

**ARCHAEOLOGICAL AND PALEONTOLOGICAL REPORT
FOR THE PEAKER PROJECT PROPOSED ETIWANDA LOCATION
SAN BERNARDINO COUNTY, CALIFORNIA**



Prepared by:
Audry Williams, Archaeologist
Southern California Edison Company
2244 Walnut Grove Ave.
Rosemead, CA 1770

DECEMBER 2006

INTRODUCTION

The Southern California Edison Company (SCE) proposes to build a new small electricity generating unit called a “peaker” that will be capable of producing up to 45 MW of electricity on short notice during periods when the electrical system needs additional usable power and a technical kind of help called local “voltage support.” The peaker units can be started on their own, without needing power from the grid, which helps to improve local reliability.

The CPUC directed SCE to site these peakers where they would provide not only usable power but also the necessary grid support. These units will increase the generation supply for local communities and provide an important service called “voltage support” to the local distribution networks in which they will be located. Unlike large power plants, which can be constructed in remote locations and connected to the statewide grid at very high voltages, these peaker units will be connected to the lower-voltage distribution grid and will be used to supply electricity and to keep local distribution voltages up at normal levels at times of system strain or imbalance. Each unit will typically run only during hot summer weekdays when the local electrical system requires support due to very high load conditions. The peakers will operate at different times and duration depending on the local need. SCE staff will operate the units remotely and monitor them regularly.

PROJECT LOCATION

Peakers will be placed at or adjacent to five existing SCE substations and/or generating stations. This report is for the peaker that will be located at the Etiwanda Generating Station. The proposed Etiwanda site is located at the northwest corner of SCE owned land adjacent to the Etiwanda Generating Station located in T1N, R7W, Section 17 of the Guasti, CA 7.5' USGS Topographic Quadrangle. This property is clear and graded with no significant overhead obstructions. The new peaker will be connected to the 66 kV bus in the existing Etiwanda Substation. A new 500 kV substation is proposed for the SCE owned property to the south. Interconnection with the grid could be made at the existing SCE substation to the south and east of the proposed site. The new 66 kV connection line would be routed to clear the expected boundary of the proposed 500 kV substation. Site access will have to be developed across land proposed for the 500 kV substation. The site is bordered to the east by the existing generating station, to the south by the proposed 500 kV substation property, and to the west by the railroad right of way (Fig. 1 and Fig. 2).

PREFIELD RESEARCH

A cultural resources records search for the proposed peaker location was conducted at the San Bernardino Archaeological Information Center at the San Bernardino County Museum on September 15, 2006, by the author.

The result of the records search indicated that one cultural resource study has been conducted directly on the subject property (Taylor 2003) and 14 have been conducted

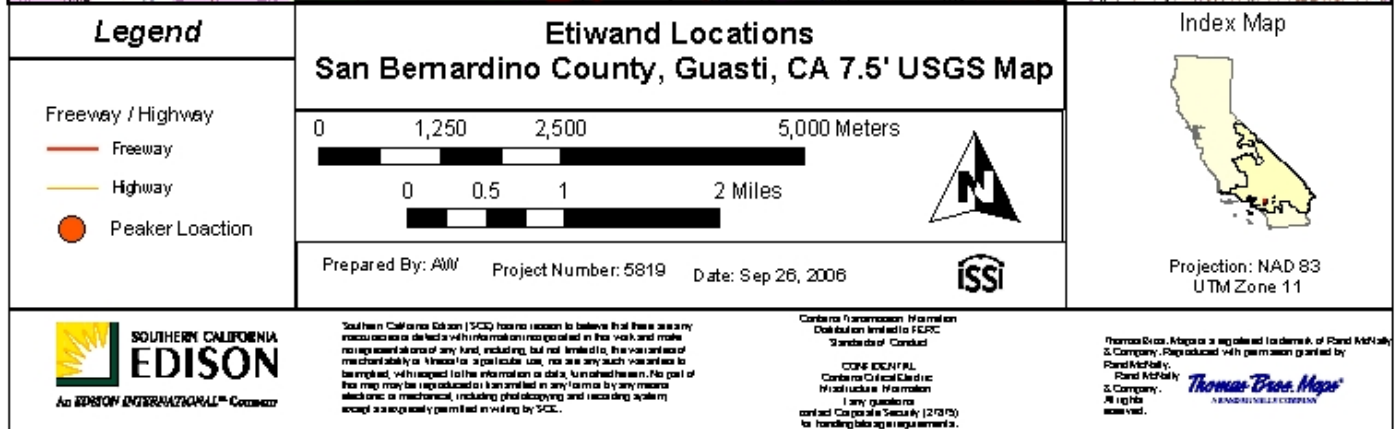
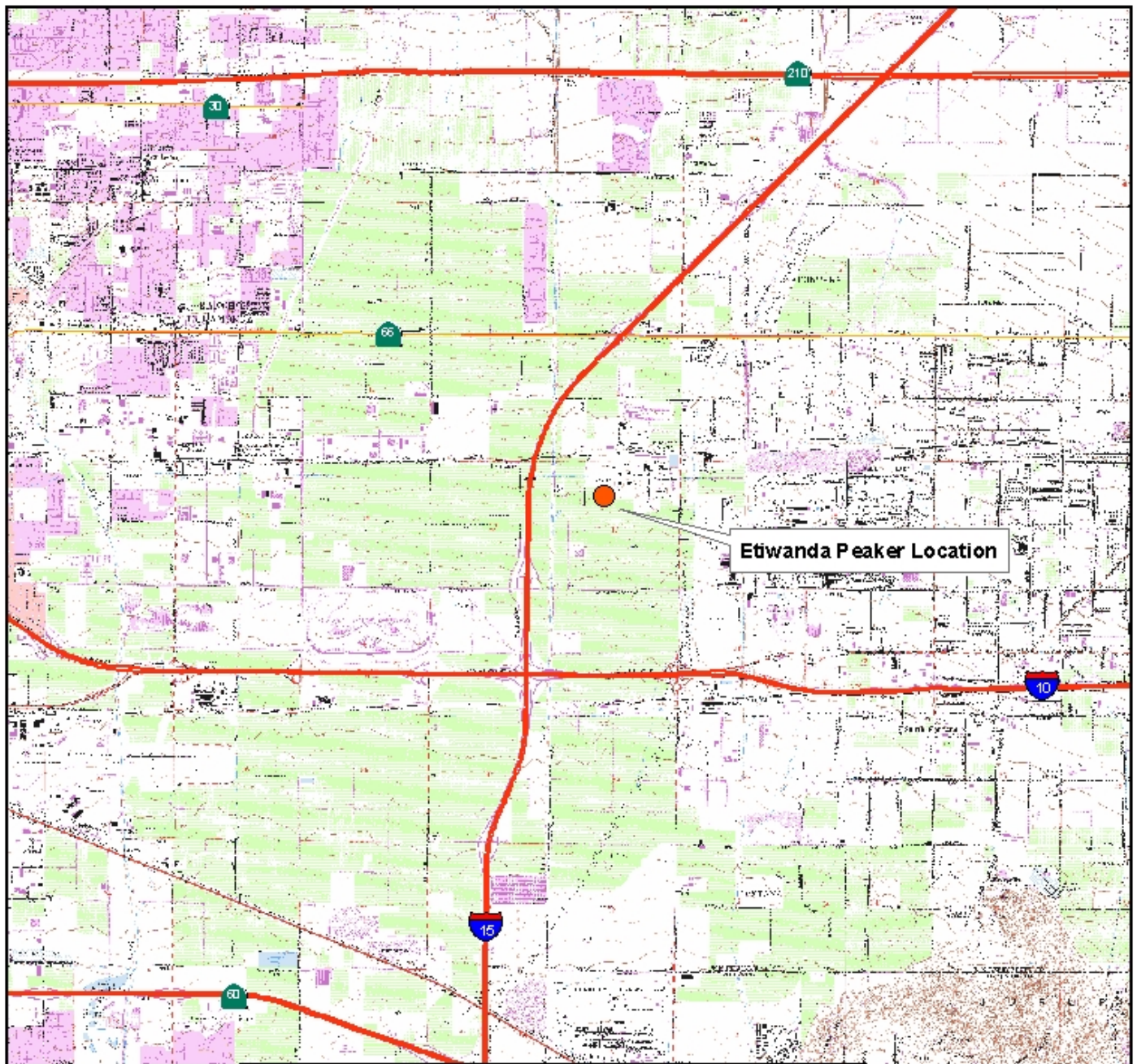


Fig. 1. Location map for Mira Loma Peaker location.

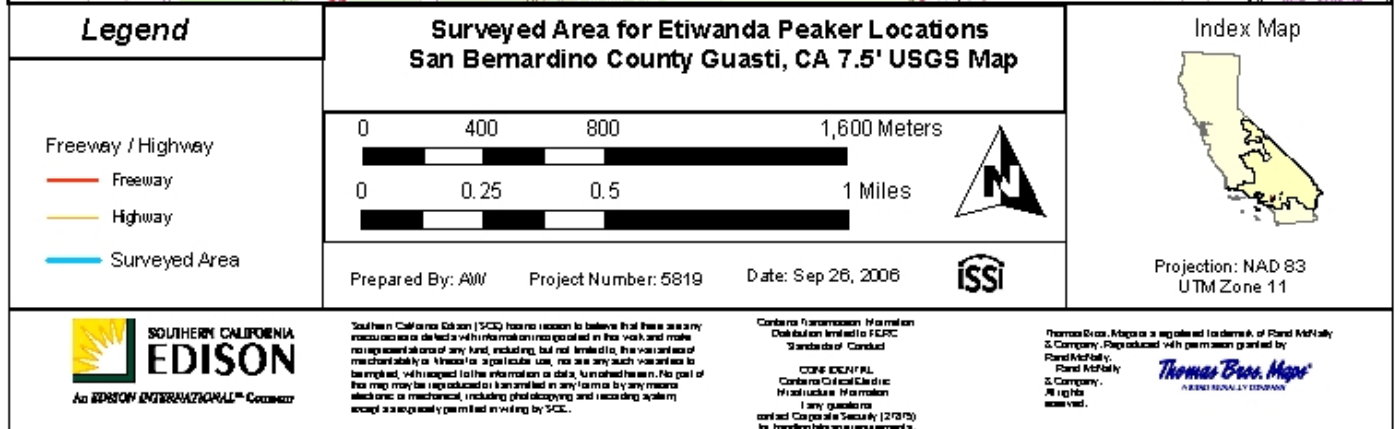
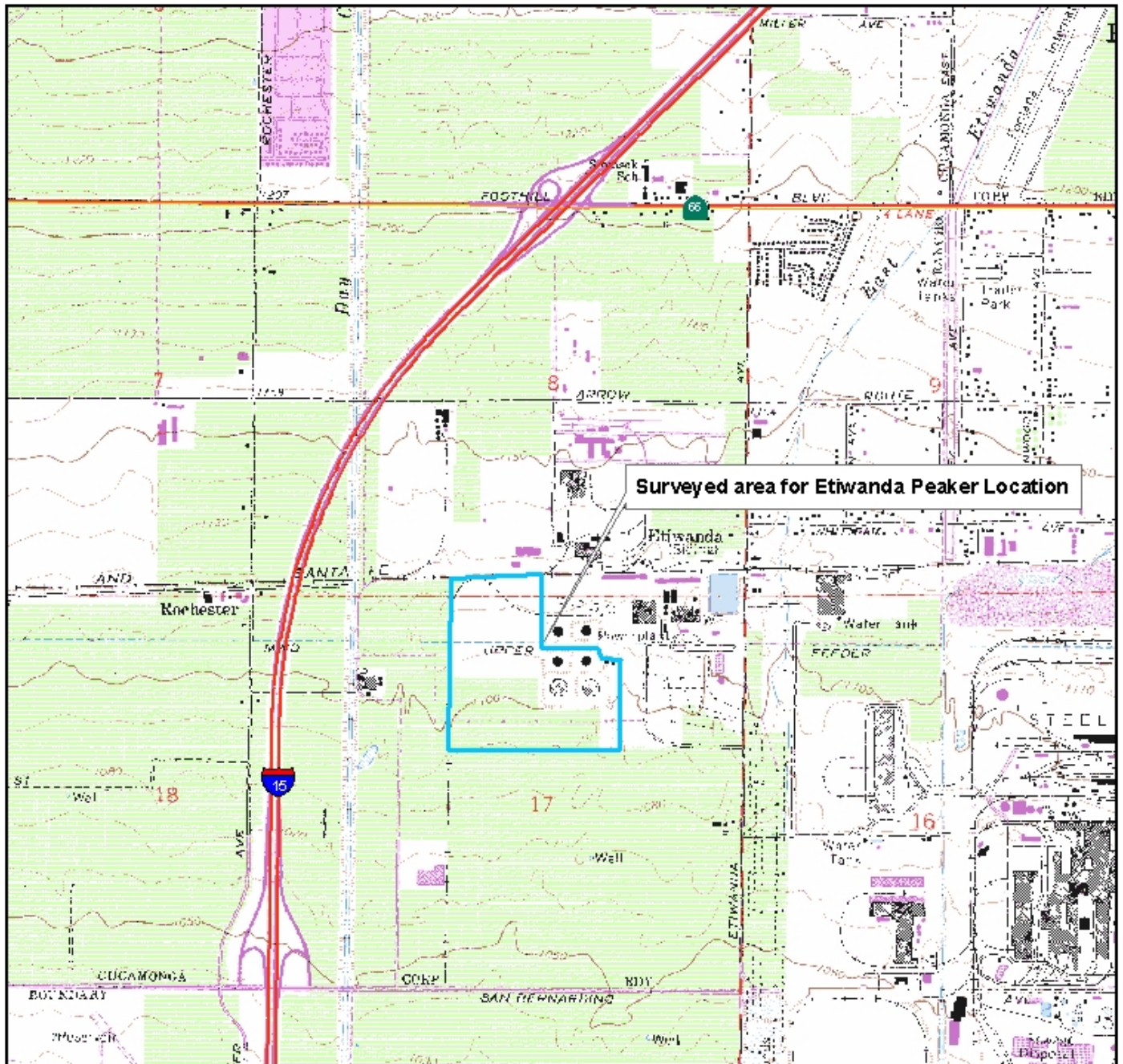


Fig. 2. Surveyed area map for Etiwanda Peaker locations.

within a mile radius of the project area. No cultural resources have been reported on the property. Three historic resources (P36-016453, CA-SBR-6847H, and CA-SBR-4131H [CPHI-SBR-71]) are located within a mile radius of the project area, one of which is listed on the *California Points of Historic Interest* (CPHI). CPHI-SBR-71 is a War World II era steel plant, which was owned and operated by Henry J. Kaiser and became one of the largest steel producers west of the Mississippi River.

There are no known archaeological sites located on the subject property or within about a mile radius of the property that are listed on the *National Register of Historic Places*, *California Historical Landmarks*, or the *Historical Resources Inventory*.

In addition, a request was submitted to the California Native American Heritage Commission to consult their Sacred Lands Files in order to identify other culturally significant properties. In a letter dated July 24, 2003 the Commission reported that no sacred lands were known to the Commission within the project area.

PALEONTOLOGICAL REVIEW

The San Bernardino Sheet geological map was reviewed for the area of the Etiwanda proposed peaker location to determine whether sensitive paleontological resources are within or adjacent to the project area (Rogers 1965). The geologic deposits include recent alluvium fan deposit. Alluvium deposits are not conducive to the formation or preservation of paleontological fossils.

ENVIRONMENTAL BACKGROUND

The project area is located within a Mediterranean Climate characterized by warm, dry summers and cool, moist winters. Annual temperatures are between 40° and 85° F, with upwards of 300 frost-free days a year. Precipitation in the region is between 15 and 30 inches per year. The native vegetation consisted of native grasses and riparian species bordered by chaparral-covered hillsides, species included buckwheat (*Eriogonum* spp.), prickly pear (*Opuntia occidentalis*), a variety of sages (*Salvia* spp.), oaks (*Quercus* spp.), and other native species. Plants utilized by prehistoric populations include acorns, yucca, cactus buds and fruit, sages, and various grasses and berries (Drucker 1937; Kroeber 1925:649–650). Native fauna utilized by prehistoric populations include deer (*Odocoileus hemionus*), rabbits and hares (*Sylvilagus* spp. and *Lepus californicus*), small game birds, and freshwater fishes. Other species that existed in the area historically included grizzly bears (*Ursus arctos horribilis*), wolves (*Canis lupus*), coyotes (*Canis latrans*), and wild cats (e.g., *Felis concolor*, *Lynx rufus*) (Cauch 1956).

ARCHAEOLOGICAL BACKGROUND

Early Holocene (12,000 to 7,000 BP)

The San Dieguito Complex, was developed by Warren (1967) and described as a hunting culture with a lithic typology that included large flake-and-core scrapers, choppers, hammer stones, drills, gravers, and crescents (Warren 1967). Sites from this

time period are usually found along ancient lake terraces in the deserts, in coastal Los Angeles and San Diego County, or on the islands off the shore of the Pacific coast (Muratto 1984).

Millingstone Horizon (7,000 to 3,500 BP)

Prehistoric subsistence patterns began to show marked changes. These changes were almost certainly in response to warming climatic conditions and the resulting changes in flora and fauna. The changes visible in the archeological record include a reduced number of projectile points, scrapers, and choppers, and an increased number of ground stone artifacts. The La Jolla, Malaga Cove, and Topanga complexes, from south to north, are the coastal representatives from this period and suggest an ecological adaptation to shellfish and other coastal resources. Inland sites are described as belonging to the Pauma or Sayles complexes. These sites have a material culture similar to the coastal sites but lack shellfish (Muratto 1984).

Intermediate Horizon (3,500 to 1,500 BP)

The period is marked by the appearance of the mortar and pestle in the archaeological record. There is a shift in resource procurement practices with the increased use of plant resources. Native American dependence on marine resources changed due to silting of estuaries on which they relied. They began to depend more heavily on seed and plant foods, which required grinding on stone platforms. In many areas of southern California, the Millingstone cultures survived into the early part of the late Holocene (Muratto 1984).

Late Prehistoric (1,500 BP to Present)

This time period is marked by the introduction of the bow and arrow to southern California. Other changes during this time include both in situ cultural adaptations in response to environmental changes as well as outside influences from the influx of Shoshonean (Takic-speaking) populations from the desert regions. Other time markers of this period include the use of pottery.

ETHNOGRAPHIC BACKGROUND

The Native American group that inhabited the project area during ethnographic times was the Gabrielino. Several ethnographers including Kroeber (1925) Bean and Smith (1978), and McCawley (1996) have studied the Gabrielino. The following discussion of the Gabrielino was synthesized using these sources.

The Gabrielino territory occupied the area now known as the Los Angeles Basin. It extended from Topanga Canyon in the north to Aliso Creek in the south and included the watershed of the Los Angeles, San Gabriel, and Santa Ana rivers. The Gabrielino also occupied the southern Channel Islands of San Clemente, San Nicolas, and Santa Catalina. The Gabrielino spoke a Cupan language in the Takic family of the Uto-Aztecan linguistic stock.

The Gabrielino were organized through a moiety system and lineages were traced along patrilineal lines. Each community contained one or more lineages that was ruled by a chief, known as the *tomyaar*. The *tomyaar* oversaw both secular and religious activities. Religion was centered on the use of rituals to control the environment, sacred powers, and knowledge. Rituals, such as rites of passage, were associated with the Chengiichngesh religion.

A domed circular thatched structure was the primary residences used by the Gabrielino. Coiled and twined baskets were used for food preparation, serving and storage. Pottery was constructed with the use of a paddle and anvil. A steatite industry was manufactured on Santa Catalina. Steatite was used to make animal carvings, pipes, ornaments, and cooking utensils.

HISTORICAL BACKGROUND

The historical period in southern California can be divided into the Spanish Mission Period, the Mexican Rancho Period, and the American Period.

Spanish Mission Period

In 1771, the mission system was established with the founding of the San Gabriel Mission. Twenty other missions followed, steaming from San Francisco to San Diego. One of the main reasons for the development of the mission system was to control the natives, and to convert them to Catholicism. Once brought to the missions, the converted natives (referred to as neophytes) were not allowed to leave. Treatment of natives at the missions was extremely poor and abusive. However, the inland area remained relatively unexplored as the Spaniards clung to the coast near their missions and presidios (Rice et al. 2002).

Mexican Period

In 1821, Mexico successfully fought for independence from Spain. The subsequent Secularization Act of 1833 marked the end of the Mission period and the return of the secularized mission lands to Mexican citizens in the form of land grants or ranchos. In 1839, Rancho Cucamonga was granted to Tiburico Tapia who planted the first orchards of what would become one of the largest plantings of wine grapes in California. Numerous wineries were established in the area and native populations were used as labors. The Mexican Period ended in 1848 with the end of the Mexican War.

American Period

The establishment of California's statehood in 1850 marked the end of the Mexican Period. The Land Commission questioned the validity of the land grants issued by Mexican governors and many of the rancheros never officially gained their land patents.

FIELD PROCEDURE AND RESULTS

SCE archaeologist Thomas Taylor previously surveyed the entire project area in 2003 (Fig. 2). Ground visibility was impeded by a thick growth of non-native plants including

mustard and domestic grapes. No paleontological or cultural resources were observed during the survey. A site visit was conducted on September 21, 2006 by the author and no paleontological or cultural resources were observed at that time.

ARCHAEOLOGICAL RECOMMENDATIONS

Based on the results of the survey and the records search, the construction of the proposed Etiwanda Peaker location will have no significant impact on cultural resources. Based on these results, no further archaeological studies are required at this time. If project scope and or project areas change then additional archaeological studies may be needed.

In the event that cultural resources are encountered during any future earth disturbing activities, all work must halt at that location until the resources can be properly evaluated by a qualified archaeologist. Further, if human remains are unearthed during excavation, State Health and Safety Code Section 7050.5 states "...no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and distribution pursuant to Public Resources Code Section 5097.98".

PALEONTOLOGICAL RESULTS AND RECOMMENDATIONS

The results of the paleontological review for the project area revealed that the geologic deposit includes a recent alluvium fan deposit. Alluvium deposits are not conducive to the formation or preservation of paleontological fossils. Based on these results, no further paleontological studies are required at this time for the proposed peaker locations at Etiwanda. If project scope and or project areas change then additional paleontological studies may be needed.

REFERENCES CITED

- Bean, Lowell John, and Charles R. Smith
1978 Gabrielino. In *Handbook of North American Indians*, Volume 8, California, pp. 530-549. edited by Robert F. Heizer, Washington, D.C.: Smithsonian Institution.
- Bean, Lowell John, and Sylvia Brakke Vane
1979 *Cultural Resources and the Devers-Mira Loma 500 kV Transmission Line Route (Valley to Mira Loma Section): A Study of the Paleontology, History and Archaeology of the Vicinity of the Line*. Report on file at the San Bernardino Archaeological Information Center.
- Cauch, Altha Merrifield (compiler)
1956 *Elsinore History, 1956-1958*. Information gathered from newspaper articles (Elsinore News, Elsinore Press, Lake Elsinore Valley Press) and other sources. Ms. in three volumes, on file at Lake Elsinore Branch Library.

- Drucker, Philip
1937 Culture Element Distributions, V: Southern California. *University of California Anthropological Records* 1(1):1–52. Berkeley.
- Johnston, Bernice Eastman
1962 *California's Gabrielino Indians*. Los Angeles: Southwest Museum.
- Kroeber, Alfred L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Government Printing Office, Washington, D.C.
- McCawley, William
1996 *The First Angelinos: The Gabrielino Indians of Los Angeles*. California: Malki Museum Press/Ballena Press.
- Muratto, Michael J.
1984 *California Archaeological*. Orlando: Academic Press.
- Rice, Richard B., William A. Bullough, and Richard J. Orsi
2002 *The Elusive Eden: A New History of California* (3rd ed.). Boston: McGraw-Hill.
- Rogers, Thomas H.
1965 Explanatory Data Santa Ana Sheet, Geologic Map of California. In *Geologic Atlas of California*. Olaf P. Jenkins, general editor. California Division of Mines and Geology, Sacramento, California.
- Taylor, Thomas T.
2003 *Cultural Resources Survey and Evaluation Report Stagecoach Substation Project Proposed and Alternative Sites San Bernardino County, California*. Report on file at Southern California Edison Company.
- Warren, Claude N.
1967 The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32:233–236.