4.6 CULTURAL RESOURCES

For the purpose of this discussion, the term "cultural resources" is employed as a general heading that encompasses those resources labeled ethnographic (Native American), archaeological (prehistoric), historical (post-European contact), and paleontological (although such resources are not cultural). Each of these topics is discussed below with regard to the Antelope Transmission Project. Figures 4.6-1, 4.6-2, and 4.6-3 illustrate the overall Study Area, the sample points along the proposed and alternative T/L routes and substations sites, and the Archaeological Sensitivity Index (ASI) model, respectively, developed by the Center for Archaeological Research (CAR) at California State University, Bakersfield (CSUB) (see Section 4.6.1.6 below; also see Appendix E). These figures demonstrate the most archaeologically sensitive areas of the project as determined by the ASI model.

The known cultural resources in the project area have the potential to be significantly impaired by disturbance. Therefore, access to archaeological site location data is restricted. Designating an archaeologically sensitive area keeps archaeological site content and location information confidential by prohibiting (i) archaeological information to unauthorized individuals and (ii) inclusion in publicly distributed documents (California Government Code Section 6354.10).

The following information is summarized from the report entitled *Phase I Archaeological and Paleontological Assessment of the Tehachapi Wind Power Transmission System Project for Southern California Edison, Kern and Los Angeles Counties, California*, submitted to SCE by the CAR in September 2004. The project has since been renamed the Antelope Transmission Project, which is the name used below. Further details related to Sections 4.0 and 5.0 herein are available in that report (see Appendix E). The cultural resource environmental setting section of this PEA addresses proposed Segment 2, including Alternatives AV1 and AV2, Segment 3, including Alternatives A, B and C, and Substations One and Two (proposed and alternative sites).

4.6.1 Segment 2

4.6.1.1 Ethnographic Resources

Prior to European contact, the Kitanemuk inhabited the southern Tehachapi Mountains and claimed a major portion of the Antelope Valley (Blackburn and Bean, 1978:564). Sutton (1980:220) suggested that the "late prehistoric period population of Antelope Valley was ancestral to the ethnographic Kitanemuk," although Blackburn (as cited in Sutton, 1980:220) believed that they "were more likely proto-Tataviam." Summaries of the ethnographic data on the Kitanemuk are available in Kroeber (1925) and Blackburn and Bean (1978).

Sutton (1979) suggested that the Antelope Valley was virtually abandoned about 300 years ago, precipitating substantial changes in territory, settlement patterns, economics, and social organization of the valley inhabitants at that time. Subsequently, the population of the valley was represented by the "ethnographically documented Kitanemuk" (Sutton, 1980:214). Kroeber (1925) assigned almost the entire Antelope Valley to the Kitanemuk, while Blackburn and Bean (1978) restricted them to the northern part of the valley. There are no historical period estimates of population for the Kitanemuk, but "comparisons with similar groups suggest that 500-1,000 people would be a reasonable estimate in view of the size of the territory that they occupied" (Blackburn and Bean, 1978:564).

The Kitanemuk employed a hunting and gathering economy. Since there are so few ethnographic or archaeological data available on the Kitanemuk, it is difficult to assess Kitanemuk subsistence. However, Blackburn and Bean (1978:564) maintained that the "general ecological adaptation and subsistence technology of the Kitanemuk differed little from that of their neighbors to the north or west." This adaptation emphasized resource exploitation of fish, waterfowl, and a variety of roots and seeds, with little emphasis on large mammals (Wallace, 1978:449-450).

The settlement patterns of the precontact Kitanemuk are also poorly understood (Sutton 1980:215), although most villages appear to have been located in the Tehachapi Mountains. Sutton (1980:216) suggested that the ethnographic Kitanemuk settlement pattern "would have consisted of a number of semi-permanent villages located in the Tehachapi Mountains with small seasonal sites located so as to exploit specific resources." Kitanemuk social, political, and religious systems apparently were well developed. Each village had a chief, ceremonial manager, messengers, shamans, and diviners (Blackburn and Bean 1978:567). Their social system was probably patrilineal and lacked the totemic moiety systems found in other areas of southern California (Blackburn and Bean, 1978:567).

While the extent of Kitanemuk contact with other groups is poorly known, it has been suggested that they may have been heavily involved in the California trade system, and perhaps "served as middlemen in that network" (Sutton, 1980:221). According to Blackburn and Bean (1978:564), there was considerable interaction not only among Kitanemuk villages, but between the Kitanemuk and outside groups such as the Chumash and the Tübatulabal. Their relationship with the Yokuts and Tataviam was usually one of hostility, while an amiable relationship seems to have occurred with the Chumash and Tübatulabal.

Kroeber (1925:612) reported that Kitanemuk structures consisted of "a series of individual family rooms surrounding a court that had entrances on two sides only." These communal dwellings were constructed with wooden poles covered with mats made of rush. Within these rooms, each family had its own door and fireplace (Kroeber, 1925:612; Harrington, 1942:2).

4.6.1.2 Archaeological Resources

A significant number of formal archaeological investigations have been conducted in the western Mojave Desert. General summaries of the prehistory of this region have been presented in Warren (1984), Warren and Crabtree (1986), and Sutton (1988, 1996). The following general time periods are presented to provide a temporal framework for this part of the Project Area.

The generally accepted time periods for this region are the Paleoindian Period (ca. 12,000 to 10,000 B.P.), the Lake Mojave Period (ca. 10,000 to 7,000 B.P.), the Pinto Period (ca. 7,000 to 4,000 B.P.), the Gypsum Period (ca. 4,000 to 1,500 B.P.), the Rose Spring Period (ca. 1,500 to 800 B.P.), and the Late Prehistoric Period (ca. 800 B.P. to Historic Contact). These time periods reflect changing lifeways that are at least partly a result of environmental fluctuations; for example, the desiccation of Pleistocene lakes that severely impacted many mammal species. Each time period is characterized by different tool types (e.g., early spear points versus later arrow points) and subsistence emphasis (large game to smaller game at the end of the Pleistocene).

4.6.1.3 Historic Resources

The Project Area encompasses a large portion of the Antelope Valley in the western Mojave Desert. The Antelope Valley is a 3,000-square-mile, high desert that bridges northern Los Angeles County and southeast Kern County (City of Palmdale, 1998:1). The earliest historical documentation for the western Mojave Desert is found in the diary of Franciscan padre Francisco Garcés. In 1776, Garcés traversed Tehachapi and Oak Creek passes in his exploration of inland California, stopping at Willow Springs near Mojave on his return to Mexico from the San Joaquin Valley (Ingles, 1982).

Following the Mexican revolt of 1821, formerly Spanish lands fell under the flag of the Republic of Mexico (Rice et al., 2002:128). In 1846, Rancho La Liebre, located along the western edge of the Antelope Valley and composed of 11 square leagues of land, was granted by Mexico to Jose Maria Flores who, in partnership with Francisco Garcia, raised livestock (Boyd, 1972:8-9).

Jedediah Strong Smith is generally considered to have been the first American to enter what is now Kern County (Gavin and Leverett, 1987:12). Smith's journeys in the region began in 1827, followed in 1830 by Christopher "Kit" Carson and by Joseph Reddeford Walker in 1833 (for whom Walker's Pass is named). Then in 1844, John C. Frémont traveled into the desert from the valley, possibly by way of Oak Creek Pass as Garcés had before him. Oak Creek Pass was the only route through the eastern Tehachapi Mountains until construction of

the railroad through the Tehachapis. The railroad extends from Tehachapi to Willow Springs, the site of the 1900 gold strike (Ingles, 1982:50-53).

From 1874 to 1876, the Tehachapi section of the Central Pacific and Southern Pacific railroads was constructed to bridge the rail gap between the San Joaquin Valley and the Mojave Desert (Heath, 1982:64-67). On September 5, 1876, the Southern Pacific Railroad completed the first north-south line from San Francisco to Los Angeles in a ceremony at Lang Station, a few miles south of Acton (Heath, 1982:64-67). The community of Mojave was established in 1876 as a worker's camp during the period of railroad construction (Darling, 1988:88). A boom town during the mining rushes in the 1890s, Mojave was also the terminus for the 20-mule-team borax outfits from Death Valley (Darling 1988:88). Mojave also served as a freight and passenger center for the mine districts located in Inyo and Mono counties and the eastern Kern County mountains (Boyd, 1972:188).

Among the most important contributions to the welfare of modern California populations was the creation of the Los Angeles Aqueduct, which was constructed between 1908 and 1913 and carries water from Haiwee Reservoir to northern Los Angeles County (Darling, 1988:80). In 1909, a cement plant was erected at Monolith (near Tehachapi) to supply cement for construction of the aqueduct. The plant was designed and built by William Mulholland, and was later purchased by the Monolith Portland Cement Company of Los Angeles in 1919 (Darling, 1988:80-81).

4.6.1.4 Paleontological Resources

Paleontological resources, which are defined as the fossilized remains of prehistoric plants and animals, are non-renewable resources that may include fossilized bones, teeth, shells, tracks, trails, and casts, to name a few. Paleontological analysis for the Project Area was conducted by Dr. Grant Hurlburt, Department of Biology, California State University, Stanislaus, in order to determine the sensitivity of the Project Area with respect to known paleontological resources and the potential for the presence of such resources, in accordance with the California Environmental Quality Act of 1970 (13 PRC, 2100 et seq.), and the Public Resources Code, Section 5097.5 (Stats, 1965, c 1136, p. 2,792). This analysis also complies with guidelines and significance criteria specified by the Society for Vertebrate Paleontology (SVP). The paleontological technical report from which this section is based is provided in Appendix E of this proposal, including details on the study methods and qualifications of those conducting the analysis.

4.6.1.5 Records Search Results

4.6.1.5.1 Archaeology. Archaeological records searches were conducted for the entire Antelope Transmission Project (encompassing all proposed routes) at the Southern San

Joaquin Valley Historical Resources Information Center at CSUB (RS No. 03-225), and the South Central Coastal Information Center at CSUF (RS No. 2648). These searches indicated that there are 100 prehistoric archaeological sites and 34 historic archaeological sites, as well as 26 prehistoric isolates and one historic isolate, within a one-mile radius of the proposed and alternative T/L routes and substation sites for Segments 2 and 3. In addition, there have been a large number of cultural resource surveys within a mile of all of the proposed routes, in both Kern and Los Angeles counties.

4.6.1.5.2 Paleontology. Records searches were also conducted for paleontological resources in the Project Area. At the Natural History Museum of Los Angeles County, Dr. Sam Mcleod identified vertebrate paleontological localities in or near the Project Area from formations found in the area. Dr. Pat Holroyd, Curatorial Assistant, found no relevant records in a search of the University of California, Berkeley, Museum of Paleontology.

4.6.1.6 Field Procedures

The archaeological fieldwork for the project consisted of field checks of selected sample points within the Project Area. Given the scope and relatively large extent of the Project Area, which extended over several geographic and cultural zones, a detailed methodology was designed in order to maximize field efforts and to obtain spatially sound samples covering all of the proposed alternatives. As part of this methodology, a GIS-based approach was utilized to develop initial locations of sample points.

Based on the records searches and limited field checks conducted as part of the project, an Archaeological Sensitivity Index (ASI) model was developed for the Project Area to provide baseline data in order to identify areas of archaeological sensitivity based on several types of cultural and environmental variables. Refer to Appendix E for more information.

The field methodology for the paleontological study of the Project Area included a pedestrian reconnaissance of the transmission line routes, along with examination of geological formations. Foot surveys of approximately 20 percent of the routes were conducted, with 100 percent surveys of substations, where possible.

4.6.2 Segment 3

4.6.2.1 Ethnographic Resources

There is some overlap between the traditional territories of the Kawaiisu and the Kitanemuk, so their lands intersect in parts of the Project Area. The Kawaiisu were the predominant aboriginal group that inhabited a large part of the western Mojave Desert during the ethnographic period. The Kitanemuk and Tataviam lived to the south and southwest of the Kawaiisu, the Owens Valley Paiute and Tübatulabal resided to the north, and the Southern

Paiute lived to the east. Ethnographic data are available in Gifford (1917) and Driver (1937), and general summaries are presented in Kroeber (1925) and Zigmond (1986).

Several large ethnographic Kawaiisu villages have been documented in Sand Canyon, on the eastern side of the Tehachapi Valley. Two of these villages have been investigated archaeologically – *Ma'a'puts* (Pruett 1987) and the Nettle Spring Site Complex (Hinshaw and Rubin, 1996; Sutton, 1997, 2001). Although sites are known in the greater Tehachapi area, it seems that Sand Canyon may have been a central occupation area for the Kawaiisu. This hypothesis is supported by frequent references to Sand Canyon in Kawaiisu mythology (Zigmond, 1980) and by the presence of Kawaiisu Creation Cave (CA-KER-508; Sutton 1982) in Sand Canyon.

The Kawaiisu economy was one of hunting and gathering, utilizing a diversity of resources. No agriculture was practiced, but tobacco plants were pruned to stimulate growth and wild seed fields were burned to improve plant yields for the subsequent year (Zigmond, 1941). Acorns were a major staple (Zigmond, 1986), but many other plants were used as well, including acorns (*Quercus* spp.), pine nuts (from *Pinus monophylla*), yucca (*Yucca* spp.), and juniper (*Juniperus*). Several important resources were obtained in the desert areas, including deer (*Odocoileus hemionus*), chuckwalla (*Sauromalus obesus*), pronghorn (*Antilocapra americana*), bighorn sheep (*Ovis canadensis*), and the black-tailed hare (*Lepus californicus*) (Zigmond, 1986:400). Rodents were also consumed, along with a variety of birds, including quail (e.g., *Oreotyx pictus*; Driver, 1937:61).

It is also evident that the Kawaiisu exploited resources outside their core territory, on occasion journeying into the southern San Joaquin Valley and other areas (Zigmond, 1986:399). Koehn Lake in the Fremont Valley was identified as a regular destination for seasonal trips (Zigmond, 1980), and along the Mojave River, Victorville has been noted in Kawaiisu oral tradition as an area where people would go to gather "bug-sugar" (Zigmond, 1980:141).

The social organization of the Kawaiisu was centered around the family group (Zigmond, 1986). Although there were no formal political groupings (at least during the ethnographic period), the position of chief (or headman) was conferred "simply through tacit acknowledgment of the people about him" (Zigmond, 1986:405). The qualifications for chief depended upon wealth (Kroeber 1925:603), and the position might be passed from father to son (Zigmond, 1986:406). Families tended to live near each other and cooperate in some activities, and as such might be considered informal bands (Zigmond, 1986:405). Moieties apparently were not present.

Many groups sporadically passed through and/or utilized the western Mojave Desert, often interacting with the Kawaiisu in a variety of ways. To one extent or another, these

undoubtedly included the Owens Valley Paiute, Kitanemuk, Yokuts, Chumash, Mojave, Chemehuevi, Vanyume, Panamint Shoshone, and probably others. External relations between the Kawaiisu and other groups were generally friendly, although there were intermittent episodes of conflict or warfare, particularly with the Yokuts and the Tübatulabal (Smith, 1978:440). Exchange with other tribes was common; for example, acorns were traded for obsidian and salt from the Western Shoshone and the Panamint Shoshone (Zigmond, 1986:399).

While little is known of Kawaiisu material culture, ethnographic data indicate that it was varied and complex. This is especially true of their basketry, which Zigmond (1986:401) referred to as "an ever-present art." The Kawaiisu built several types of structures, depending on the time of year, the "winter house" (or *tomokahni*) being the most common (Zigmond 1980:123).

4.6.2.2 Archaeological Resources

Archaeological resources occurring within Segment 3 (including all alternatives) are described above in Section 4.6.1.2.

4.6.2.3 Historic Resources

Historic resources occurring within Segment 3 (including all alternatives) are described above in Section 4.6.1.3.

4.6.2.4 Paleontological Resources

Paleontological resources occurring within Segment 3 (including all alternatives) are described above in Section 4.6.1.4.

4.6.2.5 Records Search Results

Records search results for all of the proposed and alternative T/L routes and substation sites in the project area are described above in Section 4.6.1.5.

4.6.2.6 Field Procedures

Field procedures for all of the proposed and alternative T/L routes and substation sites in the project area are described above in Section 4.6.1.6.