project Description Table B.2-3), which is considered a stationary piece of construction equipment. Maximum stationary construction noise levels are defined by the County as 60 dBA at single-family residences, 65 dBA at multi-family residences, and 70 dBA at commercial uses (see Table C.10-6). An air compressor can be expected to generate a noise level of approximately 81 dBA at 50 feet (FTA, 1995). Therefore, stationary construction equipment operations within 600 feet of single-family residences, 350 feet of multi-family residences, and approximately 200 feet of commercial uses may, depending on the equipment in use, generate noise levels in excess of the maximum levels defined by the County. Construction noise nuisances within these distances would result in a significant impact. However, Mitigation Measure N-1c (see below) would reduce the noise nuisance impacts from stationary equipment in unincorporated areas of the Project ROW by requiring the use of shields to reduce stationary equipment noise near sensitive uses during construction to reduce noise levels to below the Los Angeles County maximum construction noise levels. As such, impacts from stationary equipment would be reduced to less-than-significant levels.

Implementing Mitigation Measures N-1a, N-1b, and N-1c would reduce the short-term noise impact associated with construction noise levels in violation of local standards to a level that is less than significant, except for mobile equipment, which would continue to violate local standards and therefore result in a significant unavoidable impact (**Class I**).

Mitigation Measures for Impact N-1

Mitigation Measures N-1a, N-1b, and N-1c would help to reduce violations of local noise standards; however, impacts from mobile construction equipment would continue to violate local standards and result in a significant unavoidable impact (**Class I**).

- N-1a Nighttime Construction Noise Restriction in Santa Clarita.** During construction, SCE or its construction contractor will not perform construction activities within 300 feet of a City of Santa Clarita residentially zoned property between the nighttime hours of 7:00 p.m. to 7:00 a.m. Monday through Friday and 6:00 p.m. to 8:00 a.m. on Saturday.
- N-1b Provide Advanced Notification of Construction.** During construction, SCE or its construction contractor will provide advance notice, between two and four weeks prior to construction, by mail to all unincorporated Los Angeles County single-family residences that would be within 600 feet of project construction, multi-family residences within 300 feet of construction, and commercial uses within 170 feet of construction. The announcement will state specifically where and when construction will occur in the area. If construction delays of more than seven days occur, an additional notice will be made, either in person or by mail. Notices will provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. SCE will also publish a notice of impending construction in local newspapers, stating when and where construction will occur. Prior to construction, copies of all notices will be submitted to the CPUC and Forest Service for review and approval.
- N-1c Provide Shields for Stationary Construction Equipment.** During construction, SCE or its construction contractor will install temporary shields or curtains to reduce stationary equipment noise levels in unincorporated areas of Los Angeles County when operating within 600 feet of

single-family residences, within 350 feet of multi-family residences, and within approximately 200 feet of commercial uses to reduce noise levels from stationary construction equipment to within the Los Angeles County maximum allowable construction noise levels. The maximum allowable noise levels for single-family residences are 60 dBA between 7:00 a.m. and 8:00 p.m. and 50 dBA between 8:00 p.m. and 7:00 a.m., for multi-family residences are 65 dBA between 7:00 a.m. and 8:00 p.m. and 55 dBA between 8:00 p.m. and 7:00 a.m., and for semi-residential/commercial uses are 70 dBA between 7:00 a.m. and 8:00 p.m. and 60 dBA between 8:00 pm and 7:00 a.m.

Impact N-2: Operational corona noise levels at Veluzat Motion Picture Ranch would violate Los Angeles County standards.

The proposed Project would result in violations of local standards due to corona noise. The typical corona noise level that would be generated by the 500-kV line would be between 40 to 50 dBA at the edge of the transmission line ROW (SCE, 2004). The closest sensitive noise receptor to the proposed Project route is the Veluzat Motion Picture Ranch (Motion Picture Ranch), which is immediately adjacent to the proposed transmission ROW in Haskell Canyon in unincorporated Los Angeles County. The Motion Picture Ranch conducts outdoor filming of movies, television shows, and music videos in the vicinity of where the proposed transmission line would be built. The Los Angeles County Noise Ordinance presents a noise standard of 45 dBA for noise-sensitive areas such as the Motion Picture Ranch (see Table C.10-5; note that Los Angeles County has the most stringent land use noise standards of all the local jurisdictions in the Project area). Therefore, operational corona noise levels between 40 to 50 dBA at the Motion Picture Ranch would exceed Los Angeles County Ordinance Standards and would therefore result in a significant and unavoidable impact (Class I) to the operations of the Motion Picture Ranch.

Impact N-3: Operational corona noise levels at residences would violate Los Angeles County standards.

The closest residential sensitive receptor to the proposed route is approximately 150 feet from the proposed transmission line ROW, also located in unincorporated Los Angeles County near Mile 23.2. The typical corona noise at 150 feet from the proposed ROW would equal a sustained noise level of approximately 34 to 44 dBA. This level of noise would not exceed the Los Angeles County Noise Ordinance. During rain or heavy fog, the highest noise level at the edge of the proposed ROW would be around 56 dBA (SCE, 2005), which would equate to a noise level of approximately 50 dBA at the closest residential sensitive receptor. However, the occurrence of this noise level would be periodic and would occur relatively infrequently. Therefore, corona noise impacts at residential sensitive receptors would not be significant and no mitigation is recommended (Class III).

Impact N-4: Noise level increases related to routine inspection and maintenance would violate local standards.

Routine inspection and maintenance of the transmission line would be accomplished by either ground access or by helicopter, the use of which would increase as a result of Mitigation Measure V-4b (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), and would occur on average once a year. This would cause short-term or intermittent increases in noise along the inspection route or place of maintenance that may, depending on the equipment in use, be in excess of established local standards and/or ordinances resulting in significant and unavoidable impacts (Class I).

Excessive Ground-Borne Vibration or Ground-Borne Noise (Criterion NOI2)

The proposed Project would not result in excessive exposure of persons to or generation of ground-borne vibration or noise levels. The construction of the proposed Project would not result in blasting or impact-pile driving which could cause vibration impacts at close distances. Construction activities would result in some minor amounts of ground-borne vibration; however, such ground-borne noise or vibration would attenuate rapidly from the source and would not be perceptible outside of the construction areas. No impacts related to excessive ground-borne vibration or noise would occur as a result of the proposed Project.

A Permanent and Substantially Higher Level of Ambient Noise (Criterion NOI3)

Impact N-5: The Project would result in a permanent increase in ambient noise levels at Veluzat Motion Picture Ranch.

As identified under the Impact N-2 discussion above, transmission line corona noise associated with the proposed Project would result in continuous noise levels of 40 to 50 dBA at the edge of the transmission ROW. The majority of the sensitive receptors, including residences, that would be in the vicinity of the proposed transmission line currently experience ambient noise levels that average at least 40 to 50 dBA and are not located immediately adjacent to the proposed transmission ROW. The one exception is the outdoor set of the Motion Picture Ranch, which is immediately adjacent to the proposed transmission line ROW between approximately Mile 18.6 to 19.3. The operations of the Motion Picture Ranch require very low ambient noise levels during outdoor filming. Ambient noise levels in the vicinity of the ranch are estimated to be approximately 40 dBA. Therefore, there is a potential for the proposed Project to result in significant impacts to the operations of the Motion Picture Ranch (**Class I**).

Impact N-6: The Project would result in a permanent noise level increase related to routine inspection and maintenance.

Routine inspection and maintenance of the transmission line would be accomplished by either ground access or by helicopter, and would occur on average once a year. This would cause short-term or intermittent increases in noise along the inspection route or place of maintenance. However, because of the short-term and relatively infrequent nature of inspections and maintenance activities, associated noise impacts would not cause a permanent increase in noise levels. As such, this impact is not significant and no mitigation is recommended (**Class III**).

A Substantially High Level of Temporary Noise (Criterion NOI4)

Impact N-7: Temporary increases in ambient noise levels would severely disrupt operations at Veluzat Motion Picture Ranch.

As described in the Impact N-1 discussion above, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would help to reduce violations of local noise standards; however impacts from mobile construction equipment would continue to violate local standards and result in a significant unavoidable impact (Impact N-1; **Class I**). These mitigation measures and the rules and standards for construction noise in unincorporated Los Angeles County do not appear to address day-time noise levels at noise sensitive areas such as the Veluzat Motion Picture Ranch. Temporary construction noise levels at the Motion Picture Ranch would be as high as 95 dBA. Such noise levels would make outdoor filming in the vicinity of the active construction areas impossible and would therefore severely disrupt the operations of the

Motion Picture Ranch. Therefore, impacts associated with temporary increases in ambient noise levels at the Veluzat Motion Picture Ranch are considered to be significant (**Class I**).

Although Impact N-7 can not be reduced to a less-than-significant level, Mitigation Measure N-7 is proposed to reduce this significant impact to the greatest extent feasible.

Mitigation Measures for Impact N-7

Mitigation Measure N-7 would reduce construction noise impacts at the Veluzat Motion Picture Ranch to the greatest extent feasible.

N-7 Coordination of Construction Activities with the Veluzat Motion Picture Ranch. During construction, SCE or its construction contractor will coordinate all construction activities that will occur within one half mile of the Veluzat Motion Picture Ranch with the operators of the ranch, at least two months prior to construction. SCE or its construction contractor will make a good faith effort to schedule all construction activities within one half mile of the ranch in order to cause the least amount of disturbance as possible to the operations of the ranch.

Impact N-8: Temporary increases in ambient noise levels would disturb recreational users within Angeles National Forest.

On NFS lands within the ANF, potential sensitive receptors in the area include recreational users along trails in the vicinity of the proposed transmission line, including along the Pacific Crest National Scenic Trail. Other sensitive receptors include seasonal residences within the Forest along Bouquet Canyon Road, although these residences would only be exposed to noise associated with construction traffic and helicopter use as they are located several thousand feet from the construction areas. Construction of the proposed Project would result in substantial temporary increases in ambient noise levels in excess of the Los Angeles County noise ordinances. Mitigation Measure N-1b (Provide Advanced Notification of Construction) would provide for advanced notification of construction activities to recreational users, and Mitigation Measure R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area - see Section C.9, Land Use and Public Recreation) would require coordination between SCE and the authorized officers of various recreational areas (i.e., ANF, Pacific Crest National Scenic Trail, Mountainview Park, and Ritter Ranch) to schedule construction activities to avoid heavy recreational use periods. While these mitigation measures would help to inform the public of construction activities, the proposed Project would continue to result in significant temporary noise levels during construction that would disturb recreational users (**Class I**).

C.10.6 Alternative 1: Partial Undergrounding of Antelope-Pardee Transmission Line

C.10.6.1 Affected Environment

The aboveground portions of Alternative 1 would follow the same route as the proposed Project. The two underground segments of this alternative include one in the ANF, which generally follows the same route as the proposed Project, and one in the Santa Clarita area, which follows a substantially different route than the proposed Project. The following paragraphs describe the affected environment of the two underground route segments associated with Alternative 1.

Angeles National Forest

Existing noise levels along the majority of the ANF underground route area tend to be relatively low (below 50 dBA). However, elevated noise levels exist along the route in the vicinity of the Bouquet Canyon Stone Quarry due to quarry equipment operations and material hauling (between 50 and 60 dBA) on Del Sur Ridge Road. Potential sensitive receptors in the ANF within the area of the Alternative 1 underground route would be occasional recreational users and seasonal residences.

Santa Clarita Area

This alternative would include underground transmission line construction within the ROW of San Francisquito Canyon Road, Copper Hill Drive, and Newhall Ranch Road. Traffic on these streets is the major source of ambient noise in the area (between 55 and 65 dBA). This underground route segment would pass adjacent to a number of sensitive residential receptors and a Junior High School. Table C.10-10 provides information about the stationary sensitive receptors along Alternative 1 in the Santa Clarita area, including a general description, nearest streets, nearest alternative milepost (Mile), and the approximate distance the receptor is from the alternative route. Figure C.10-4 provides a depiction of the relative locations of the sensitive receptors provided in Table C.10-10. Alternative 1 generally follows the same route as the proposed Project from Mile 0.0 (Antelope Substation) to Mile 22.7. Therefore, the same sensitive receptors in the Antelope Valley and Santa Clarita areas would be affected by Alternative 1 as are discussed for the proposed Project in Table C.10-1.

No.	Description of Receptor	Receptor Street Location	Nearest Route Mile	Distance from Route
1	14 MFR	North Mayfair Drive	22.7 – 22.9	100 to 200 feet
2	67 SFR	Medlar Drive, Lobelia Lane, Azurite Place, and Granite Court, Canterbury Court, and West Abbey Glen.	23.1 – 23.3	100 to 300 feet
3	20 MFR*	McBean Parkway	23.4	100 to 300 feet
4	39 SFR	Mirada Circulo, Rustica Court, Rancho Court	23.7 – 23.9	100 to 300 feet
5	Rio Norte Jr. High School	Rio Norte Drive	24.0	600 feet
6	42 SFR	Monte Vista Circle, Graciosa Street, Mira Vista Street.	25.1 – 25.4	200 feet
7	19 MFR*	Copper Hill Drive	25.4 – 25.6	200 feet

Source: Google, 2006.

Notes: *Estimated; SFR = single-family residence; MFR = multi-family residence.

C.10.6.2 Impacts and Mitigation Measures

Noise Levels in Violation of Local Standards (Criterion NOI1)

Underground construction activities associated with Alternative 1 would result in a longer period of construction noise nuisance in the Santa Clarita area compared to that of the proposed Project. In addition, underground construction activities would require additional equipment (see Table B.4-2), labor (see Table B.4-3) and materials (imported and exported from the construction areas), thereby increasing the quantity of mobile noise sources associated with Alternative 1 in comparison to the proposed Project or any of the other alternatives. Construction activities associated with Alternative 1 would violate the City of Santa Clarita's nighttime construction restriction (Municipal Code Section 11.44.080), particularly at the residential receptors along and adjacent to Copper Hill Drive (Impact N-1). In addition, Alternative 1 construction activities would exceed the Los Angeles County defined maximum construction noise levels for mobile and stationary construction

Figure C.10-4. Noise Sensitive Receptor Locations for Alternative 1 in the Santa Clarita Area
[CLICK HERE TO VIEW](#)

equipment (Impact N-1; see Table C.10-6). Mitigation Measure N-1a (Nighttime Construction Noise Restriction in Santa Clarita) would ensure that construction activities associated with Alternative 1 are consistent with the spirit of City of Santa Clarita Municipal Code Section 11.44.080. Mitigation Measures N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would provide for advanced notification of construction activities to residences along the utility corridor as well as require temporary shielding of stationary construction equipment when located near sensitive receptors to reduce noise impacts. These mitigation measures would help to reduce violations of local noise standards; however impacts from mobile construction equipment, especially from helicopters, the use of which would increase as a result of Mitigation Measure V-4b (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), would continue to violate local standards and result in a significant unavoidable impact (**Class I**).

In the vicinity of the Veluzat Motion Picture Ranch, Alternative 1 would be identical to the proposed Project. As such, construction of Alternative 1 would result in violations of Los Angeles County standards during Project operations at the Veluzat Motion Picture Ranch in Haskell Canyon (Impact N-2). The Los Angeles County Noise Ordinance presents a noise standard of 45 dBA for noise-sensitive areas such as the Motion Picture Ranch. Therefore, operational corona noise levels between 40 to 50 dBA at the Motion Picture Ranch would exceed Los Angeles County Ordinance Standards and would therefore result in a significant and unmitigable impact (**Class I**) to the operations of the Motion Picture Ranch. Operational corona noise impacts to residential receptors (Impact N-3) would be less than significant (**Class III**), as identified for the proposed Project; however, it should be noted that for those areas where cables are placed underground (7.5 miles, of which 4.0 miles would be on NFS lands within the ANF) no impact from corona noise would occur.

Impacts related to inspection and maintenance activities (Impact N-4) for overhead portions of Alternative 1 would be the same as those identified for the proposed Project. As discussed in Section B.4.1.3 (Alternative 1 Construction and Operation), maintenance of underground transmission lines and transition stations would require additional inspections. As such, Alternative 1 would have the potential to result in greater and/or more frequent noise impacts during maintenance activities than the proposed Project; impacts would be significant and could not be mitigated to a less-than-significant level (**Class I**).

Excessive Ground-Borne Vibration or Ground-Borne Noise (Criterion NOI2)

The construction of Alternative 1 would not result in blasting or impact-pile driving which could cause vibration impacts at close distances. Construction activities would result in some minor amounts of ground-borne vibration; however, such ground-borne noise or vibration would attenuate rapidly from the source and would not be perceptible outside of the construction areas. No impacts related to excessive ground-borne vibration or noise would occur.

A Permanent and Substantially Higher Level of Ambient Noise (Criterion NOI3)

The same as the proposed Project, transmission line corona noise associated with Alternative 1 would result in continuous noise levels of 40 to 50 dBA at the edge of the transmission ROW. The majority of the sensitive receptors, including residences, that would be in the vicinity of the proposed transmission line currently experience ambient noise levels that average at least 40 to 50 dBA and are not located immediately adjacent to the proposed transmission ROW. However, the outdoor set of the Motion Picture Ranch, which is located between Mile 18.6 and 19.3, requires very low ambient noise levels during outdoor filming. Ambient noise levels in the vicinity of the ranch are estimated to be approximately 40 dBA. Therefore, there is a potential for operations of Alternative 1 to result in significant impacts to the operations of the Motion Picture Ranch

(Impact N-5; **Class I**). Operational impacts related to permanent, non-emergency, inspection and maintenance activities (Impact N-6) would be similar to those identified for the proposed Project, although it should be noted that some additional maintenance activities would be required for underground portions and transition stations as discussed in Section B.4.1.3 (Alternative 1 Construction and Operation). Impacts related to permanent increases in noise levels from routine inspection and maintenance would be less than significant (**Class III**).

A Substantially High Level of Temporary Noise (Criterion NOI4)

Underground construction activities associated with Alternative 1 would result in a longer period of construction noise nuisance in the Santa Clarita area compared to that of the proposed Project. Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would help to reduce violations of local noise standards; however impacts from mobile construction equipment would continue to violate local standards and result in a significant unavoidable impact (Impact N-1; **Class I**). These mitigation measures and the rules and standards for construction noise in unincorporated Los Angeles County do not address day-time noise levels at noise sensitive areas such as the Veluzat Motion Picture Ranch. Temporary construction noise levels at the Motion Picture Ranch would be as high as 95 dBA. Such noise levels would make outdoor filming in the vicinity of the active construction areas impossible and would therefore severely disrupt the operations of the Motion Picture Ranch (Impact N-7). Therefore, impacts associated with temporary increases in ambient noise levels at the Veluzat Motion Picture Ranch are considered to be significant (**Class I**). Although Impact N-7 can not be reduced to a less-than-significant level, Mitigation Measure N-7 (Coordination of Construction Activities with the Veluzat Motion Picture Ranch) would also help to reduce this significant impact to the greatest extent feasible.

Same as the proposed Project, construction of Alternative 1 within the ANF would result in substantial temporary increases in ambient noise levels in excess of the Los Angeles County noise ordinances which would disturb recreational users. Mitigation Measure N-1b (Provide Advanced Notification of Construction) would provide for advanced notification of construction activities to recreational users, and Mitigation Measure R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area - see Section C.9, Land Use and Public Recreation) would require coordination between SCE and the authorized officers of various recreational areas (i.e., ANF, Pacific Crest National Scenic Trail, Mountainview Park, and Ritter Ranch) to schedule construction activities to avoid heavy recreational use periods. While these mitigation measures would help to inform the public of construction activities, Alternative 1 would continue to result in significant temporary noise levels during construction that would disturb recreational users (Impact N-8; **Class I**).

C.10.7 Alternative 2: Antelope-Pardee East Mid-Slope

C.10.7.1 Affected Environment

Alternative 2 would traverse the ANF from north to south as would the proposed Project; however, the alignment for Alternative 2 would be located several thousand feet below the proposed Project alignment on the easterly side of Del Sur Ridge below the Del Sur Ridge Road. Existing noise levels along the majority of the Alternative 2 re-route area typically tend to be relatively low (below 45 dBA). However, elevated noise levels (between 50 and 60 dBA) exist along the route in the vicinity of the roadways that would be crossed by the route, especially at the Bouquet Canyon Road crossing. Potential sensitive receptors in the area would be occasional recreational users and seasonal residences.

C.10.7.2 Impacts and Mitigation Measures

Noise Levels in Violation of Local Standards (Criterion NOI1)

There would be limited noise related impacts associated with the Alternative 2 route in the ANF, as the only potential sensitive receptors in the area would be occasional recreational users and seasonal residences; however, Alternative 2 would result in substantial tower construction by helicopter within the ANF (37 towers), which would result in high noise levels that would exceed Los Angeles County noise ordinances (Impact N-1). In the Santa Clarita area, Alternative 2 would result in the same noise levels as the proposed Project. Therefore, construction activities associated with Alternative 2 would result in violations of Santa Clarita and Los Angeles County noise ordinances (Impact N-1). Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would help to reduce violations of local noise standards; however impacts from mobile construction equipment, which includes helicopters, would continue to violate local standards and result in a significant unavoidable impact (**Class I**).

In the vicinity of the Veluzat Motion Picture Ranch, Alternative 2 would be identical to the proposed Project. As such, construction of Alternative 2 would result in violations of Los Angeles County standards during Project operations at the Veluzat Motion Picture Ranch in Haskell Canyon (Impact N-2). The Los Angeles County Noise Ordinance presents a noise standard of 45 dBA for noise-sensitive areas such as the Motion Picture Ranch. Therefore, operational corona noise levels between 40 to 50 dBA at the Motion Picture Ranch would exceed Los Angeles County Ordinance Standards and would therefore result in a significant and unmitigable impact (**Class I**) to the operations of the Motion Picture Ranch. Operational corona noise impacts to residential receptors (Impact N-3) would be less than significant (**Class III**), as identified for the proposed Project. Impacts related to inspection and maintenance activities (Impact N-4) would also be the same as those identified for the proposed Project, which are considered to be significant and could not be mitigated to a less-than-significant level (**Class I**).

Excessive Ground-Borne Vibration or Ground-Borne Noise (Criterion NOI2)

The construction of Alternative 2 would not result in blasting or impact-pile driving which could cause vibration impacts at close distances. Construction activities would result in some minor amounts of ground-borne vibration; however, such ground-borne noise or vibration would attenuate rapidly from the source and would not be perceptible outside of the construction area. No impacts related to excessive ground-borne vibration or noise would occur.

A Permanent and Substantially Higher Level of Ambient Noise (Criterion NOI3)

Same as the proposed Project, transmission line corona noise associated with Alternative 2 would result in continuous noise levels of 40 to 50 dBA at the edge of the transmission ROW. The majority of the sensitive receptors, including residences, that would be in the vicinity of the proposed transmission line currently experience ambient noise levels that average at least 40 to 50 dBA and are not located immediately adjacent to the proposed transmission ROW. However, the outdoor set of the Motion Picture Ranch, which is located between Mile 18.6 and 19.3, requires very low ambient noise levels during outdoor filming. Ambient noise levels in the vicinity of the ranch are estimated to be approximately 40 dBA. Therefore, there is a potential for operations of Alternative 2 to result in significant impacts to the operations of the Motion Picture Ranch (Impact N-5; **Class I**). Operational impacts related to permanent inspection and maintenance activities (Impact N-6) would be the same as those identified for the proposed Project, less than significant (**Class III**).

A Substantially High Level of Temporary Noise (Criterion NOI4)

Alternative 2 would result in the same construction related impacts as the proposed Project in the Santa Clarita area. Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would help to reduce violations of local noise standards; however impacts from mobile construction equipment would continue to violate local standards and result in a significant unavoidable impact (Impact N-1; **Class I**). These mitigation measures and the rules and standards for construction noise in unincorporated Los Angeles County do not address day-time noise levels at noise sensitive areas such as the Veluzat Motion Picture Ranch. Temporary construction noise levels at the Motion Picture Ranch would be as high as 95 dBA. Such noise levels would make outdoor filming in the vicinity of the active construction areas impossible and would therefore severely disrupt the operations of the Motion Picture Ranch (Impact N-7). Therefore, impacts associated with temporary increases in ambient noise levels at the Veluzat Motion Picture Ranch are considered to be significant (**Class I**). Although Impact N-7 can not be reduced to a less-than-significant level, Mitigation Measure N-7 (Coordination of Construction Activities with the Veluzat Motion Picture Ranch) would help to reduce this significant impact to the greatest extent feasible.

Construction activities associated with Alternative 2, specifically within the ANF, would require the use of helicopters (37 towers proposed for helicopter construction) resulting in high ambient noise levels in the ANF in excess of the Los Angeles County noise ordinances. Mitigation Measure N-1b (Provide Advanced Notification of Construction) would provide for advanced notification of construction activities to recreational users, and Mitigation Measure R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area - see Section C.9, Land Use and Public Recreation) would require coordination between SCE and the authorized officers of various recreational areas (i.e., ANF, Pacific Crest National Scenic Trail, Mountainview Park, and Ritter Ranch) to schedule construction activities to avoid heavy recreational use periods. While these mitigation measures would help to inform the public of construction activities, Alternative 2 would continue to result in significant temporary noise levels during construction that would disturb recreational users (Impact N-8; **Class I**).

C.10.8 Alternative 3: Antelope-Pardee Single-Circuit 500-kV Towers between Haskell Canyon and Pardee Substation

C.10.8.1 Affected Environment

From a noise standpoint, the affected environment for Alternative 3 would be essentially the same as that for the proposed Project (see Section C.10.1.2, Noise Environment).

C.10.8.2 Impacts and Mitigation Measures

Construction activities associated with Alternative 3 would generally be the same as the proposed Project; however, Alternative 3 would not include the removal of the single-circuit 500-kV towers between Mile 20.3 and 25.6. As such, construction noise from on-site construction equipment and haul trucks within this segment of the ROW would be less than the proposed Project, but would continue to create noise impacts in excess of Los Angeles County noise ordinances. Therefore, construction of Alternative 3 would result in the same noise impacts as those identified for the proposed Project, as described in Section C.10.5.

C.10.9 Alternative 4: Antelope-Pardee Re-Routing of New Right-of-Way along Haskell Canyon

C.10.9.1 Affected Environment

The re-routed portion of Alternative 4 would traverse 1.3 miles of the southern portion of the ANF and continue another 1.8 miles within the Santa Clarita area before rejoining the proposed Project route. Existing noise levels along the majority of the Alternative 4 re-route area typically tend to be relatively low (below 45 dBA). However, slightly elevated noise levels (approximately 50 dBA) exist along the route in the vicinity of Del Sur Ridge Road. The Veluzat Motion Picture Ranch is located at least 2,000 feet east of alternative route between Mile 18.1 and Mile 18.8. In addition, the Alternative 4 re-route would be within 400 to 500 feet of at least 12 residences located on Kathleen Avenue, Mauch Street, and Howard Marie Court, near Mile 19.5 (see Table C.10-11, Map No. 9, and Figure C.10-5b, below, for location).

C.10.9.2 Impacts and Mitigation Measures

Noise Levels in Violation of Local Standards (Criterion NOI1)

Alternative 4 is similar to the proposed Project in the Santa Clarita area; however, at least 12 additional residences would be exposed to construction noise compared to the proposed Project. Construction activities associated with Alternative 4 would result in violations of Santa Clarita and Los Angeles County noise ordinances (Impact N-1). Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would help to reduce violations of local noise standards and provide for advanced notification of construction activities to residences along the utility corridor; however impacts from mobile construction equipment, especially from helicopters, the use of which would increase as a result of Mitigation Measure V-4b (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), would continue to violate local standards and result in a significant unavoidable impact (**Class I**). Because the Alternative 4 re-route would be at least 2,000 feet from the Veluzat Motion Picture Ranch, corona noise levels associated with the operations of Alternative 4 would not conflict with Los Angeles County standards and no impact would occur (Impact N-2). Operational corona noise impacts to residential receptors (Impact N-3) would be similar to the proposed Project; however, it should be noted that Alternative 4 is 0.3 miles longer than the proposed Project and would expose at least 12 additional residences to corona noise levels. Therefore Alternative 4 would have a slightly greater potential to result in operational corona noise impacts to residential receptors than the proposed Project, but impacts would be less than significant (**Class III**).

Impacts related to inspection and maintenance activities (Impact N-4) would also be similar to those identified for the proposed Project; however, as noted above, Alternative 4 would expose a greater number of residences to inspection and maintenance activities. Therefore, Alternative 4 would have a slightly greater potential than the proposed Project to result in significant inspection and maintenance noise impacts (**Class I**).

Excessive Ground-Borne Vibration or Ground-Borne Noise (Criterion NOI2)

The construction of Alternative 4 would not result in blasting or impact-pile driving which could cause vibration impacts at close distances. Construction activities would result in some minor amounts of ground-borne vibration; however, such ground-borne noise or vibration would attenuate rapidly from the source and would not be perceptible outside of the construction areas. No impacts related to excessive ground-borne vibration or noise would occur.

A Permanent and Substantially Higher Level of Ambient Noise (Criterion NOI3)

Alternative 4 would avoid the Veluzat Motion Picture Ranch, and would therefore not result in permanent operational impacts to ambient noise levels at the ranch (Impact N-5). Operational impacts related to permanent inspection and maintenance activities (Impact N-6) would be similar to those identified for the proposed Project; however, as noted above, Alternative 4 would expose a greater number of residences to inspection and maintenance activities. Impacts would remain less than significant (**Class III**).

A Substantially High Level of Temporary Noise (Criterion NOI4)

Construction related impacts associated with Alternative 4 would continue to be significant even with Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) (Impact N-1; **Class I**). Similarly, despite the rerouting of the ROW to avoid the Veluzat Motion Picture Ranch, which would be located approximately 2,000 feet away, there is a possibility that construction activities would disrupt its operations due to the sensitive nature of motion picture filming (Impact N-7). Therefore, Mitigation Measure N-7 (Coordination of Construction Activities with the Veluzat Motion Picture Ranch) would be required to reduce the severity of this impact. The combination of the re-route being located a greater distance from the Veluzat Motion Picture Ranch (compared to the proposed Project or Alternatives 1, 2, or 3), and Mitigation Measures N-1a through N-1c and N-7, would reduce this impact to a less-than significant-level (**Class II**).

Same as the proposed Project, construction of Alternative 4 within the ANF would result in substantial temporary increases in ambient noise levels in excess of the Los Angeles County noise ordinances, which would disturb recreational users. Mitigation Measure N-1b (Provide Advanced Notification of Construction) would provide for advanced notification of construction activities to recreational users, and Mitigation Measure R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area - see Section C.9, Land Use and Public Recreation) would require coordination between SCE and the authorized officers of various recreational areas (i.e., ANF, Pacific Crest National Scenic Trail, Mountainview Park, and Ritter Ranch) to schedule construction activities to avoid heavy recreational use periods. While these mitigation measures would help to inform the public of construction activities, Alternative 4 would continue to result in significant temporary noise levels during construction that would disturb recreational users (Impact N-8; **Class I**).

C.10.10 Alternative 5: Antelope-Pardee Sierra-Pelona Re-Route

C.10.10.1 Affected Environment

The Alternative 5 route is located primarily in open space, agricultural, and low density rural residential areas with existing noise levels that are generally low (55 dBA or less). Although a short portion of Alternative 5 would be located within the City of Palmdale, the portion of the route in Palmdale would not be in the vicinity of any existing sensitive receptors, such as residences. Therefore, no City of Palmdale goals, objectives, or policies relative to noise issues would be applicable to this alternative. Table C.10-11 provides information about the sensitive receptors along the portion of Alternative 5 that deviates from the proposed Project, including a general description, nearest streets, nearest alternative milepost (Mile), and the approximate distance the receptor is from the alternative route. Figures C.10-5a and b provides a depiction of the relative locations of the sensitive receptors provided in Table C.10-11. Alternative 5 follows the same route as the proposed Project from Mile 31.9 (proposed Project Mile 20.3) to Mile 37.2 (proposed Project Mile 25.6). Therefore, the same sensitive receptors in the Santa Clarita area would be affected by Alternative 5 as are discussed for the proposed Project in Table C.10-1 (No. 5 to 15).

No.	Description of Receptor	Receptor Street Location	Nearest Route Mile	Distance from Route
1	Scattered Rural Ranches	Leona Avenue	5.6	300 feet
2	Scattered Rural Ranches	Lost Valley Ranch Road	6.5 – 8.5	300 feet
3	Scattered Rural Ranches	Bouquet Canyon Road	9.1	200 feet
4	Scattered Rural Ranches	Anthony Road	12.3 – 13.2	100 to 300 feet
5	Scattered Rural Ranches	Big Springs Road	13.3 – 13.8	500 feet
6	Scattered Rural Ranches and SFR	Between Sierra Highway and Vasquez Canyon Road	25.8 – 28.1	500 feet
7	Scattered Rural Ranches and SFR	Esquerra Road	28.6 – 30.1	200 to 500 feet
8	Approximately 28 SFR	Blue Cloud Road	29.8	300 to 500 feet
9	Approximately 35 SFR	Shadow Valley Road, Kathleen Avenue, Mauch Street, and Howard Marie Court	30.9 – 31.8	400 to 500 feet

Source: Google, 2006.

C.10.10.2 Impacts and Mitigation Measures

Noise Levels in Violation of Local Standards (Criterion NOI1)

The Alternative 5 route would result in the same impacts as the proposed Project in the Santa Clarita area as it would be identical between Mile 31.9 (proposed Project Mile 20.3) and Mile 37.2 (proposed Project Mile 25.6); however, additional residences in Leona Valley and Agua Dulce would be exposed to construction noise unlike the proposed Project or any of the other alternatives. Construction activities associated with Alternative 5 would result in violations of Santa Clarita and Los Angeles County noise ordinances (Impact N-1). Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would help to reduce violations of local noise standards and provide for advanced notification of construction activities to residences along the utility corridor; however impacts from mobile construction equipment, especially from helicopters, the use of which would increase as a result of Mitigation Measure V-4b (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), would continue to violate local standards and result in a significant unavoidable impact (**Class I**).

Because the Alternative 5 route would bypass the Veluzat Motion Picture Ranch, corona noise levels associated with the operations of Alternative 5 would not impact the ranch (Impact N-2). Operational corona noise impacts to residential receptors (Impact N-3) would be less than significant (**Class III**), as identified for the proposed Project. However, it should be noted that Alternative 5 would have the potential to affect a greater number of residences along the ROW compared to the proposed Project or other alternatives due to the fact that Alternative 5 would not traverse the ANF, except for a 0.5-mile segment, where there are few residences, and would instead cross through rural development in both Leona Valley and Agua Dulce, as well as urban development in Santa Clarita (common to the proposed Project and other alternatives). Furthermore, as discussed in Section B (Project Description), Alternative 5 would traverse approximately 103 private parcels, whereas the proposed Project and other alternatives would traverse between 58 and 60 private parcels.

Impacts related to inspection and maintenance activities (Impact N-4) would be similar to those identified for the proposed Project, which are considered to be significant and unavoidable (**Class I**); however, as mentioned above, a greater number of residences would be impacted for Alternative 5 compared to the proposed Project or other alternatives.

Figure C.10-5a. Noise Sensitive Receptor Locations for Alternative 5 (Northern Portion)

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Figure C.10-5b. Noise Sensitive Receptor Locations for Alternative 5 (Southern Portion)

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Excessive Ground-Borne Vibration or Ground-Borne Noise (Criterion NOI2)

The construction of Alternative 5 would not result in blasting or impact-pile driving which could cause vibration impacts at close distances. Construction activities would result in some minor amounts of ground-borne vibration; however, such ground-borne noise or vibration would attenuate rapidly from the source and would not be perceptible outside of the construction areas. No impacts related to excessive ground-borne vibration or noise would occur.

A Permanent and Substantially Higher Level of Ambient Noise (Criterion NOI3)

Alternative 5 would not result in permanent operational impacts to ambient noise levels at the Veluzat Motion Picture Ranch (Impact N-5). Operational impacts related to permanent inspection and maintenance activities (Impact N-6) would be similar to those identified for the proposed Project, less than significant (**Class III**); however, as mentioned above, a greater number of residences would be impacted by Alternative 5 compared to the proposed Project or other alternatives (See discussion above for Criterion NOI1).

A Substantially High Level of Temporary Noise (Criterion NOI4)

There would be no construction related impacts at the Veluzat Motion Picture Ranch for Alternative 5. Therefore, no temporary increases in ambient noise levels at the ranch would occur for this alternative (Impact N-7).

Construction of Alternative 5 within the ANF would result in substantial temporary increases in ambient noise levels in excess of the Los Angeles County noise ordinances which would disturb recreational users. However, for Alternative 5, only 0.5 miles of the utility corridor would traverse the ANF (1.5 miles total on NFS lands due to two additional NFS parcels crossed in the Soledad Canyon area), thereby reducing not only the likelihood of disturbing recreational users but the duration of disturbance in comparison to the proposed Project or any of the other alternatives (Alternatives 1, 2, 3, and 4). Mitigation Measure N-1b (Provide Advanced Notification of Construction) would provide for advanced notification of construction activities to recreational users, and Mitigation Measure R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area - see Section C.9, Land Use and Public Recreation) would require coordination between SCE and the authorized officers of various recreational areas (i.e., ANF, Pacific Crest National Scenic Trail, Mountainview Park, and Ritter Ranch) to schedule construction activities to avoid heavy recreational use periods. While these mitigation measures would help to inform the public of construction activities, Alternative 5 would continue to result in significant temporary noise levels during construction that would disturb recreational users (Impact N-8; **Class D**).

C.10.11 No Project/Action Alternative

Under the No Project/Action Alternative, the Project would not be implemented and the Forest Service would deny the special use application. No Forest Plan amendments would be needed with this alternative. As such, none of the impacts associated with the proposed Project and alternatives described in Sections C.10.5 through C.10.10 above would occur. As a result, the No Project/Action alternative would not result in violations of noise regulations or impact noise-sensitive receptors. Noise levels would continue, similar to what was described in the affected environment sections for the proposed Project and each alternative (Sections C.10.1, C.10.6.1, C.10.7.1, C.10.8.1, C.10.9.1, and C.10.10.1).

As identified in Section B.4.6.2, in the absence of the Project, other actions would occur. Because detailed descriptions of these actions are not available, it is not possible at this time to determine what specific impacts

to noise would occur. However, it can be reasonably assumed that since the actions listed in Section B.4.6.2 would involve transmission line construction, some of the impacts to noise would be the same or similar to the Project.

C.10.12 Impact and Mitigation Summary

Table C.10-12 presents a summary of the impacts and proposed mitigation measures for noise. Applicable mitigation measures are listed below the impact significance classification for each alternative.

Table C.10-12. Impact and Mitigation Summary – Noise						
Impact	Impact Significance					
	Proposed Project	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
N-1: Construction noise levels would violate local standards.	Class I	Class I	Class I	Class I	Class I	Class I
	N-1a thru N-1c	N-1a thru N-1c	N-1a thru N-1c	N-1a thru N-1c	N-1a thru N-1c	N-1a thru N-1c
N-2: Operational corona noise levels at Veluzat Motion Picture Ranch would violate Los Angeles County standards.	Class I	Class I	Class I	Class I	No Impact	No Impact
	None	None	None	None	None	None
N-3: Operational corona noise levels at residences would violate Los Angeles County standards.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
N-4: Noise level increases related to routine inspection and maintenance would violate local standards.	Class I	Class I	Class I	Class I	Class I	Class I
	None	None	None	None	None	None
N-5: The Project would result in a permanent increase in ambient noise levels at Veluzat Motion Picture Ranch.	Class I	Class I	Class I	Class I	No Impact	No Impact
	None	None	None	None	None	None
N-6: The Project would result in a permanent noise level increase related to routine inspection and maintenance.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
N-7: Temporary increases in ambient noise levels would severely disrupt operations at Veluzat Motion Picture Ranch.	Class I	Class I	Class I	Class I	Class II	No Impact
	N-1a thru N-1c N-7	N-1a thru N-1c N-7	N-1a thru N-1c N-7	N-1a thru N-1c N-7	N-1a thru N-1c N-7	None
N-8: Temporary increases in ambient noise levels would severely disrupt users within Angeles National Forest.	Class I	Class I	Class I	Class I	Class I	Class I
	N-1b and R-1a*	N-1b and R-1a	N-1b and R-1a	N-1b and R-1a	N-1b and R-1a	N-1b and R-1a

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.9.5, Land Use, Proposed Project/Action, Mitigation Measure R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area).

C.10.13 Cumulative Effects

C.10.13.1 Geographic Extent

The geographic extent for the analysis of cumulative impacts related to noise is generally limited to areas within approximately 600 feet of the Project route (proposed route or alternative routes). These routes traverse through generally rural and low-density residential areas of Lancaster, the open areas of the Forest System lands, and the existing and developing suburban residential areas of Santa Clarita. In addition to these areas, Alternative 5 also traverses unincorporated areas of Los Angeles County, including Leona Valley and Agua Dulce. This area is defined as the geographic extent of the cumulative noise impact area because noise impacts would generally be localized, mainly within approximately 600 feet from any noise source and rarely more than one-quarter mile away.

C.10.13.2 Existing Cumulative Conditions

Past development and population growth within the cities of Santa Clarita, Palmdale, and Lancaster and in adjacent unincorporated areas have expanded the potential for man-made noise, mainly due to roadway traffic, air traffic, and ongoing construction projects. A description of the existing noise environment, which would include the past projects for the geographic area determined for noise impacts (see Section C.10.13.1), for the proposed Project and each alternative are described in Sections C.10.1.2, C.10.6.1, C.10.7.1, C.10.8.1, C.10.9.1, and C.10.10.1. Due to the multiple types of land uses that have developed, a wide range of noise sources occur in the geographic area. Existing ambient noise levels tend to be lowest (below 40 dBA) in the recreational and open areas of NFS lands and away from the highways and urban and suburban areas. Noise levels are higher (55dBA or less) southwest of the Antelope Substation, the northernmost area of the Project, as well as in the rural and low-density areas within the City of Lancaster. The highest noise levels (between 50 and 65 dBA) within the Project area occur near transportation facilities, such as McBean Parkway and Copper Hill Drive, and in the suburban area of Rancho Santa Clarita.

Future baseline noise levels within the geographic area described above are expected to be incrementally higher than the levels in the present regional setting where increased urbanization, population growth, or human activity occurs. This is particularly true for the area just south of the Angeles National Forest and north of Santa Clarita, where several residential development projects are planned for open areas that currently have relatively low ambient noise levels. Approved and pending projects (future), listed in Table B.5-1 and depicted in Figures B.5-1a and b, located within approximately 600 feet of the proposed Project route include three residential development projects: (1) Meadow Peak Project (Map ID No. 3), (2) North Park (Map ID No. 7), (3) and an unnamed residential development (Map ID No. 8). These projects would add to the future noise levels of the geographic area. As a result, noise generated from construction and operation of the proposed Project is cumulatively considerable.

As stated above, existing ambient noise levels tend to be lowest (below 40 dBA) in the recreational and open areas of NFS lands and away from the highways and urban and suburban areas. However, past projects, such as mining operations by the Bouquet Canyon Stone Company, have resulted in increased ambient noise levels due to equipment operations and material hauling (between 50 and 60 dBA) on Del Sur Ridge Road. Other past projects, which have resulted in increases in ambient noise levels in the ANF along the proposed Project route and Alternatives 1 through 4, include the building of access roads and trails within the ANF. These roads and trails now provide for access to interior areas of the ANF by vehicle (OHV or otherwise) and on foot, thereby increasing ambient noise levels in the geographic area to where they are today (2006).

C.10.13.3 Cumulative Impact Analysis

If construction activities from projects identified in Table B.5-1 (Cumulative Projects Scenario: Approved and Pending Projects Within Five Miles of the Proposed Project Route) and Table B.5-3 (Recent and Future Projects on NFS Lands) occur at the same time as construction of the Project, cumulative construction noise impacts would occur.

- **Construction noise levels would violate local standards (Impact N-1).** Construction activities associated with the proposed Project would result in intermittent temporary violations of Santa Clarita and County of Los Angeles noise ordinances as a result of mobile construction equipment, which would produce noise levels up to 95 dBA at 50 feet. Similarly, construction activities associated with other projects in close proximity to the proposed Project, such as the Meadow Peak Project, North Park, and other residential developments, that potentially occur at the same time as the proposed Project could also violate local standards. The combined effect of construction noise could be cumulatively significant at various times during construction. For the proposed Project, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification

of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the local noise standards to the extent feasible; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**). A potential additional mitigation measure to reduce cumulative noise impacts would be to coordinate with Los Angeles County, the Cities of Lancaster and Santa Clarita, as well as the ANF to stagger construction schedules to the extent feasible for construction projects occurring within 600 feet of the Project construction areas. While this mitigation measure would reduce the potential for cumulative increases in ambient noise levels during construction, it would result in potentially longer periods of construction noise nuisance, which may in effect be considered by the communities to be worse than higher noise levels over a shorter duration. Therefore, this mitigation measure for cumulative noise impacts is not recommended.

Alternative 1 would result in a longer period of construction noise impacts in both the ANF and the Santa Clarita area compared to that of the proposed Project due to activities associated with underground construction. In addition, underground construction activities would require additional equipment, labor, and materials (imported and exported), increasing the quantity of mobile noise sources associated with Alternative 1 in comparison to the proposed Project or any of the other alternatives. Construction noise associated with Alternative 1, when combined with other construction projects potentially occurring at the same time, would be cumulatively significant. As discussed above for the proposed Project, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the local noise standards; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**).

Alternative 2 would re-route the existing utility corridor generally on NFS lands within the ANF and place towers in mid-slope locations. Alternative 2 would result in substantial tower construction by helicopter within the ANF (37 towers), which would result in high ambient noise levels over a broad geographic area that would exceed Los Angeles County noise ordinances. In the Santa Clarita area, Alternative 2 would result in the same noise levels as the proposed Project. Construction noise associated with Alternative 2, when combined with other projects potentially occurring at the same time, would be cumulatively significant. As discussed above for the proposed Project, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the local noise standards; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**).

Alternative 3 would not include the removal of the single-circuit 500-kV towers between Mile 20.3 and 25.6. As such, construction noise from on-site construction equipment and haul trucks within this segment of the ROW would be less than the proposed Project or any of the other alternatives, but would continue to create noise impacts in excess of Los Angeles County noise ordinances. When combined with other projects potentially occurring at the same time, construction noise associated with Alternative 3 would be cumulatively significant. As discussed above for the proposed Project, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the local noise standards; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**).

Alternative 4 would expose 12 additional residences in the Santa Clarita area to construction noise compared to the proposed Project. Construction activities associated with Alternative 4 would result in violations of Santa Clarita and Los Angeles County noise ordinances. From a cumulative standpoint, Alternative 4 would have less potential to result in cumulatively considerable noise impacts in the Santa Clarita area as only one potentially cumulative project has been identified in the vicinity of this route (Table B.5-1, Map ID No. 7 - North Park residential development), whereas the proposed Project would pass within approximately 600 feet of at least three projects. When combined with this other cumulative project, which could potentially be constructed at the same time as Alternative 4, construction noise would be cumulatively significant. As discussed above for the proposed Project, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the local noise standards; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**).

Alternative 5 would result in the same impacts as the proposed Project in the Santa Clarita area as it would be identical between Mile 31.9 (proposed Project Mile 20.3) and Mile 37.2 (proposed Project Mile 25.6); however, additional residences in Leona Valley and Agua Dulce would be exposed to construction noise unlike the proposed

Project or any of the other alternatives. Construction activities associated with Alternative 5 would result in intermittent temporary violations of Santa Clarita and County of Los Angeles noise ordinances as a result of mobile construction equipment. Similarly, construction activities associated with other projects in close proximity to the Alternative 5 ROW, such as the Ritter Ranch and Agua Dulce residential developments, which could potentially occur at the same time as the proposed Project, could also violate local standards. The combined effect of construction noise could be cumulatively significant at various times during construction. As discussed above for the proposed Project, Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the local noise standards; however, noise impacts from mobile construction equipment would remain cumulatively significant (**Class I**).

- **Operational corona noise levels at Veluzat Motion Picture Ranch would violate Los Angeles County standards (Impact N-2).** The Veluzat Motion Picture Ranch is a sensitive receptor located directly adjacent to the proposed Project that could be impacted by operational noise from the transmission ROW. Since the ranch is located in a rural, low density area, the current potential for other noise generating activities in the immediate area is low. However, as indicated in Table B.5-1, the Meadow Peak Project, a proposed development project that would include 479 single-family residential lots, an elementary school, and park lots, is proposed to be constructed within approximately 1,000 feet of the Veluzat Motion Picture Ranch. If the Meadow Peak Project is approved and constructed, the combined operational noise impacts would be cumulatively significant (**Class I**).

Alternatives 1, 2, and 3 would be identical to the proposed Project in the vicinity of the Veluzat Motion Picture Ranch. As such, operational noise impacts would be cumulatively significant (**Class I**).

Alternatives 4 and 5 would be routed to avoid the Veluzat Motion Picture Ranch. Therefore, corona noise levels associated with the operations of Alternatives 4 and 5 would not impact the ranch.

- **Operational corona noise levels at residences would violate Los Angeles County standards (Impact N-3).** The operational noise generated by the proposed Project alone would not exceed County of Los Angeles noise standards except in conditions such as rain and fog. Since weather conditions could combine with this impact to exceed regulatory thresholds, it is possible that other activities, such as roadway noise and other development projects, could also exceed noise standards. Therefore, the combined effect of operational corona noise combined with other noise sources located within close proximity to the proposed transmission line and residences would be cumulatively significant (**Class I**).

Alternative 1 operational corona noise impacts to residential receptors would similar to the proposed Project; however, it should be noted that for those areas where cables are placed underground (7.5 miles, of which 3.5 miles would be within the Santa Clarita area) no impact from corona noise would occur. For the above ground transmission lines, impacts would be the same as the proposed Project, corona noise levels would combine with other noise sources located within close proximity to the proposed transmission line and residences, and would result in a cumulatively significant impact (**Class I**).

Alternatives 2 and 3 would have the same potential to result in operational corona noise levels at residence that would violate Los Angeles County standards. Same as the proposed Project, when combined with other noise sources located in close proximity to the proposed transmission line and residences, corona noise impacts would be cumulatively significant (**Class I**).

Alternative 4 operational corona noise impacts to residential receptors would be similar to the proposed Project; however, it should be noted that Alternative 4 is 0.3 miles longer and would expose at least 12 additional residences to corona noise levels compared to the proposed Project. Therefore, Alternative 4 would have a slightly greater potential to result in operational corona noise impacts to residential receptors than the proposed Project. Similar to the proposed Project, when combined with other noise sources located in close proximity to the proposed transmission line and residences, corona noise impacts would be cumulatively significant (**Class I**).

Alternative 5 operational corona noise impacts to residential receptors would be similar to the proposed Project. It should be noted, however, that Alternative 5 would have the potential to impact a greater number of residences along the ROW compared to the proposed Project or other alternatives due to the fact that Alternative 5 would not traverse the ANF, except for a 0.5-mile segment, where there are few residences, and would instead cross through rural development in both Leona Valley and Agua Dulce, as well as urban and suburban development in the Santa Clarita area (common to the proposed Project and other alternatives). Similar to the proposed Project, when combined with other noise sources located in close proximity to the proposed transmission line and residences, corona noise impacts would be cumulatively significant (**Class I**).

- **Noise level increases related to routine inspection and maintenance would violate local standards (Impact N-4).** The inspection and maintenance activities for the proposed Project would occur on average once per year. Noise increases related to these activities would be short-term and intermittent, but would be in excess of established local standards and/or ordinances resulting in significant and unavoidable impacts. The likelihood of another project, which results in noise impacts, occurring not only within 600 feet of the new transmission line but also in the area of a maintenance activity would be extremely low. Therefore, noise impacts related to routine inspection and maintenance would not combine with other cumulative projects and no cumulative impact would occur.

Alternative 1 would consist of both overhead and underground transmission lines. Impacts related to inspection and maintenance activities for the overhead portions would be the same as those identified for the proposed Project. However, the maintenance of underground transmission lines and transition stations would require additional inspections. As such, Alternative 1 would have the potential to result in greater and/or more frequent noise impacts during maintenance activities than the proposed Project. Impacts would be considered significant as noise levels would be in excess of established local standards and/or ordinances (Class I). The likelihood of another project, which results in noise impacts, occurring not only within 600 feet of the new transmission line but also in the area of a maintenance activity would be extremely low. Therefore, noise impacts related to routine inspection and maintenance would not combine with other cumulative projects and no cumulative impact would occur.

Alternatives 2 and 3 would result in the same significant noise impacts (Class I) related to inspection and maintenance activities as the proposed Project. The likelihood of another project, which results in noise impacts, occurring not only within 600 feet of the new transmission line but also in the area of a maintenance activity would be extremely low. Therefore, noise impacts related to routine inspection and maintenance would not combine with other cumulative projects and no cumulative impact would occur.

Alternative 4 impacts related to inspection and maintenance activities would also be similar to those identified for the proposed Project; however, Alternative 4 would expose at least 12 additional residences to inspection and maintenance activities. Therefore, Alternative 4 would have a slightly greater potential than the proposed Project to result in significant inspection and maintenance noise impacts. The likelihood of another project, which results in noise impacts, occurring not only within 600 feet of the new transmission line but also in the area of a maintenance activity would be extremely low. Therefore, noise impacts related to routine inspection and maintenance would not combine with other cumulative projects and no cumulative impact would occur.

Alternative 5 impacts related to inspection and maintenance activities would be similar to those identified for the proposed Project; however, a greater number of residences in both Leona Valley and Agua Dulce would be impacted for Alternative 5 compared to the proposed Project or other alternatives. The likelihood of another project, which results in noise impacts, occurring not only within 600 feet of the new transmission line but also in the area of a maintenance activity would be extremely low. Therefore, noise impacts related to routine inspection and maintenance would not combine with other cumulative projects and no cumulative impact would occur.

- **The Project would result in a permanent increase in ambient noise levels at Veluzat Motion Picture Ranch (Impact N-5).** Transmission line corona noise associated with the proposed Project would result in a permanent significant impact at the Veluzat Motion Picture Ranch. Since the Ranch is located in a rural, low density area, the current potential for other noise generating activities in the immediate area is low. However, as indicated in Table B.5-1, the Meadow Peak Project, a proposed development project that would include 479 single-family residential lots, an elementary school, and park lots, is proposed to be constructed within approximately 1,000 feet of the Veluzat Motion Picture Ranch. If the Meadow Peak Project is approved and constructed, the combined operational noise impacts would be cumulatively significant (Class I).

Alternatives 1, 2, and 3 would be identical to the proposed Project in the vicinity of the Veluzat Motion Picture Ranch. As such, permanent noise impacts from these alternatives when combined with other proposed development projects in the vicinity would be cumulatively significant (Class I).

Alternatives 4 and 5 would be routed to avoid the Veluzat Motion Picture Ranch. Therefore, ambient noise levels associated with the everyday operations of Alternatives 4 and 5 would not impact the ranch.

- **The Project would result in a permanent noise level increase related to routine inspection and maintenance (Impact N-6).** The inspection and maintenance activities for the proposed Project would occur on average once per year. Noise increases related to these activities would be intermittent and short term. Any combination of these

noise increases with other sources would be similarly intermittent and short term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 1 impacts related to permanent, non-emergency inspection and maintenance activities would be similar to those identified for the proposed Project, except that some additional maintenance activities would be required for underground portions and transition stations. Noise increases related to these activities would be intermittent and short term, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternatives 2 and 3 would result in identical inspection and maintenance impacts as the proposed Project, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 4 impacts related to inspection and maintenance activities would be similar to those identified for the proposed Project, except that Alternative 4 would have the potential to expose a greater number of residences to these activities. Noise increases related to these activities would be intermittent and short term, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 5 impacts related to inspection and maintenance activities would be the similar to those identified for the proposed Project, except that Alternative 5 would have the potential to expose a greater number of residences (especially in Leona Valley and Agua Dulce) to these activities. Noise increases related to these activities would be intermittent and short term, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

- **Temporary increases in ambient noise levels would severely disrupt operations at Veluzat Motion Picture Ranch (Impact N-7).** Noise generated by construction activities associated with the proposed Project would disrupt operations at the Motion Picture Ranch. Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment), as well as N-7 (Coordination of Construction Activities with the Veluzat Motion Picture Ranch) would reduce impacts to the ranch to the greatest extent feasible; however, impacts would remain significant. If the proposed Meadow Peak Project (described in Table B.5-1) were approved and constructed at the same time as the proposed Project, the combined construction noise impacts would be cumulatively significant (**Class I**).

Alternatives 1, 2, and 3 would be identical to the proposed Project in the vicinity of the Veluzat Motion Picture Ranch. As such, temporary noise impacts during construction with mitigation (N-1a through N-1c, N-7) would reduce impacts to the ranch to the greatest extent feasible; however, impacts would remain significant when combined with other proposed development projects in the vicinity would be cumulatively significant (**Class I**).

Alternative 4 would re-route the ROW approximately 2,000 feet away from the Veluzat Motion Picture Ranch; however, there is a possibility that temporary construction noise would still disrupt ranch operations due to the sensitive nature of motion picture filming. Mitigation Measures N-1a (Nighttime Construction Noise Restriction in Santa Clarita), N-1b (Provide Advanced Notification of Construction), and N-1c (Provide Shields for Stationary Construction Equipment) and N-7 (Coordination of Construction Activities with the Veluzat Motion Picture Ranch) would reduce construction noise impacts to the ranch associated with Alternative 4 to a less-than-significant level; however, when combined with other proposed development projects in the vicinity of the ranch impacts would be cumulatively significant (**Class I**).

Alternative 5 would be routed to avoid the Veluzat Motion Picture Ranch. Therefore, temporary noise impacts during construction of Alternative 5 would not impact the ranch and, therefore, there is no potential for cumulative noise impacts.

- **Temporary increases in ambient noise levels would disturb recreational users within Angeles National Forest (Impact N-8).** Noise generated by construction activities associated with the proposed Project would disturb recreational users within the ANF. Mitigation Measures N-1b (Provide Advanced Notification of Construction) and R-1a (Coordinate Construction Schedule with the Authorized Officer for the Recreation Area - see Section C.9, Land Use and Public Recreation) would help to inform the public of construction activities and provide a mechanism to coordinate the construction schedule to avoid heavy recreational use periods; however, the proposed

Project would continue to disturb recreational users in the ANF. Since there are no new/future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF along the proposed utility corridor, no cumulative impact would occur.

Alternatives 1, 2, 3, and 4 would have the potential to disturb an equivalent number of recreational users within the ANF with mitigation (N-1b and R-1a), which would result in a significant impact. Since there are no new/future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF along the proposed utility corridor, no cumulative impact would occur.

- Alternative 5 would have the potential to disturb recreational users within the ANF; however, only 0.5 miles of the utility corridor would traverse the ANF (1.5 miles total on NFS lands), thereby reducing not only the likelihood of disturbing recreational users but the duration of disturbance in comparison to the proposed Project or any of the other alternatives. Alternative 5 would result in a significant noise impact to recreational users within the ANF with mitigation (N-1b and R-1a). Since there are no new/future projects identified within the ANF along the proposed utility corridor, no cumulative impact would occur.

Cumulative Effects on National Forest System Lands

Below is a discussion of cumulative effects as they apply to NFS lands.

- **Construction noise levels would violate local standards (Impact N-1).** For the proposed Project, construction noise levels would violate the County of Los Angeles noise ordinances as a result of mobile construction equipment. Mitigation Measures N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the county noise ordinances to the extent feasible; however, noise impacts from mobile construction equipment would remain significant. While there are no future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF, the overall cumulative effect would be considered significant (**Class I**).

Alternative 1 would result in a longer period of construction noise nuisance in the ANF than the proposed Project due to activities associated with 4.0 miles of underground construction. In addition, underground construction activities would require additional equipment, labor, and materials (imported and exported), increasing the quantity of mobile noise sources in the ANF during construction in comparison to the proposed Project or any of the other alternatives. Mitigation Measures N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the county noise ordinances; however, noise impacts from mobile construction equipment would remain significant. While there are no future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF, the overall cumulative effect would be considered significant (**Class I**).

Alternative 2 would traverse 13.2 miles of NFS lands (0.6 miles more than the proposed Project) and require substantial tower construction by helicopter (37 towers), resulting in ambient noise levels that would exceed Los Angeles County noise ordinances over a broad geographic area. As discussed above for the proposed Project, Mitigation Measures N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the county noise ordinances; however, noise impacts from mobile construction equipment would remain significant. While there are no future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF, the overall cumulative effect would be considered significant (**Class I**).

Alternative 3 would not include the removal of the single-circuit 500-kV towers between Miles 20.3 and 25.6. This area of the ROW is not on NFS lands. Therefore, impacts to NFS lands would be the same as the proposed Project, which would be cumulative significant with mitigation (N-1b and N-1c) (**Class I**).

Alternative 4 would establish 1.0 miles of new utility corridor within the ANF on NFS lands, in an area that has not previously been affected. Construction activities associated with Alternative 4 would result in violations of Los Angeles County noise ordinances. As discussed above for the proposed Project, Mitigation Measures N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the county noise ordinances; however, noise impacts from mobile construction equipment would remain significant. While there are no future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF, the overall cumulative effect would be considered significant (**Class I**).

Alternative 5 would traverse only 1.5 miles of NFS lands. Construction activities associated with this alternative would result in intermittent temporary violations of County of Los Angeles noise ordinances as a result of mobile construction equipment. As discussed above for the proposed Project, Mitigation Measures N-1b (Provide Advanced Notification of Construction) and N-1c (Provide Shields for Stationary Construction Equipment) would reduce the potential to violate the county noise ordinances; however, noise impacts from mobile construction equipment would remain significant. While there are no future projects identified within the ANF that would cumulatively add to ambient noise levels in the ANF, the overall cumulative effect would be considered significant (**Class I**).

- **Operational corona noise levels at Veluzat Motion Picture Ranch would violate Los Angeles County standards (Impact N-2).** The Veluzat Motion Picture Ranch is not located on NFS lands. No impact to NFS lands would occur.
- **Operational corona noise levels at residences would violate Los Angeles County standards (Impact N-3).** As described above in Section C.10.13.3 (Cumulative Impact Analysis), the operational noise generated by the proposed Project alone, or any of the alternatives, would not exceed County of Los Angeles noise standards except in conditions such as rain and fog. As there are no nearby residences (closest residence would be several thousand feet away) or future projects identified on NFS lands within the vicinity of the proposed transmission line, cumulative impacts would be less than significant (**Class III**).
- **Noise level increases related to routine inspection and maintenance would violate local standards (Impact N-4).** The inspection and maintenance activities for the proposed Project would occur on average once per year. Noise increases related to these activities would be short-term and intermittent, but would be in excess of established local standards and/or ordinances resulting in significant and unavoidable impacts (Class I). Since no new/future projects have been identified on NFS lands in the vicinity of the proposed transmission line, no cumulative impact would occur.

Alternative 1 would consist of both overhead and underground transmission lines. Impacts related to inspection and maintenance activities for the overhead portions would be the same as those identified for the proposed Project. However, the maintenance of underground transmission lines, of which 4.0 miles would be on NFS lands in the ANF, as well as transition stations (two would be on NFS lands in the ANF) would require additional inspections. As such, Alternative 1 would have the potential to result in greater and/or more frequent noise impacts on NFS lands during maintenance activities than the proposed Project. Impacts would be considered significant as noise levels would be in excess of established local standards and/or ordinances. Since no new/future projects have been identified on NFS lands in the vicinity of the proposed transmission line, no cumulative impact would occur.

Alternative 2 would traverse 13.2 miles of NFS lands (0.6 miles more than the proposed Project). As such, inspection and maintenance activities would occur over a greater distance on NFS lands. Noise increases related to these activities would exceed established local standards and/or ordinances resulting in significant noise impacts (Class I); however, since no new/future projects have been identified on NFS lands in the vicinity of the proposed transmission line, no cumulative impact would occur.

Alternative 3 would result in the same significant noise impacts on NFS lands related to inspection and maintenance activities as the proposed Project, as the route is identical to the proposed Project on NFS lands. Since no new/future projects have been identified on NFS lands in the vicinity of the proposed transmission line, no cumulative impact would occur.

Alternative 4 would establish 1.0 mile of new utility corridor within the ANF on NFS lands, in an area that has not previously been affected, and would traverse 12.5 miles of NFS lands (0.1 miles less than the proposed Project). Noise increases related to inspection and maintenance activities would exceed established local standards and/or ordinances resulting in significant noise impacts; however, since no new/future projects have been identified on NFS lands in the vicinity of the proposed transmission line, no cumulative impact would occur.

Alternative 5 would establish 1.5 miles of new utility corridor on NFS lands, of which 0.5 miles would be within the ANF. This is substantially less than the proposed Project or any of the other alternatives; however, noise increases related to inspection and maintenance activities on NFS lands would exceed established local standards and/or ordinances resulting in significant noise impacts. Since no new/future projects have been identified on NFS lands in the vicinity of the proposed transmission line, no cumulative impact would occur.

- **The Project would result in a permanent increase in ambient noise levels at Veluzat Motion Picture Ranch (Impact N-5).** The Veluzat Motion Picture Ranch is not located on NFS lands. No impact to NFS lands would occur.
- **The Project would result in a permanent noise level increase related to routine inspection and maintenance (Impact N-6).** The inspection and maintenance activities for the proposed Project would occur on average once per year. Noise increases related to these activities would be intermittent and short term. Any combination of these noise increases with other sources would be similarly intermittent and short term, although no new/future sources have been identified on NFS lands in the vicinity of the proposed transmission line. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 1 impacts related to permanent, non-emergency inspection and maintenance activities would be similar to those identified for the proposed Project, except that some additional maintenance activities would be required for underground portions, of which 4.0 miles would be on NFS lands in the ANF, as well as transition stations (two would be on NFS lands in the ANF). Noise increases related to these activities would be intermittent and short term. Any combination of these noise increases with other sources would be similarly intermittent and short term, although no new/future sources have been identified on NFS lands in the vicinity of the proposed transmission line. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 2 would traverse 13.2 miles of NFS lands (0.6 miles more than the proposed Project). As such, inspection and maintenance activities would occur over a greater distance on NFS lands. Noise increases related to these activities would be intermittent and short term. Any combination of these noise increases with other sources would be similarly intermittent and short term, although no new/future sources have been identified on NFS lands in the vicinity of the proposed transmission line. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 3 would result in identical inspection and maintenance impacts as the proposed Project on NFS lands, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 4 would establish 1.0 mile of new utility corridor within the ANF on NFS lands, in an area that has not previously been affected, and would traverse 12.5 miles of NFS lands (0.1 miles less than the proposed Project). Noise increases related to inspection and maintenance activities would be intermittent and short term, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

Alternative 5 would establish 1.5 miles of new utility corridor on NFS lands, of which 0.5 miles would be within the ANF. This is substantially less than the proposed Project or any of the other alternatives. Noise increases related to inspection and maintenance activities would be intermittent and short term, and when combined with other sources would continue to be intermittent and short-term. Therefore, noise impacts related to routine inspection and maintenance would be adverse but not cumulatively significant (**Class III**).

- **Temporary increases in ambient noise levels would severely disrupt operations at Veluzat Motion Picture Ranch (Impact N-7).** The Veluzat Motion Picture Ranch is not located on NFS lands. No impact to NFS lands would occur.
- **Temporary increases in ambient noise levels would disturb recreational users within Angeles National Forest (Impact N-8).** This impact is specific to the ANF, and in effect describes the impacts related to NFS lands. A complete discussion for Impact N-8 is provided above (see Impact N-8).