

APPENDIX 6.7-1: PART 1

CULTURAL RESOURCES INVENTORY, APPLICATION FOR CERTIFICATION  
AVENAL ENERGY TECHNICAL REPORT

CULTURAL RESOURCES INVENTORY  
APPLICATION FOR CERTIFICATION  
AVENAL ENERGY

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## 1.0 INTRODUCTION

This report documents the inventory of cultural resources that could be affected by Avenal Energy. There are no known historical resources in the project area nor any cultural resources that appear to be eligible for listing in the California Register of Historical Resources.

### 1.1 LAWS, ORDINANCE, REGULATIONS AND STANDARDS (LORS)

Development of Avenal Energy is subject to the requirements of the California Environmental Quality Act (CEQA), as amended. This cultural resources study complies with California energy Commission (CEC) guidance at California Code of Regulations, Title 20, Chapter 5, Article 6, Appendix B: Information Requirements for an Application (Section (g)(2) Cultural Resources). There are no federally administered public lands in the project area and there are no federal actions anticipated that would require compliance with federal historic preservation law or regulation.

The following LORS are applicable:

- Public Resources Code, Section 5020.1 defines several terms, including the following:
  - (j) Historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural education, social, political, military, or cultural annals of California.
  - (q) Substantial adverse change means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.
- Public Resources Code, Section 5024.1 established the California Register of Historical Resources; sets forth criteria to determine significance; defines eligible properties; and lists nomination procedures. The criteria are essentially the same as for eligibility to the NRHP, but stipulate that some properties that may not retain sufficient integrity to meet NRHP standards may still be eligible for the California Register.
- Title 14, California Code of Regulations, Section 485(c) explains that a resource that has lost its historic character or appearance may still have sufficient integrity for the California Register of Historical Places.
- Public Resources Code, Section 5097.5 states that any unauthorized removal or destruction of archaeological or paleontological resources on sites located on public land is a misdemeanor. As used in this section, public land means land owned by or under the jurisdiction of, the state, or any city, county, district, authority or public corporation, or any agency thereof.

- Public Resources Code, Section 5097.98 defines procedures for notification of discovery of Native American artifacts or remains and for the disposition of such materials.
- Public Resources Code, Section 5097.99 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions.
- Public Resources Code, Section 5097.991 states that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.
- Public Resources Code, Section 2100: et seq., California Environmental Quality Act (CEQA). This act requires the analysis of potential environmental impacts of proposed projects and requires application of feasible mitigation measures.
- Title 14, California Code of Regulations, Section 15064.5 states that the lead agency determines whether a project may have a significant effect on important archaeological resources; if so, an EIR shall address these resources. If a potential for damage to significant archaeological resources can be demonstrated, such resources must be avoided, if they can not be avoided, mitigation measures shall be required. If a resource is found to be a historical resource, Public Resources Code, Section 21083.2 does not apply and the criterion as unique is now replaced by the standards for eligibility to the California Register.
- Public Resources Code, Section 21084.1 indicates that a project may have a significant effect on the environment if it causes a substantial adverse change in the significance of a historic resource; the section further defines a historic resource and describes what constitutes a significant historic resource.
- CEQA Guidelines, Title 14, California Code of Regulations, Section 15126.4, Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects, Subsection (b), Mitigation Measures Related to Impacts on Historical Resources: Subsection (b) discusses impacts of maintenance, repair, stabilization, restoration, conservation, or reconstruction of a historical resource. Subsection (b) discusses mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place; alternatives include documentation or data recovery by scientific excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan.
- CEQA Guidelines, Title 14, California Code of Regulations, Section 15064.5, Determining the Significance of Impacts to Archaeological and Historical Resources: Subsection (a) defines the term historical resources. Subsection (b) explains when a project may be deemed to have a significant effect on historic resources and defines terms used in describing those situations. Subsection (c) describes CEQA's applicability to archaeological sites and provides a bridge between the application of the terms historic resources and archaeological resources.
- CEQA Guidelines, Title 14, California Code of Regulations, Section 15064.7, Thresholds of Significance: This section encourages agencies to develop thresholds of significance to be used in determining potential impacts and defines the term cumulatively significant.

- CEQA Guidelines, Appendix G: Issue V: Cultural Resources. Lists four questions to be answered in determining the potential for a project to impact archaeological, historical, and paleontological resources.
- California Penal Code, Section 622.5: Anyone who willfully damages an object or thing of archaeological or historic interest can be found guilty of a misdemeanor.
- California Health and Safety Code, Section 7050.5: If human remains are discovered during earth disturbing activities or construction, the project owner is required to contact the county coroner.
- Public Resources Code, Section 5097.98: If the county coroner determines that the remains are Native American, the coroner is required to contact the Native American Heritage Commission, which is then required to determine the Most Likely Descendant to inspect the burial and to make recommendations for treatment or disposition of the remains and any associated burial items.

The Kings County General Plan defines as its Goal 26: Preserve significant historical and archaeological sites and structures which represent ethnic, cultural, and economic groups that have lived and worked in Kings County. Objective 26.1: Promote the rehabilitation or adaptation of new uses of historic sites and structures. Further, the county plan defines three policy elements under the Objective. Policy 26a: List historic sites and structures designated or proposed for designation as County landmarks in specific or area plans or local area development guidelines. Policy 26b: Designate the existing Kings County Museum Advisory Committee, a subcommittee of the Kings County Parks and Recreation Advisory Commission, or its successor to review proposed development which may affect proposed or designation historic sites or County landmarks. Policy 26c: Refer applications which involve the removal, destruction, or alteration of proposed designated historic sites or County landmarks to the Kings County Museum Advisory Committee or its successor for recommended mitigation measures.

In the event that cultural resources are found in the project area, a determination would be made as to the potential significance of each cultural resource with reference to the eligibility criteria for listing a resource in the California Register of Historical Resources.

According to CEQA Guidelines Section 15064.5(a)(3), "Generally, a resource shall be considered by the lead agency to be historically significant if the resource has integrity and meets the criteria for listing in the California Register of Historical Resources (CRHR) (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852) as follows:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (B) Is associated with lives of persons important in our past;
- (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important, creative individual, or possesses high artistic values; or

- (D) Has yielded, or may be likely to yield, information important in prehistory or history."

A project with an effect (impact) that may cause a substantial adverse change in the significance of an historical resource is considered to have a significant adverse impact on the environment (CEQA Guidelines Section 15064.5(4)(b)). A substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5(4)(b)(1)).

A historical resource must also maintain its integrity. A property that has been substantially altered from its historical condition within its period of significance may not qualify for listing in the CRHR.

## 1.2 INVOLVED AGENCIES AND AGENCY CONTACTS

A letter from the Native American Heritage Commission (NAHC) regarding Avenal Energy is included in Appendix A. No other local, state, or federal agencies have been contacted regarding the cultural resources studies for this project.

Letters describing Avenal Energy and soliciting comment were sent to Native American tribes, individuals and organization. Copies of correspondence are in Appendix A. As of September 30, 2001 no response has been received from any of the parties addressed.

## 1.3 STUDY AREA

The study area for Avenal Energy is located in Kings County, near and within the city of Avenal. Areas subject to cultural resources inventory for are as follows (Figure 1):

**Development of a ~150 acre plant site plus a 500 ft. buffer**

**Electric transmission line construction along potential and preferred routes:**

Route A ~3000 linear feet (1000 ft. survey on either side of the center line)  
Route B ~4000 linear feet (500 ft. survey on either side of the center line)  
Preferred ~6200 linear feet (500 ft. survey on either side of the center line)

**Gas pipeline construction along one of two potential routes:**

Gas pipeline ~11,700 linear feet (survey 50 ft. south from edge of pavement/50 ft. north from edge of pavement along Avenal Cutoff Road and 50 ft. either side of Plymouth Ave.)

Gas pipeline alternate ~10,500 linear feet (survey 50 ft. south from edge of pavement/50 ft. north from edge of pavement along Avenal Cutoff Road and 50 ft. either side of pipeline centerline south to Plymouth Ave.)

**Water well sites and water pipeline construction:**

Water pipeline from well site ~3000 linear ft north of plant site boundary (600-ft. survey corridor west of San Luis canal)

Water pipeline from well site ~1400 linear ft north of plant site boundary (600-ft. survey corridor west of San Luis canal)

Water pipeline from well site ~4000 linear ft southwest of plant site boundary (600-ft. survey corridor west of San Luis canal).



## 2.0 ENVIRONMENTAL AND CULTURAL SETTING

### 2.1 ENVIRONMENTAL SETTING

The project is generally situated on alluvial fan deposits between the Kettleman Hills and the Tulare Lake basin, at the western margin of the San Joaquin Valley. The low Kettleman Hills and Diablo Range are to the west. The bed of the former Tulare Lake and expanse of the San Joaquin Valley extend eastward from the project vicinity to the Sierra Nevada foothills.

Contemporary climate in the San Joaquin Valley is characterized as Mediterranean, with marked seasonal precipitation. Seasonal runoff, particularly from the Sierra Nevada, is the primary source of groundwater water for the San Joaquin Valley (Preston 1981). Although few paleoclimatic data exist for the Tulare Lake area, studies from the southern Sierra Nevada suggest that ca. 2,000 – 1,150 B.P. the climate in the project area was relatively wet and cool, followed by extreme drought and higher temperatures (Mediaeval Climatic Anomaly); the medieval period in California was marked by extreme and abrupt hydroclimatic shifts from dry to wet (Stine 1994). By ca. 650-100 B.P., cooler and more mesic conditions prevailed.

The marshlands around Tulare Lake, now mostly drained for agricultural use, provided important subsistence and other resources to regional Native American inhabitants, particularly the Tache Yokuts who occupied the general area historically. Faunal remains from archaeological investigations in the vicinity (e.g., CA-KIN-66, CA-KER-60, CA-KER-116) attest to an expansive variety of fishes, birds (mostly waterfowl), turtles and reptiles, small and large game, and freshwater invertebrates (Siefkin 1999). Plant species of the former marshlands and sloughs, primarily swamp-grass, tules, swamp-willow, cattail and bulrush, would have provided food, construction materials and tools for aboriginal peoples (Siefkin 1999).

The project area is currently entirely taken up in agriculture. The area is planted in orchards and row crops.

### 2.2 PREHISTORY

Archaeological manifestations in the San Joaquin Valley region suggest human occupation began in the early Holocene (~ 11,000 to 7,000 B.P.). Sites on the southwestern and southern shore of Tulare Lake have yielded artifact types of the Western Stemmed complex, a generalized early Holocene hunting and gathering adaptation (e.g., Riddell and Olsen 1969; Wallace and Riddell 1988; Wallace 1991). At CA-KER-116 on the shoreline of Buena Vista Lake south of the project area, deeply buried strata associated with stemmed point and flaked stone crescent fragments have yielded three radiocarbon dates between 8,200 and 7,600 B.P. (Fredrickson and Grossman 1977). At CA-CAL-629/630 in western Calaveras County a substantial assemblage of groundstone tools were found in deposits dating as early as 9,200 B.P. (McGuire 1994).

Early archaeological investigations in Tulare Basin were primarily salvage excavations

associated with agricultural development from the 1920s to the 1950s. Most of these involved mound sites containing flexed and extended burials, cremations and associated grave goods including shell beads and ornaments, flaked and ground stone tools, pottery and steatite artifacts and historic items. Notable early studies include excavations at CA-KER-47 (Gifford and Schenck 1926) and survey and subsurface testing of the Sacramento-San Joaquin Delta region. Gifford and Schenck (1926) used material from private collections and data from CA-KER-47 to characterize the area archaeologically, while Hewes (1941) recorded numerous sites within historic Tache Yokuts territory, reporting similarities with sequences from the Santa Barbara Channel region. Salvage excavations carried out by Latta (see Siefkin 1995a, 1995b, 1995c) in the 1920s-30s at the Broder Mound (CA-TUL-16) on the Kaweah River Delta, Sweet Mound on Tulare Lake, and Alamo Solo (CA-KER-152) in the Sunflower Valley served to define a culture chronology for the Tulare Basin based on changes in burial mode.

More recently, CSU Bakersfield and the Tulare Lake Archaeological Research Group have conducted preliminary studies in the vicinity of the Witt Paleo-Indian Site (CA-KIN-32) although results are yet to be published. Recently published investigations include excavations and assessment of a private collection at CA-KIN-66 near the northern shore of Tulare Lake (Siefkin 1999); excavations at CA-TUL-1613, a late Holocene occupation site near the mouth of the Tulare River (Dillon et al. 1991); subsurface testing in two rockshelters and open-air midden deposits at CA-FRE-1333 (Breschini and Haversat 1987); and limited testing at a deeply buried middle Holocene site along Los Gatos Creek (Atwater et al. 1990).

### 2.3 ETHNOGRAPHY

At the time of contact, the project vicinity was inhabited by the Tache Yokuts, who utilized the marshlands from summertime residential bases (Latta 1949). The Yokuts are a linguistically defined group including more than 40 tribes and whose territory included the entire San Joaquin Valley south of Stockton, the foothills of the Sierra Nevada south of the Fresno River, and portions of the Coast Range.

Tache Yokuts practiced a seasonal subsistence and settlement round, residing in the low foothills of the Diablo Range during the winter months (e.g., near present town of Coalinga), and the northern shore of Tulare Lake and its tributaries from spring to fall (Kroeber 1925). A typical lowland village might include one or more large communal tule houses for each individual lineage, one or more sweathouses, granaries, and other storage structures, one or more large sunshades, a centralized communal area, smaller houses and perhaps a game field (Kroeber 1925; Gayton 1930; Latta 1977 [1949]). Trade relations with coastal groups to the west provided marine shell commodities, while obsidian and stone milling implements were traded with groups east of the Sierra Nevada in exchange for salt from native salt grass, baskets, elk, deer and antelope skins, and steatite (Latta 1977 [1949]).

Ethnographic accounts identify the core of Tache territory as the northern and western shoreline of Tulare Lake and the village of *Poso Chane* in the Coalinga area. Other ethnohistoric data, however, suggest that *Poso Chane* was actually a Salinan village called *Chenen* (Gibson 1983; Harrington (1933; Latta 1977; Siefkin 1999) near a pool of water on the Coalinga plain. Avenal Energy is probably within historic Yokuts territory.

Spanish expeditions to the Tulare Basin in the early 19<sup>th</sup> century were largely exploratory in nature (e.g., Moraga in 1806; see Cook 1960), but were followed by efforts to convert the aboriginal population and move them to the coastal missions (Cook 1960). Many Tulare Basin Native Americans were baptized at the coastal missions in the early 1800s, and after the collapse of that system in the 1830s many of them returned to the Basin, bringing with them the clothes, language and agricultural practices they had learned from the Spanish. After failed treaty negotiations in 1851, attempts to forcibly relocate Yokuts groups from the Tulare Lake area to the Fresno and Kings River Indian Farms and San Sebastian/Tejon Reservation met with limited success; the Tache escaped from the Americans to the marshes of Tulare Lake.

In the historic period, Tache Yokuts continued to periodically occupy the margins of Tulare Lake, most likely as annual visits, although the population of most Tulare Basin groups dwindled dramatically during the latter half of the 19<sup>th</sup> century (Kroeber 1925; Latta 1976). Traditional Tache Yokuts life was permanently disrupted by Euroamerican settlement, although by the late 1800s many had found work on farms and towns on the western margin of the San Joaquin Valley (McCarthy 1992), while others took up residence at the Santa Rosa Reservation [Rancheria].

Yokuts people still maintain important cultural practices and retain a strong feeling of affinity for the San Joaquin Valley area. The Santa Rosa Rancheria near Lemoore is an important cultural center for Tache Yokuts people.

## 2.4 HISTORY

Avenal Energy lies at the edge of the Tulare Lake Basin in the western end of Kings County. The first documented American presence in the Tulare Basin began in 1826 with the arrival of the Jedediah Smith party. Around 1840 several American explorers, including John C. Fremont, passed through the Tulare Basin. Following the end of the Mexican War, in 1848, and the signing of the treaty of Guadalupe Hidalgo, California was ceded to the United States by Mexico. California was granted statehood in 1850, and the first permanent Euroamerican settlement was established in the Basin.

Also in 1850 a failed miner named David Kettleman left the gold fields of California and settled in the hills west of the Tulare Basin near the current town of Avenal. In 1852 Kettleman was granted the first land patent issued by the United States on land in Central California. Kettleman's arrival was preceded by two other men who arrived in the region in 1850. These men, Jim McClure and John Fisher, along with Kettleman, raised cattle with the intent of supplying miners in the gold fields with beef. Cattle and sheep remained the economic mainstay of the area through the end of the 19<sup>th</sup> century with the larger livestock concerns planting grain to augment existing feed sources. This grain and other crops were dry-farmed until the construction of the California aqueduct in the 1970s.

Attempts were made during the late 19<sup>th</sup> century to establish settlements in the Kettleman Hills and surrounding area that today covers portions of western Kings County. In 1888 a group of

people organized a communal colony ten miles south of the present town of Avenal. This community, called Esperanza, (Spanish for Hope) lasted two years before the drought and hardship took its toll and the members of the colony began to quarrel amongst themselves. The colony soon disbanded and its members dispersed. At the end of the 19<sup>th</sup> century Basque sheepmen arrived in the area after fleeing the harsh economic conditions of their homeland in the Pyrenees. The Mexican outlaw Joaquin Murietta whose gang terrorized the valley in the early 1850s is rumored to have hidden his riches in the Kettleman Hills near Coalinga.

Geologists long before the 20<sup>th</sup> Century boom knew the presence of coal and oil in the Kettleman Hills. Oil slicks appeared on the surface in places with names like Tar Canyon and were the original targets of early oil prospectors. The Pacific Oil Company established the first oil well in 1862 near the Avenal Ranch. This crude affair was lined with redwood planking and only tapped into the surface oil down to about 200 feet. The main supply of oil remained at much greater depths: 2000 to 4000 feet by some early estimates. Later wells would be drilled to over 12,000 feet to reach the deposits of oil and natural gas. An 1894 California State Bureau of Mines report acknowledged the potential oil resources in the Kettleman Hills but the isolation of the area made large-scale exploitation of the supply difficult. The only roads were rough wagon tracks and equipment had to be brought in from Stockton far to the north.

The difficult conditions did not deter the search for oil. By 1920, roughly 45 wells had been drilled in the Kettleman hills but none ever reached the large sea of black gold that the prospectors sought. It was not until 1928 when the Milham Oil company drove in its Eliot # 1 well that the true potential of the oil field was realized. On October 5 the drillers broke through into the underground reservoir at a depth of 7108 feet. The oil was under such tremendous pressure that the blast was heard 20 miles away. An estimated 6000 barrels of oil shot from the hole, soaking everything with a combination of oil and water. It took 23 days to cap the gusher.

Soon after the Milham Company strike the surrounding hills were awash with men and equipment seeking to harvest the oil under their feet. The Standard Oil Company already owned alternating sections of land throughout the Kettleman Hills and effectively led the area's development. In 1929 Standard Oil laid out the town site of Avenal and rudimentary shacks passing as houses were hauled in from Taft to replace the workers tents. Water lines were laid and a sewer plant was built. A post office, fire department and a hospital were soon added to the new community. Electricity replaced oil lamps in the 1930s and as time passed and the oil boom continued Standard Oil built the community an airport and a 600-seat theater.

The oil boom lasted through the 1950s despite labor shortages caused by World War II. Production of the Kettleman oil wells began to decline by the 1960s as did the number of the areas inhabitants. As the oil money dwindled agriculture assumed a larger importance in the economic base of the surrounding area. The construction of the California Aqueduct in 1970s met a growing demand for water necessary to convert the dry-farming practices, of earlier times, to the more productive practices in use at the start of the 21<sup>st</sup> Century. (See Forbes 1954; Carbiner 1966; Clough and Secrest, Jr. 1985 ).

## 3.0 METHODS

### 3.1 PERSONNEL

Personnel participating in this study meet the Secretary of Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. Personnel and their roles are as follows:

Thomas L. Jackson, Ph.D., Principal Investigator - 30 years experience in California cultural resources management and archaeology;  
Thomas Nave, M.A., Historian - 7 years experience in California history, architectural history, and cultural resources management;  
William A. Shapiro, M.A., Field Director - 17 years experience in California cultural resources management and archaeology;  
Brendan Culleton, B.A., Archaeologist - 2 years experience in California cultural resources management and archaeology;  
Mary O'Neil, B.A., Archaeologist - 2 years experience in California cultural resources management and archaeology;  
Cara Monroe, B.A., Archaeologist - 1 year experience in California cultural resources management and archaeology.

Résumés of personnel are provided in Appendix B.

### 3.2 DOCUMENTARY RESEARCH

Documentation on file at Southern San Joaquin Valley Archaeological Information Center was consulted for any previous archaeological studies undertaken within ½ mile of the project components. No previously documented cultural resources are known in the project area and no previous archaeological studies are documented. No sites listed on the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR) are located within the project area. Historical research was carried out at the Avenal Museum, the Local History collection of the Kings County Library, and Internet sources regarding Fresno and Kings County history.

### 3.3 NATIVE AMERICAN AND OTHER CONSULTATION

The Native American Heritage Commission was contacted regarding the project and a letter of response is included in Appendix A. Letters were also sent to the Santa Rosa Rancheria, Tule River Tribe, and Salinan Nation soliciting any concerns the tribes might have regarding the project. A similar letter was sent to Mr. Ronald Alec. Copies of the letters sent to the tribes and individuals are included in Appendix A. No replies have been received to these letters.

### 3.4 FIELDWORK

The historian reconnoitered the project area on April 2, 2001 for potential historic structures or objects. Archaeological inspection was completed April 17 through April 20, 2001 and August 14 and 15, 2001.

Archaeological field investigations involved complete/intensive level pedestrian archaeological survey over the entire plant site, along the entire length of the alternate transmission line routes A and B, along the gas pipeline and alternate routes, and the water well sites and along the three water pipeline routes. Archaeological survey along the preferred electric transmission line was hampered by dense cotton planted in the fields along the route and that prevented a close examination of the soil surface except in the areas depicted on Figure 1. The project area examined is as defined in "Project Area" above.

During the initial archaeological survey a field crew of four (4) walked over the project study area in a systematic fashion spaced no more than 15 meters apart. There were no constraints on fieldwork and surface visibility and access in the area was very good. The field supervisor maintained a daily log to record the progress of the survey. During survey in August, however, fields of cotton plants prevented close inspection of most of the electrical transmission line route. All portions of the gas line routes were available for complete/intensive examination. Based on the absence of cultural resources discovered in the study area during the April survey, it is not expected that cultural resources would be encountered in those areas where mineral soil was obscured by cotton plants.

#### 4.0 RESULTS AND MANAGEMENT RECOMMENDATIONS

No cultural resources were discovered in the project area in the course of this study. According to Kings County records, the first public right-of-way for the Avenal Cutoff Road was declared in February 1936 and land deeds were secured for the right-of-way between 1938 and 1939. The first road surface was graded between 1936 and 1940. Between 1962 and 1969 the County raised and widened the alignment to its current dimensions. Since that time the road surface has been periodically replaced. Thus, the roadway lacks any semblance of its original construction due to periodic roadway improvements and, therefore, appears to lack integrity. Lacking integrity it would not be a potentially significant cultural resource.

The electrical transmission line into which Avenal Energy would connect is apparently less than 50 years old and is not considered a cultural resource potentially eligible for listing in the CRHR.

There appears to be very little likelihood that buried or obscured archaeological resources occur in the project area. Ground surface visibility was very good during archaeological survey in April because virtually the entire area was tilled. The area has reportedly been agriculturally "ripped" to a depth of 5 feet, which could have turned up deeply buried artifacts or other cultural material. Buried archaeological sites are reported on the Coalinga Fan (Atwater et al. 1990), however, these are found adjacent to former stream courses. The topographic setting of the project area makes it very unlikely that a comparable buried archaeological resource occurs here.

Despite the fact that no potentially significant cultural resources are known or anticipated in the project area it is recommended that workers involved with ground disturbing activities for construction for Avenal Energy be trained in the recognition of archaeological resources (e.g., historic and prehistoric artifacts typical of the general area), procedures to report such discoveries, and other appropriate protocols to ensure that construction activities avoid or minimize impacts to potentially significant cultural resources.

Portions of the archaeological survey corridor for the electrical transmission line were obscured by cotton plants during the August survey. It is recommended that a pre-construction survey of the preferred electrical transmission line route be conducted before any project-related ground disturbance occurs along the line. Any cultural resources encountered that could be affected by Avenal Energy should be managed in accordance with a cultural resources mitigation and management plan completed before any ground-disturbing actions are begun for the electrical transmission line.

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1995a A Surface Collection from the Drunken Navigator Site (CA-KIN-39) and Implications for Late Holocene Human Adaptations in the Tulare Lake Basin, California. *Kern County Archaeological Society Journal* 6:22-40.
- Siefkin, N.  
1995b Aboriginal Trails in the Southern San Joaquin Valley, California.
- Siefkin, N.  
1995c Putting Together the Pieces: Frank Latta's Little Known Archaeological Investigations

in the Tulare Lake Basin. *TULARG Report: Newsletter of the Tulare Lake Archaeological Research Group* 8(8):2-4.

Siefkin, N.

1999 *Archaeology of the Redtfeldt Mound (CA-KIN-66), Tulare Basin, California*. Masters, California State University.

Stine, S.

1994 Extreme and Persistent Drought in California and Patagonia during Mediaeval Time. *Nature* 369(6481):546-549.

Wallace, W. J.

1991 Tulare Lake's Archaeological Past. In *Contributions to Tulare Lake Archaeology I: Background to a Study of Tulare Lake's Archaeological Past.*, edited by W. W. J. and F. A. Riddell, pp. 23-33. Tulare Lake Archaeological Research Group., Redondo Beach.

Wallace, W. J. and F. A. Riddell

1988 Archaeological Background of Tulare Lake, California. In *Early Human Occupation in Far Western North America: The Clovis-Archaic Interface*, edited by J. A. Willig, C. M. Aikens and J. L. Fagan, pp. 87-101. Nevada State Museum Anthropological Papers No. 21. Nevada State Museum, Carson City.

APPENDIX A  
CORRESPONDENCE WITH NATIVE AMERICAN INTERESTS



Customer-Focused Solutions

March 21, 2001

Project No. 31161

Mr. Rob Wood  
Native American Heritage Commission  
915 Capital Mall, Room 364  
Sacramento, California 95814

Request for Record Search

Dear Mr. Wood:

This letter is written on behalf of Duke Energy Avenal, LLC (Duke Energy), who is developing a power generating project (Avenal Energy Center) in the northern portion of Kings County, within the city limits of Avenal (see Figure 1). This is a request for a record search of the Sacred Lands File and list of Native American contacts for the proposed project. Duke Energy proposes to construct new facilities that will add approximately 600 megawatts (MW) of baseload power generation capability to the state of California.

The Avenal Power Plant site is located in Section 19, Township 21 South, Range 18 East, Mount Diablo Base and Meridian. Construction of the power plant will occur within the site boundary. Construction of water and gas pipelines would occur as shown in the attached Figure 2 and Figure 8. An electric transmission line from the site would be constructed as shown in Figure 9 and could extend into Fresno County.

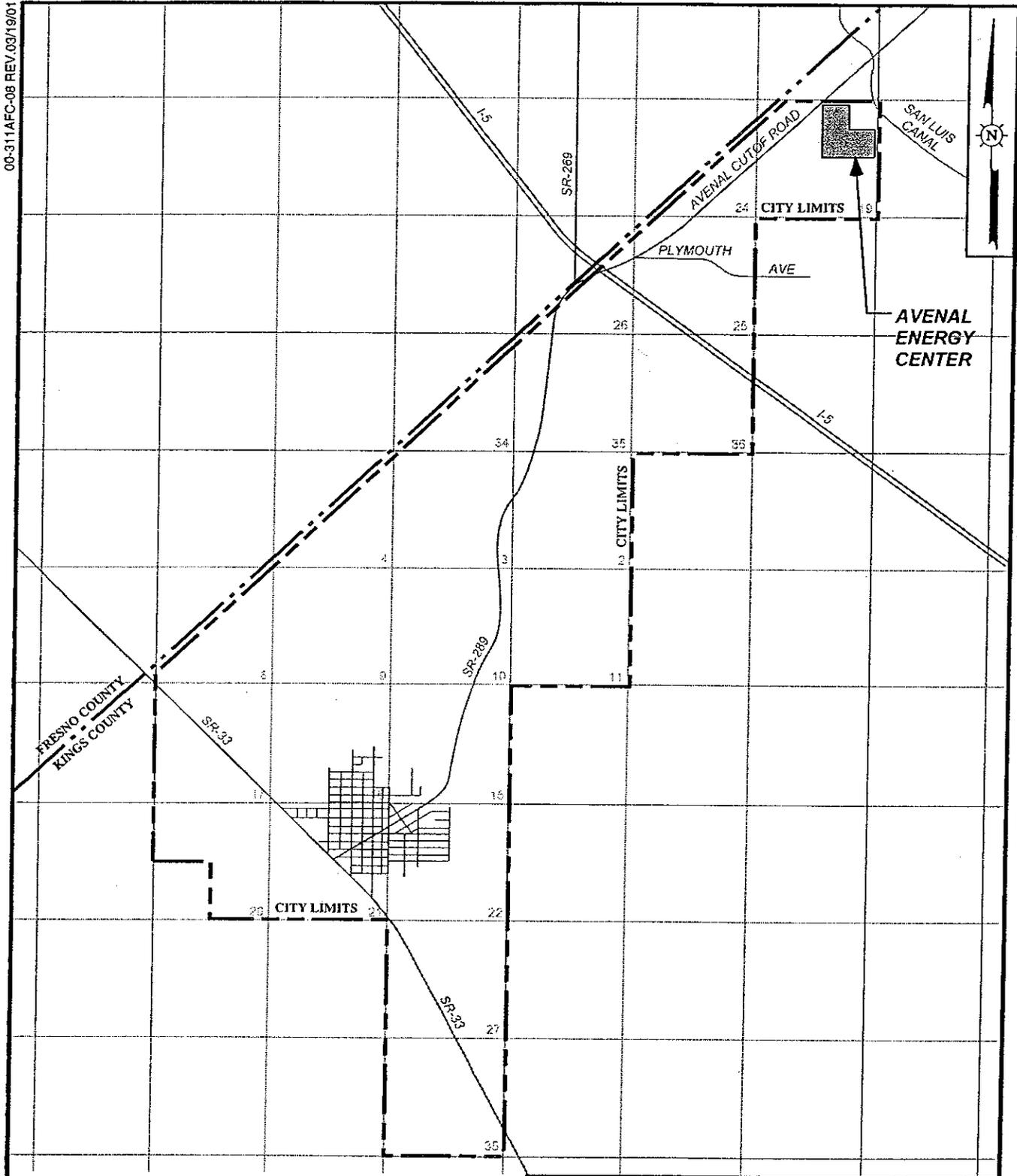
If you have any questions, please call me or Bob Mason, the project manager.

Thank you for your assistance.

Sincerely,

Carolyn E. Trindle

CET/KM:rw  
Attachments

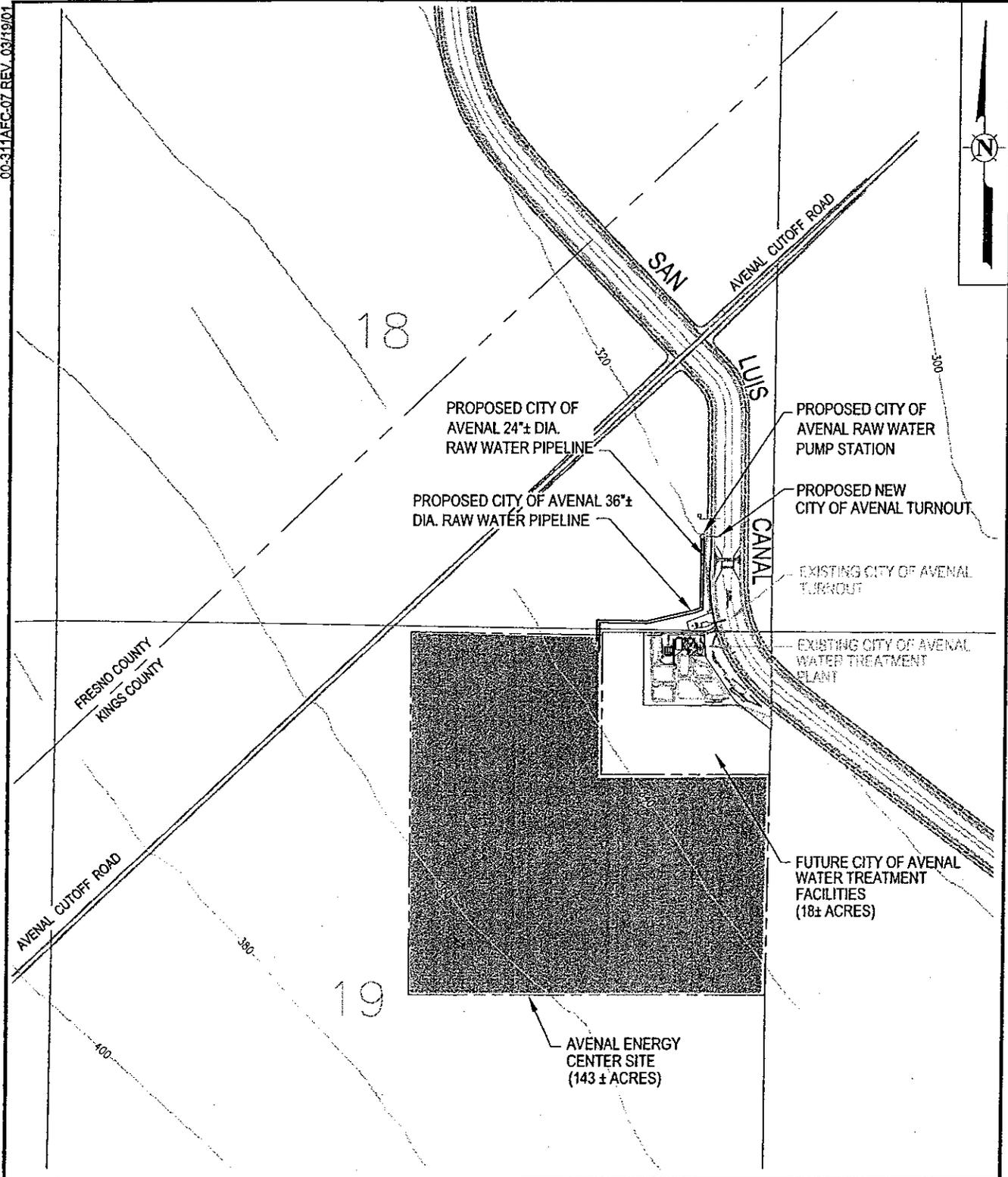
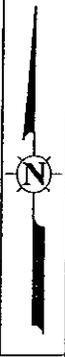


**SITE LOCATION**

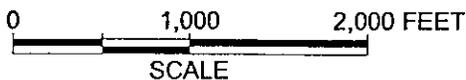
AVENAL ENERGY CENTER  
DUKE ENERGY NORTH AMERICA

<b>TRC</b>	<b>FIGURE 1</b>
------------	-----------------

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.



REFERENCE: SUMMERS ENGINEERING, INC,  
 LOCATION MAP, WATER SUPPLY AND  
 TREATMENT FACILITIES WITH OPTION B,  
 PRELIMINARY, MARCH 7, 2001

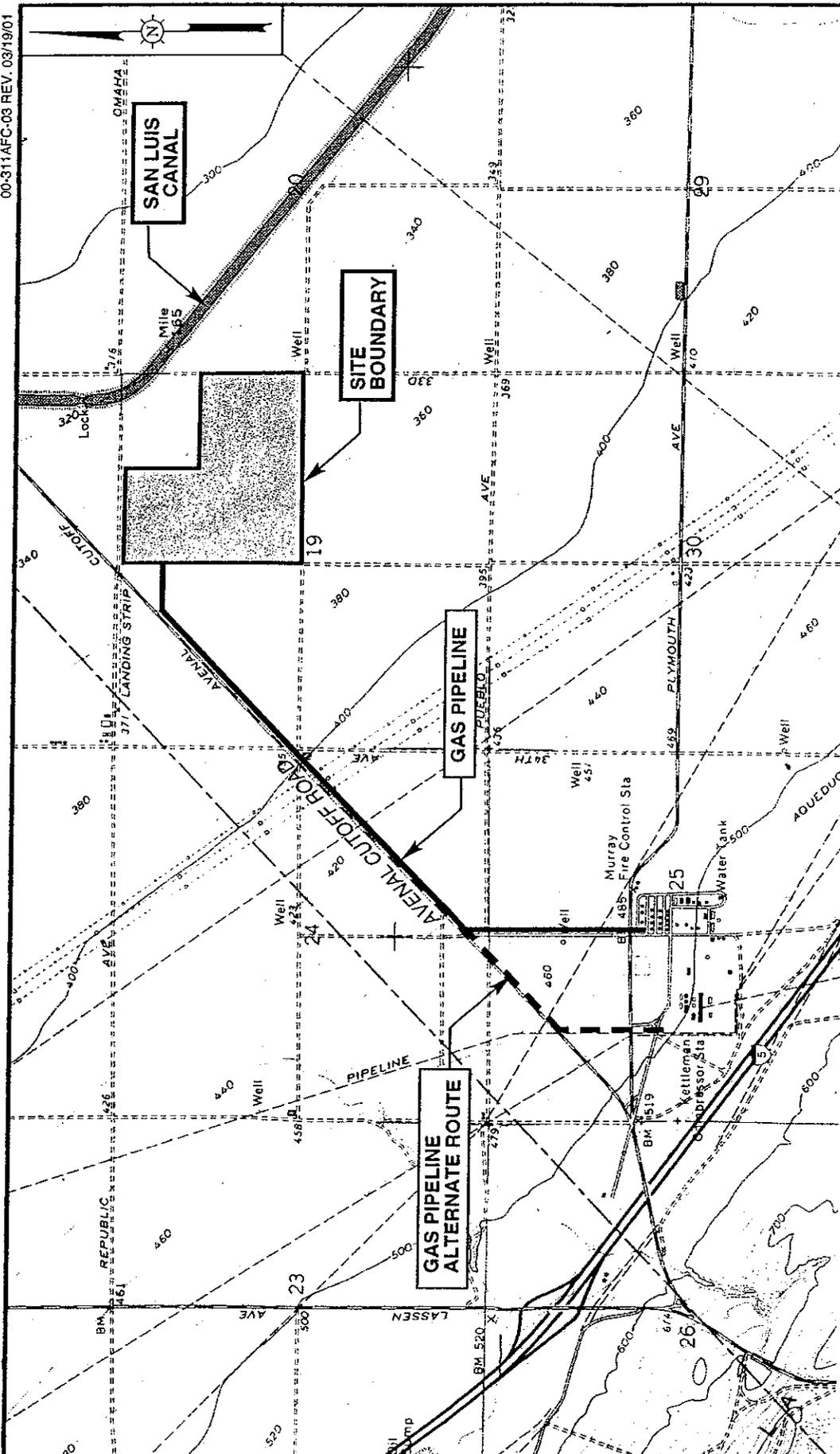


**SITE PARCEL MAP AND CITY  
 WATER TREATMENT PLANT  
 EXPANSION AREA**

AVENAL ENERGY CENTER  
 DUKE ENERGY NORTH AMERICA

**TRC**

**FIGURE 2**



REFERENCE:  
 U.S.G.S 7.5 MINUTE TOPOGRAPHIC SERIES MAP  
 OF LA CIMA, CALIFORNIA, DATED 1978.

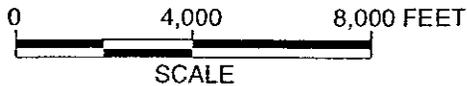
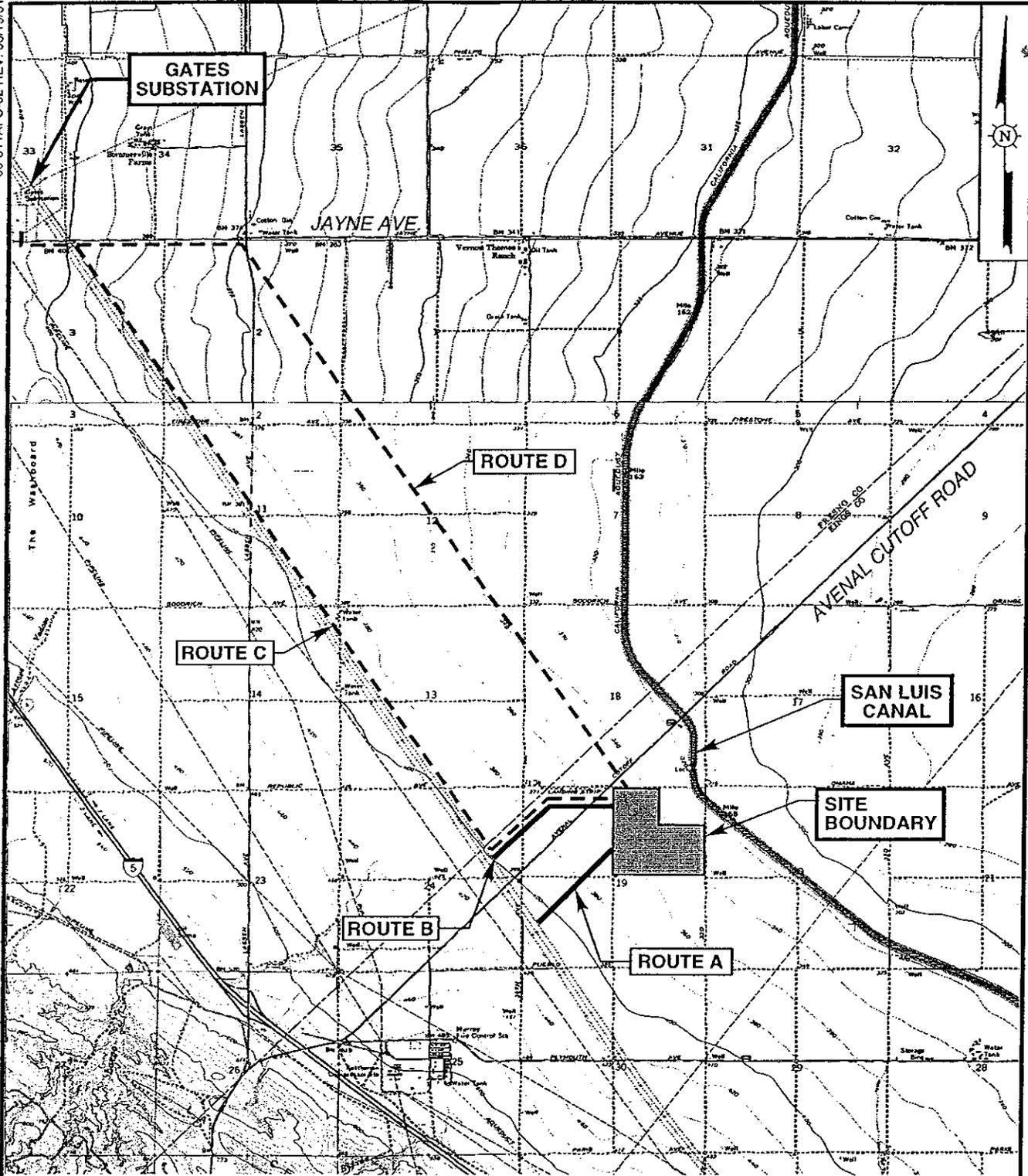


**NATURAL GAS LINE ROUTE**

AVENAL ENERGY CENTER  
 DUKE ENERGY NORTH AMERICA

**TRC**

**FIGURE 8**



REFERENCE: U.S.G.S 7.5 MINUTE TOPOGRAPHIC SERIES MAPS OF HURON, CALIFORNIA, DATED 1971 AND LA CIMA, CALIFORNIA, DATED 1978.

**TRANSMISSION LINE ALTERNATIVES**

AVENAL ENERGY CENTER  
DUKE ENERGY NORTH AMERICA

**TRC**

**FIGURE 9**

**NATIVE AMERICAN HERITAGE COMMISSION**  
915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-4082  
Fax (916) 657-5390



March 29, 2001

Carolyn Trindle  
TRC  
21 Technology Drive  
Irvine, CA 92618

RE: Avenal Energy Center

Sent By Fax: (949) 727-7399  
Pages Sent: 2

Dear Ms. Trindle:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend other with specific knowledge. A minimum of two weeks must be allowed for responses after notification.

If you receive notification of change of addresses and phone numbers from any these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

A handwritten signature in black ink that reads "Rob Wood".

Rob Wood  
Associate Governmental Program Analyst

**NATIVE AMERICAN CONTACTS**  
**Fresno and Kings County**  
**March 29, 2001**

Big Sandy Rancheria of Mono Indians  
 Loren Baty, Chairperson  
 P.O. Box 337 / 7302 Rancheria Western Mono  
 Auberry, CA 93602  
 (209) 855-4003  
 (209) 855-4129 Fax

Puilulaw Khus Zarate  
 2001 San Bernardo Creek  
 Morro Bay, CA 93442  
 (805) 772-0579  
 Chumash

Cold Springs Rancheria of Mono Indians  
 Jennifer Philley, Chairperson  
 P.O. Box 209  
 Tollhouse, CA 93667  
 (209) 855-5043  
 (209) 855-8359 Fax  
 Mono

Central Valley & Mountain Reinterment Assoc.  
 Lorrie Planas  
 2736 Palo Alto  
 Clovis, CA 93611  
 (559) 855-5355  
 Choinumni  
 Wobonuch Mono

Ron Goode  
 P.O. Box 275  
 Northfork, CA 93643  
 (209) 259-3729 Home  
 (209) 443-8123 Work  
 Mono

Ronald Alec  
 PO Box 14  
 Tollhouse, CA 93667  
 (209) 291-7953  
 Mono

Santa Rosa Rancheria  
 Mike Sisco, Chairperson  
 P.O. Box 8  
 Lemoore, CA 93245  
 (559) 924-1278  
 (559) 924-3583 Fax  
 Tache  
 Tachi  
 Yokut

Dunlap Band of Mono  
 Gladys Dick McKinney  
 Box 44  
 Dunlap, CA 93624  
 (669) 338-2771  
 Mono

Table Mountain Rancheria  
 Vernon Castro, Chairperson  
 P.O. Box 410  
 Friant, CA 93626-0  
 (209) 822-2587  
 (209) 822-2693 FAX  
 Yokut

**This list is current only as of the date of this document.**

*Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7059.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.*

**This list is only applicable for contacting local Native Americans with regards to the cultural assessment for the proposed Duke Energy Avenal Energy Center, Avenal, Kings County.**

Bay Area  
Central Coast/Business  
Pacific Basin  
Valley/Sierra  
Internet/E-mail

1027 San Pablo Ave. ◊ Albany, CA 94706 ◊ 510-524-3991 ◊ 510-524-4419 fax  
1525 Seabright Ave. ◊ Santa Cruz, CA 95062 ◊ 831-423-0588 ◊ 831-423-0587 fax  
332 Uluniu St. ◊ Kailua, HI 96734 ◊ 808-263-4800 ◊ 808-263-4300 fax  
3081 Alhambra Dr., Ste. 208 ◊ Cameron Park, CA 95682 ◊ 530-677-9713 ◊ 530-677-9762 fax  
www.pacificlegacy.com



April 3, 2001

Mr. Greg Castro  
Chairman  
Salinan Nation  
5225 Roeder Road  
San Jose, CA 95111

Re.: Avenal Energy Center

Dear Mr. Castro:

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California as shown on the attached map. The plant would also require the construction of gas, water and electrical transmission lines.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources. Duke Energy will conduct studies of the project area to determine if any cultural resources are present.

We understand that members of your Tribe have cultural affiliations with the area of the proposed project and they may wish to express their concerns or interest regarding cultural resources in the project area. Duke Energy respects the views of Native Americans and will take into account whatever information your Tribe or its members care to communicate.

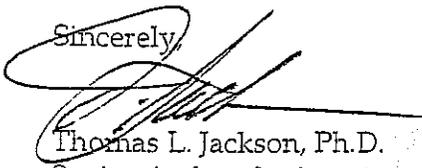
If you or other members of the Tribe would like to respond to this letter, please provide written comments to:

Tom Jackson  
Pacific Legacy  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call, (831) 423-0588 ext. 15 (e-mail, legacytj@yahoo.com).

If at all possible, we would appreciate receiving any comments by April 30, but would welcome your views at any time. If you would like more information, please contact me.

Sincerely,



Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



Bay Area  
Central Coast/Business  
Pacific Basin  
Valley/Sierra  
Internet/E-mail

1027 San Pablo Ave. ♦ Albany, CA 94706 ♦ 510-524-3991 ♦ 510-524-4419 fax  
1525 Seabright Ave. ♦ Santa Cruz, CA 95062 ♦ 831-423-0588 ♦ 831-423-0587 fax  
332 Uluniu St. ♦ Kailua, HI 96734 ♦ 808-263-4800 ♦ 808-263-4300 fax  
3081 Alhambra Dr., Ste. 208 ♦ Cameron Park, CA 95682 ♦ 530-677-9713 ♦ 530-677-9762 fax  
www.pacificlegacy.com



April 3, 2001

Mr. Duane Garfield  
Chairman  
Tule River Tribal Council  
P.O. Box 589  
Porterville, CA 93258

Re.: Avenal Energy Center

Dear Mr. Garfield:

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California as shown on the attached map. The plant would also require the construction of gas, water and electrical transmission lines.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources. Duke Energy will conduct studies of the project area to determine if any cultural resources are present.

We understand that members of your community have cultural affiliations with the area of the proposed project and they may wish to express their concerns or interest regarding cultural resources in the project area. Duke Energy respects the views of Native Americans and will take into account whatever information your Tribe or its members care to communicate.

If you or other members of the Tribe would like to respond to this letter, please provide written comments to:

Tom Jackson  
Pacific Legacy  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call, (831) 423-0588 ext. 15 (e-mail, [legacytj@yahoo.com](mailto:legacytj@yahoo.com)).

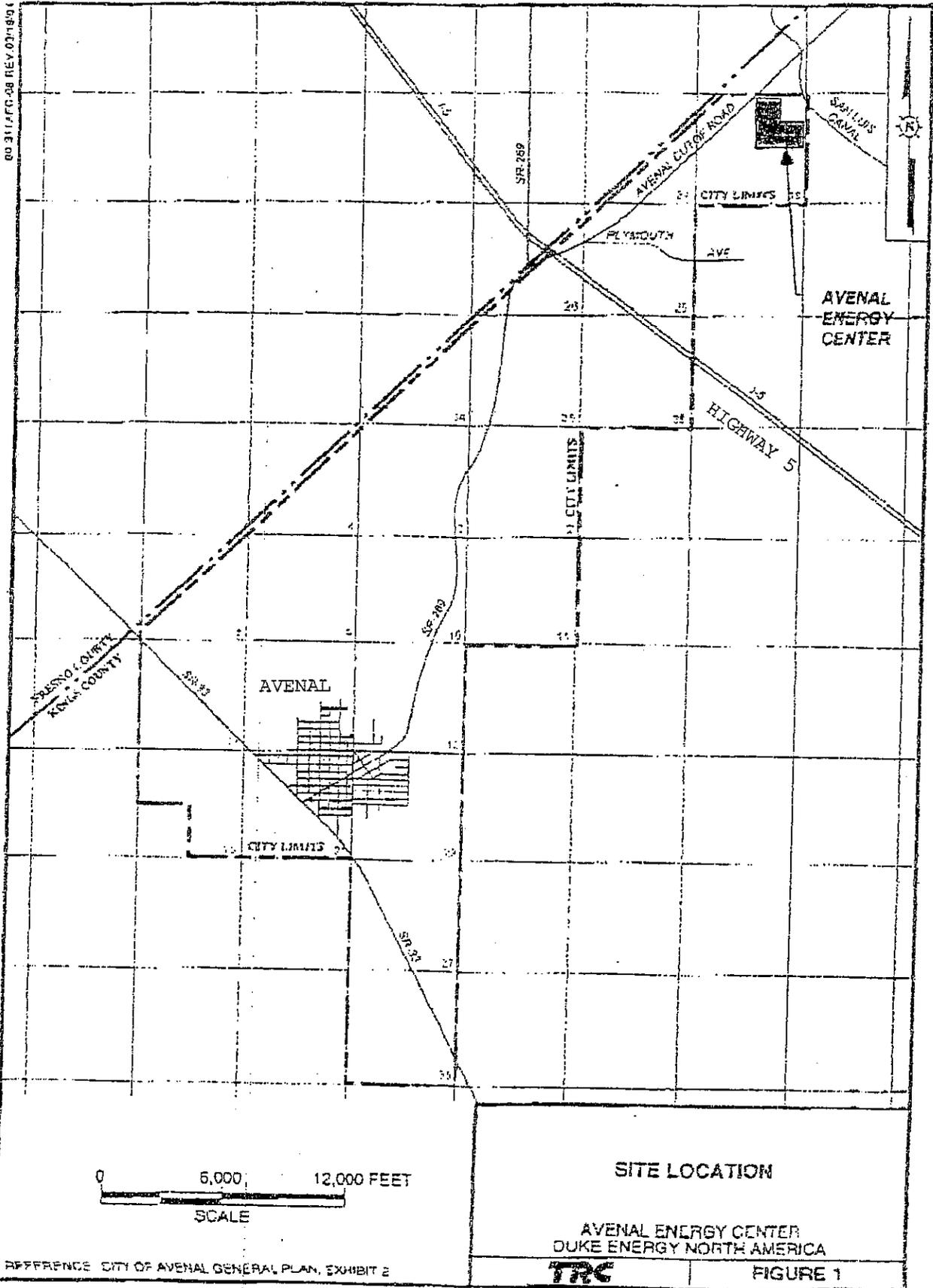
If at all possible, we would appreciate receiving any comments by April 30 but would welcome your views at any time. If you would like more information, please contact me.

Sincerely,



Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division

00 3117FC-08 REV. 07/19/90



REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2

**SITE LOCATION**

AVENAL ENERGY CENTER  
DUKE ENERGY NORTH AMERICA

**TRC** **FIGURE 1**

Bay Area  
Central Coast/Business  
Pacific Basin  
Valley/Sierra  
Internet/E-mail

1027 San Pablo Ave. ♦ Albany, CA 94706 ♦ 510-524-3991 ♦ 510-524-4419 fax  
1525 Seabright Ave. ♦ Santa Cruz, CA 95062 ♦ 831-423-0588 ♦ 831-423-0587 fax  
332 Uluniu St. ♦ Kailua, HI 96734 ♦ 808-263-4800 ♦ 808-263-4300 fax  
3081 Alhambra Dr., Ste. 208 ♦ Cameron Park, CA 95682 ♦ 530-677-9713 ♦ 530-677-9762 fax  
www.pacificlegacy.com



April 3, 2001

Mr. Mike Sisco  
Chairman, Tribal Council  
Santa Rosa Rancheria Tachi Tribe  
P.O. Box 8  
Lemoore, CA 93245

Re.: Avenal Energy Center

Dear Mr. Sisco:

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California as shown on the attached map. The plant would also require the construction of gas, water and electrical transmission lines.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources. Duke Energy will conduct studies of the project area to determine if any cultural resources are present.

We understand that members of your Tribe have cultural affiliations with the area of the proposed project and they may wish to express their concerns or interest regarding cultural resources in the project area. Duke Energy respects the views of Native Americans and will take into account whatever information your Tribe or its members care to communicate.

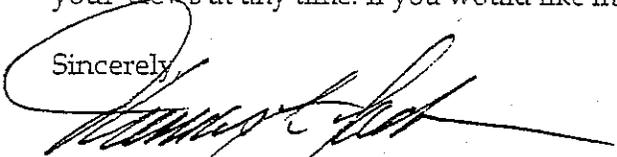
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Tom Jackson  
Pacific Legacy  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call, (831) 423-0588 ext. 15 (e-mail, [legacytj@yahoo.com](mailto:legacytj@yahoo.com)).

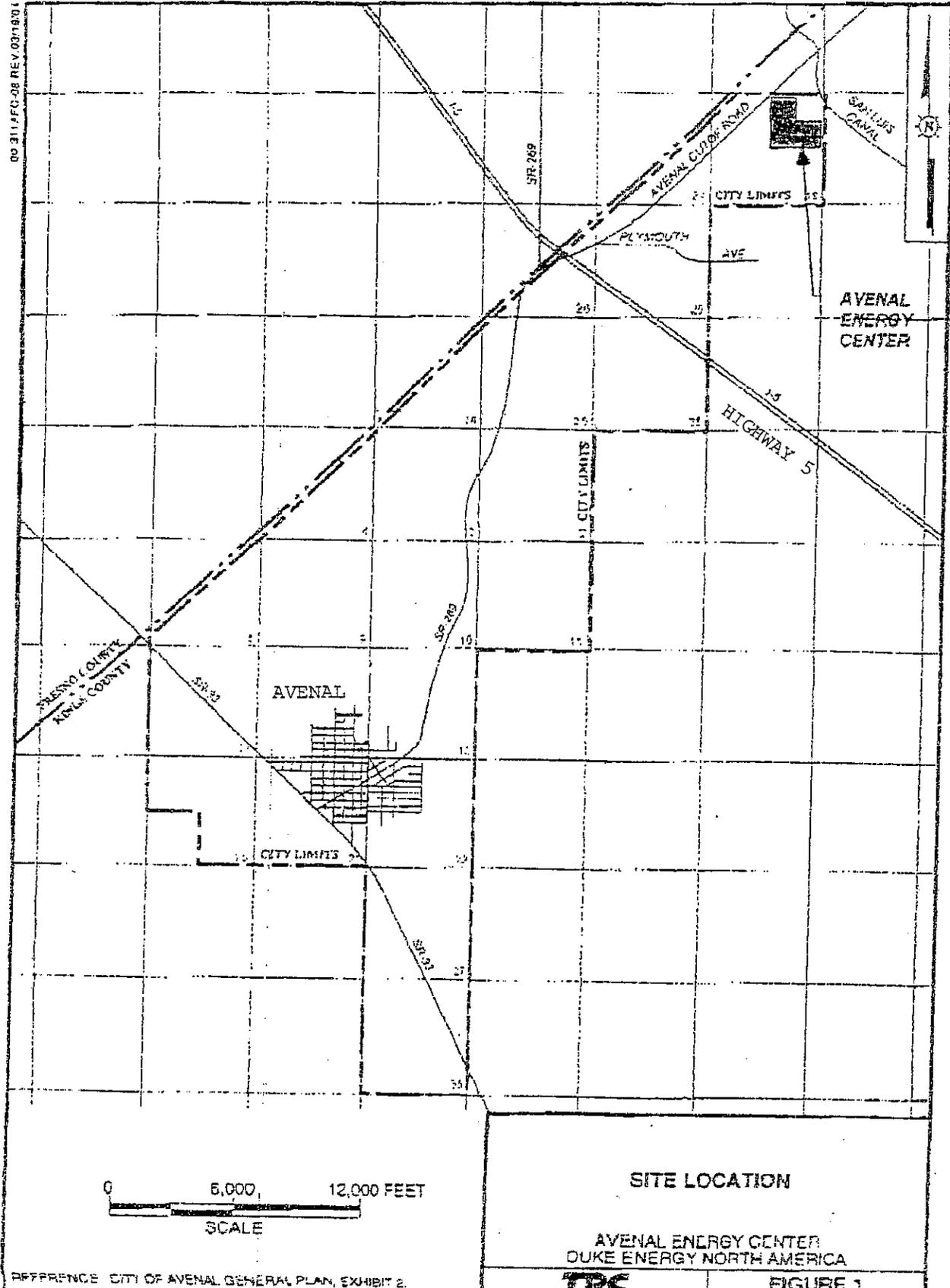
If at all possible, we would appreciate receiving any comments by April 30, but would welcome your views at any time. If you would like more information, please contact me.

Sincerely,



Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division

09 311 AFG-08 REV. 03/1970



REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

**SITE LOCATION**

AVENAL ENERGY CENTER  
DUKE ENERGY NORTH AMERICA

**TTC**

**FIGURE 1**



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Ms. Leann Grant, Chair  
Table Mountain Rancheria  
P.O. Box 410  
Friant, CA 93626

Dear Ms. Grant,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

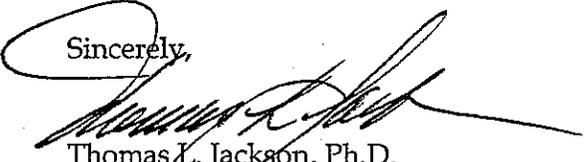
We understand that your membership may have cultural affiliations with the area of the proposed project and they may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your community cares to communicate.

If you or other members of your community would like to respond to this letter, please provide written comments to:

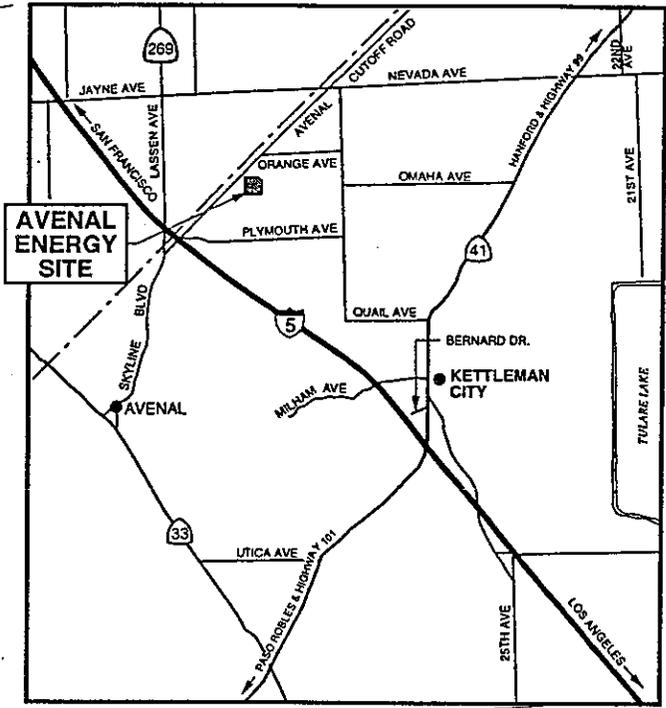
Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

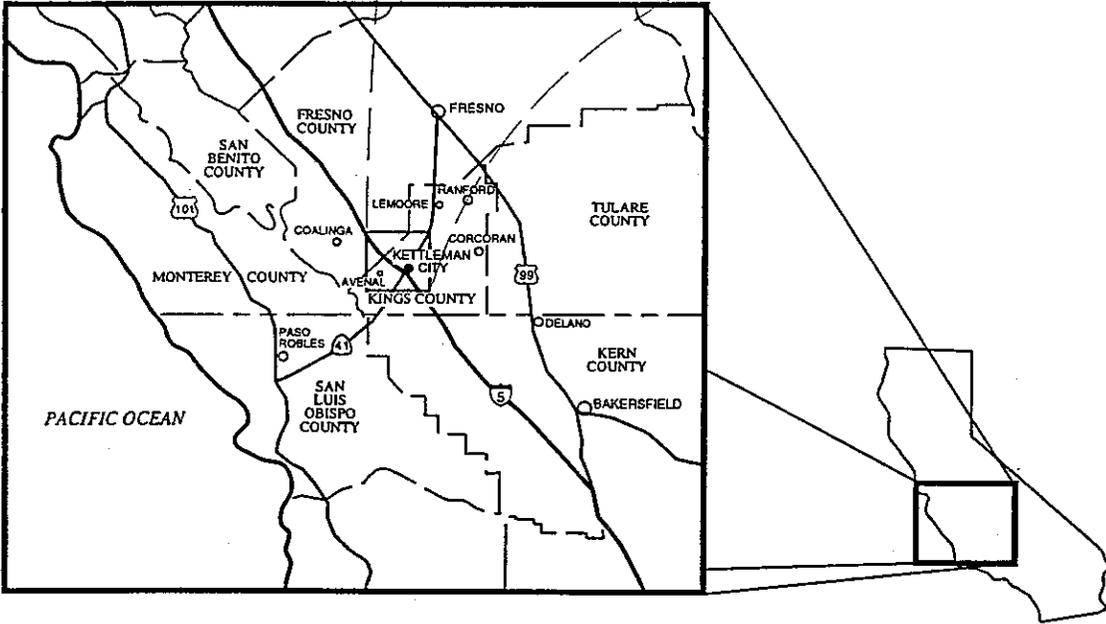
Sincerely,



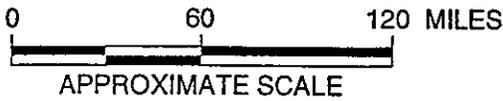
Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



**VICINITY MAP**  
NOT TO SCALE



**REGIONAL MAP**

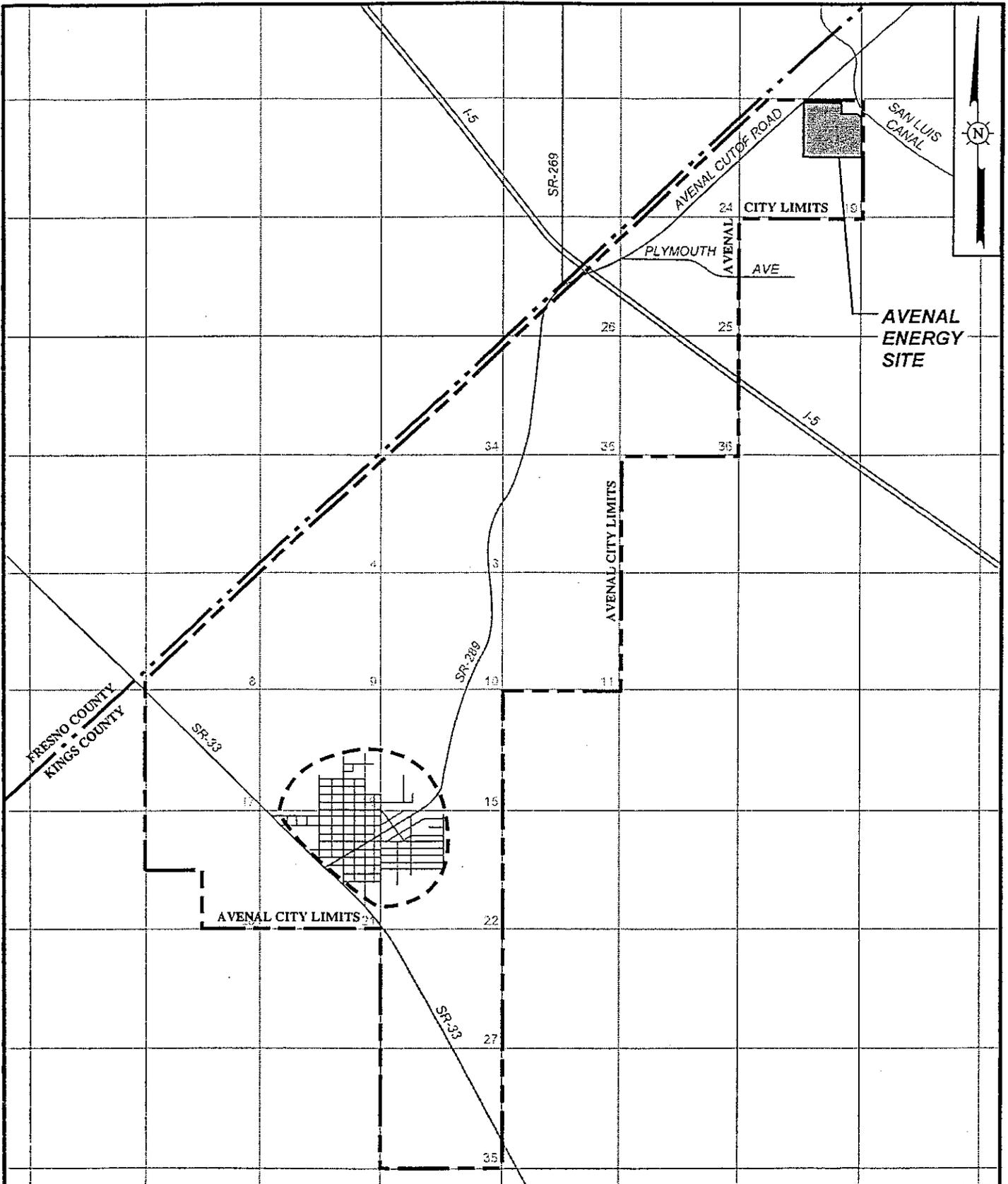


**REGIONAL LOCATION MAP**

**DUKE ENERGY AVENAL, LLC**

**AVENAL ENERGY**

**FIGURE 1.0-1**



NOTE: MULTIPLE SENSITIVE RECEPTORS ARE LOCATED WITHIN DASHED LINE AROUND THE MAIN PART OF THE CITY OF AVENAL.

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

<b>SITE LOCATION</b>	
<b>DUKE ENERGY AVENAL, LLC</b>	
<b>AVENAL ENERGY</b>	<b>FIGURE 1.0-2</b>



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Ms. Puilulaw Khus Zarate  
2001 San Bernardo Creek  
Morrow Bay, CA 93442

Dear Ms. Zarate,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

We understand that you may have cultural affiliations with the area of the proposed project and may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your community cares to communicate.

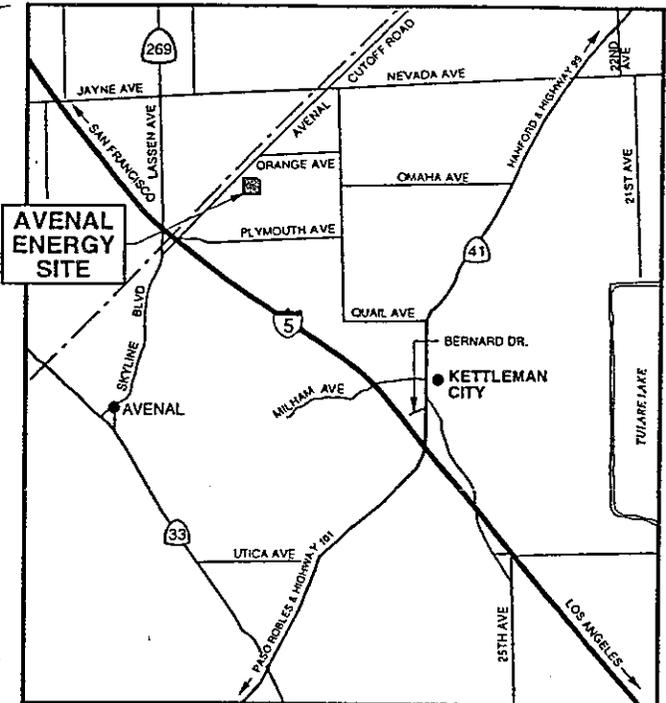
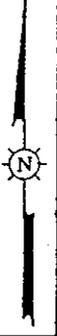
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Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

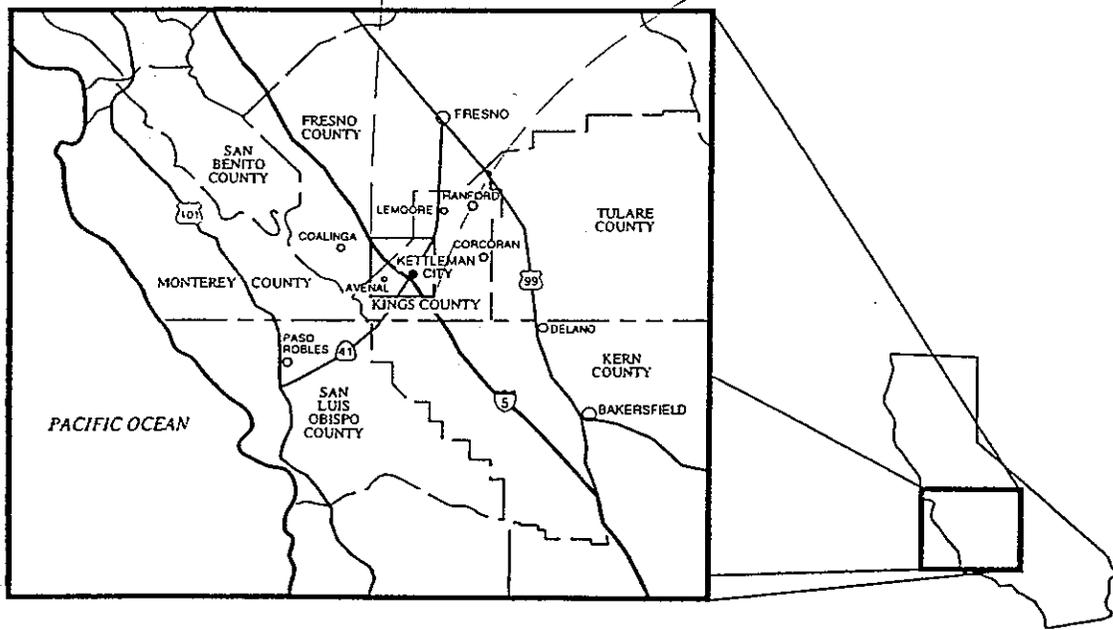
Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

Sincerely,

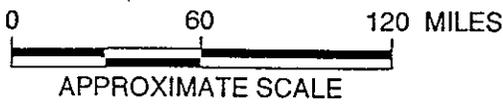
Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



VICINITY MAP  
NOT TO SCALE



REGIONAL MAP

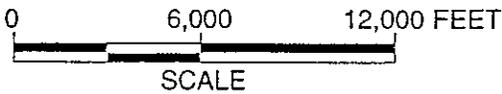
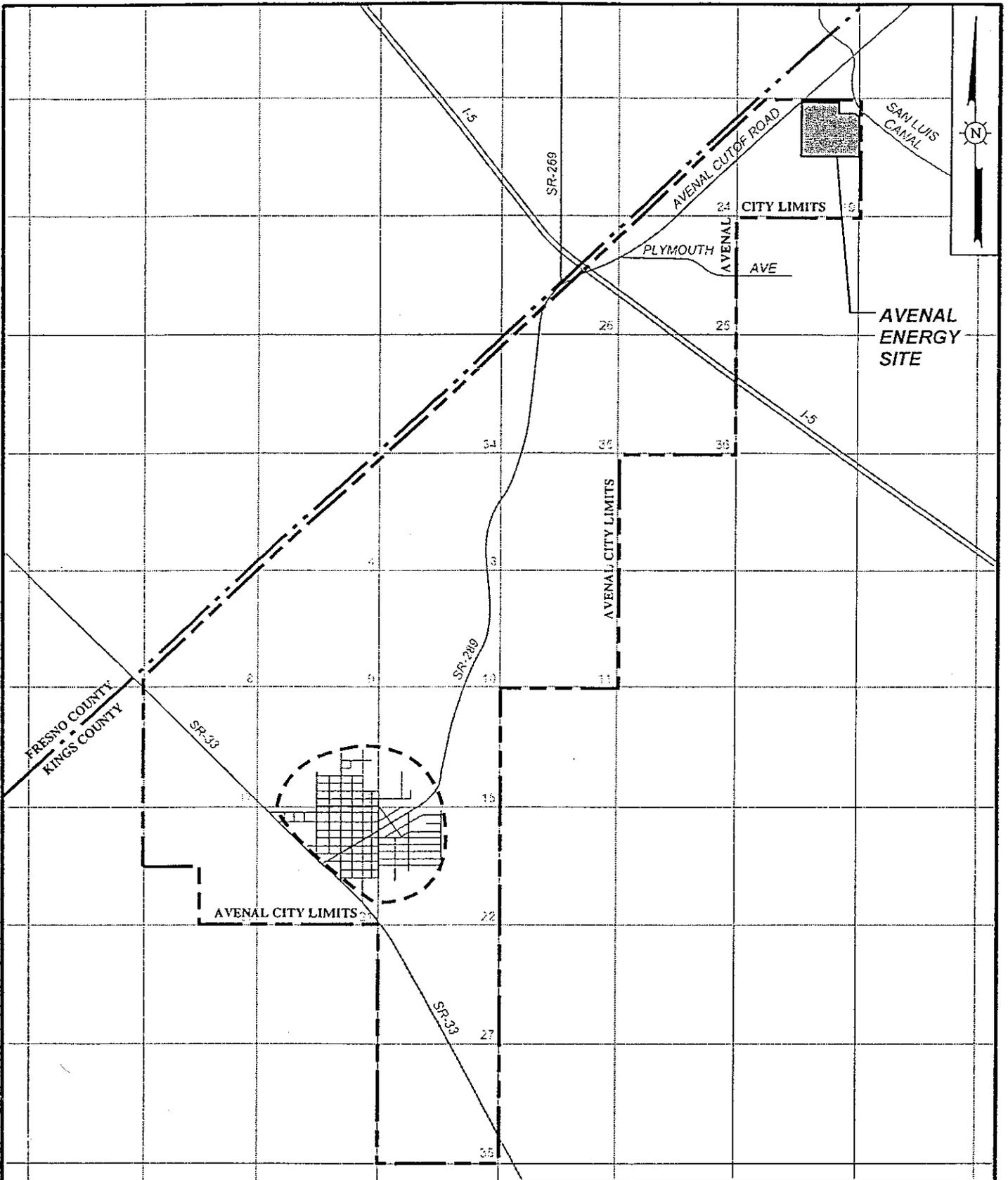


REGIONAL LOCATION MAP

DUKE ENERGY AVENAL, LLC

AVENAL ENERGY

FIGURE 1.0-1



NOTE: MULTIPLE SENSITIVE RECEPTORS ARE LOCATED WITHIN DASHED LINE AROUND THE MAIN PART OF THE CITY OF AVENAL.

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

<b>SITE LOCATION</b>	
<b>DUKE ENERGY AVENAL, LLC</b>	
<b>AVENAL ENERGY</b>	<b>FIGURE 1.0-2</b>



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Mr. Wilbur Beecher, Tribal Chair  
Big Sandy Rancheria  
P.O. Box 337  
Auberry, CA 93602

Dear Mr. Beecher,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

We understand that your membership may have cultural affiliations with the area of the proposed project and they may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your community cares to communicate.

If you or other members of your community would like to respond to this letter, please provide written comments to:

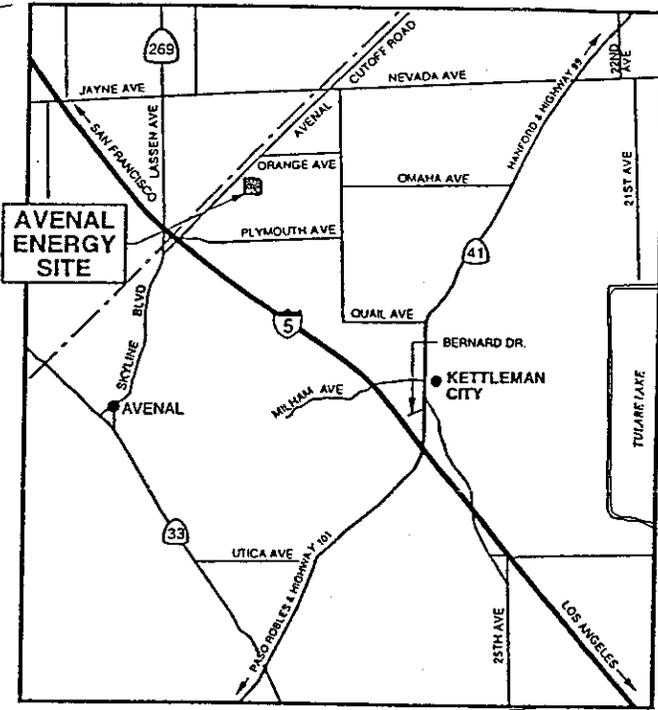
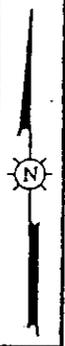
Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

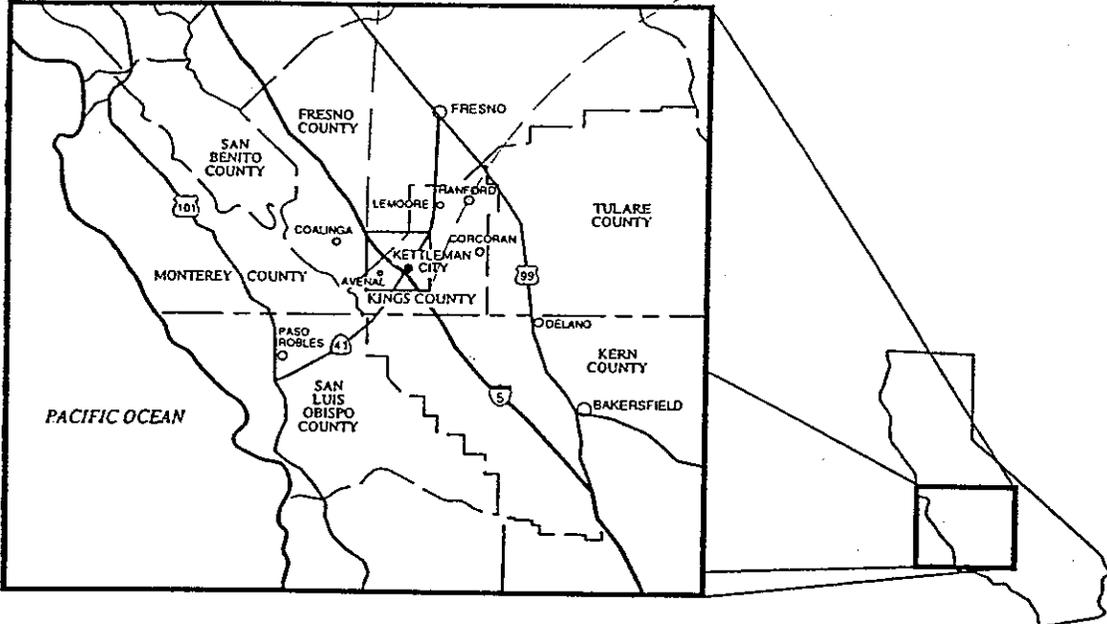
Sincerely,



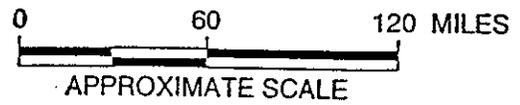
Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



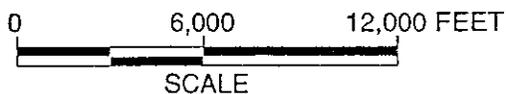
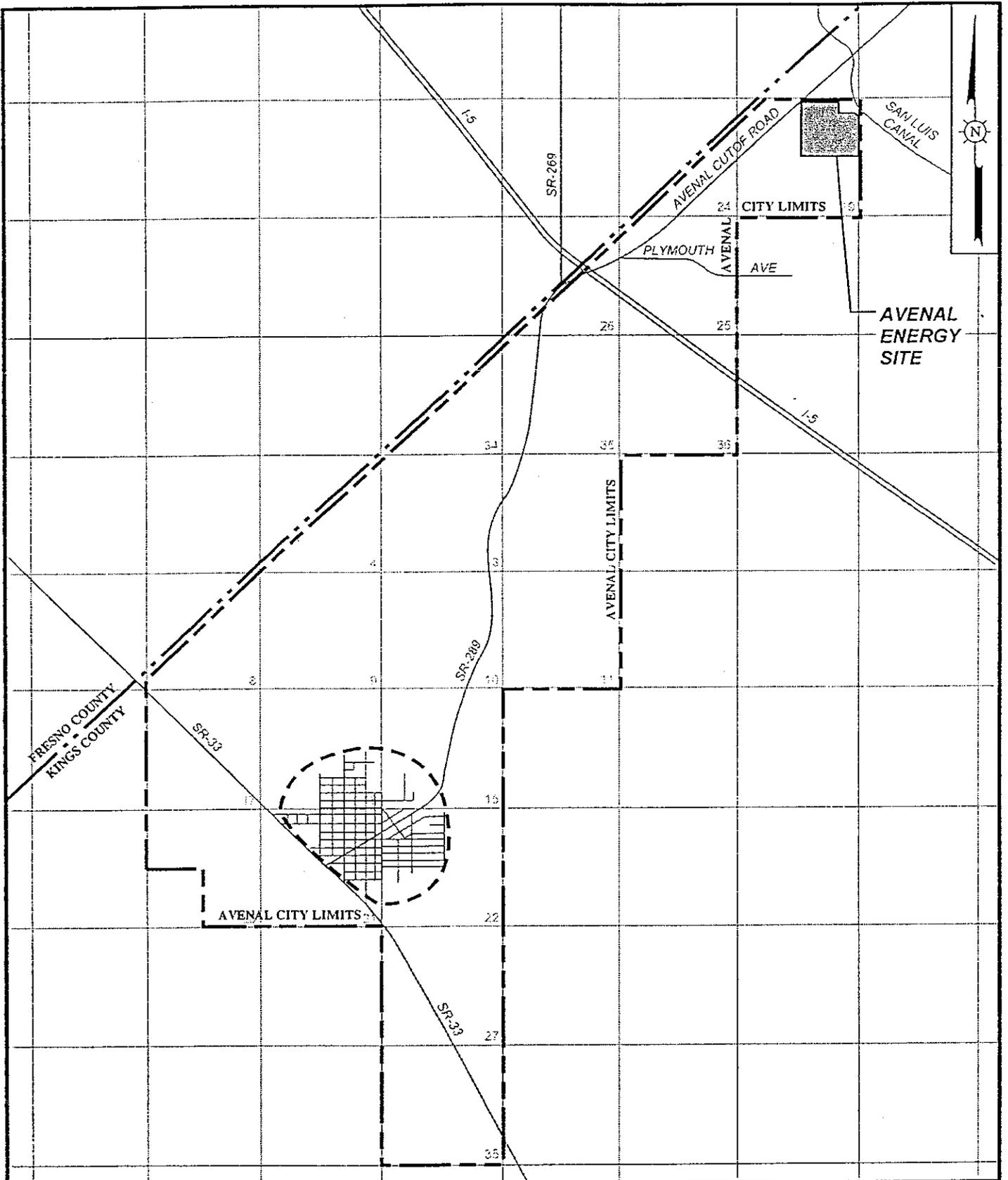
VICINITY MAP  
NOT TO SCALE



REGIONAL MAP



<b>REGIONAL LOCATION MAP</b>	
<b>DUKE ENERGY AVENAL, LLC</b>	
<b>AVENAL ENERGY</b>	<b>FIGURE 1.0-1</b>



NOTE: MULTIPLE SENSITIVE RECEPTORS ARE LOCATED WITHIN DASHED LINE AROUND THE MAIN PART OF THE CITY OF AVENAL.

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

**SITE LOCATION**

**DUKE ENERGY AVENAL, LLC**

**AVENAL ENERGY**

**FIGURE 1.0-2**



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Mr. Ron Goode, Chair  
North Fork Mono Tribe  
13396 Tollhouse Road  
Clovis, CA 93611

Dear Mr. Goode,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

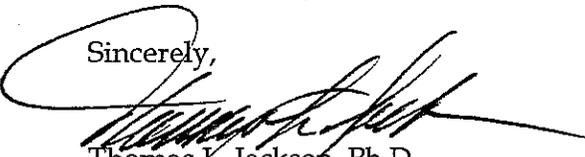
We understand that your membership may have cultural affiliations with the area of the proposed project and they may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your community cares to communicate.

If you or other members of your community would like to respond to this letter, please provide written comments to:

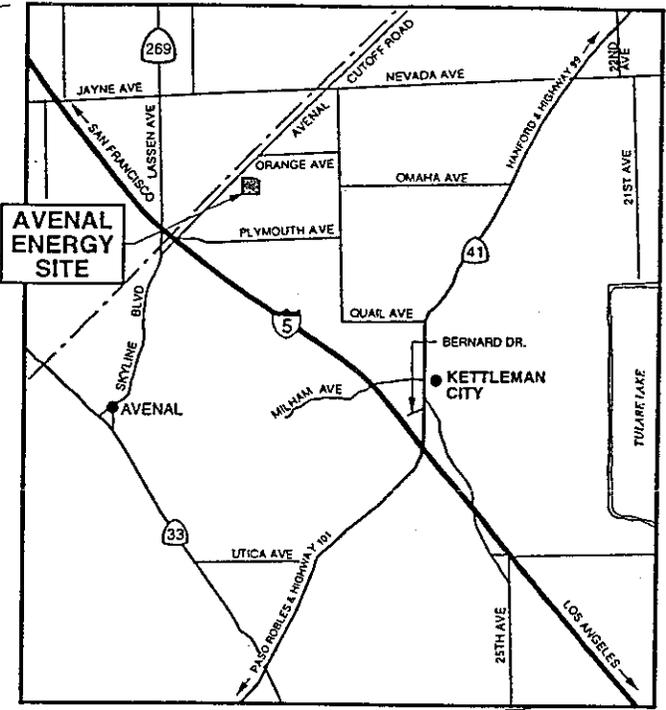
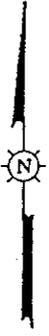
Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

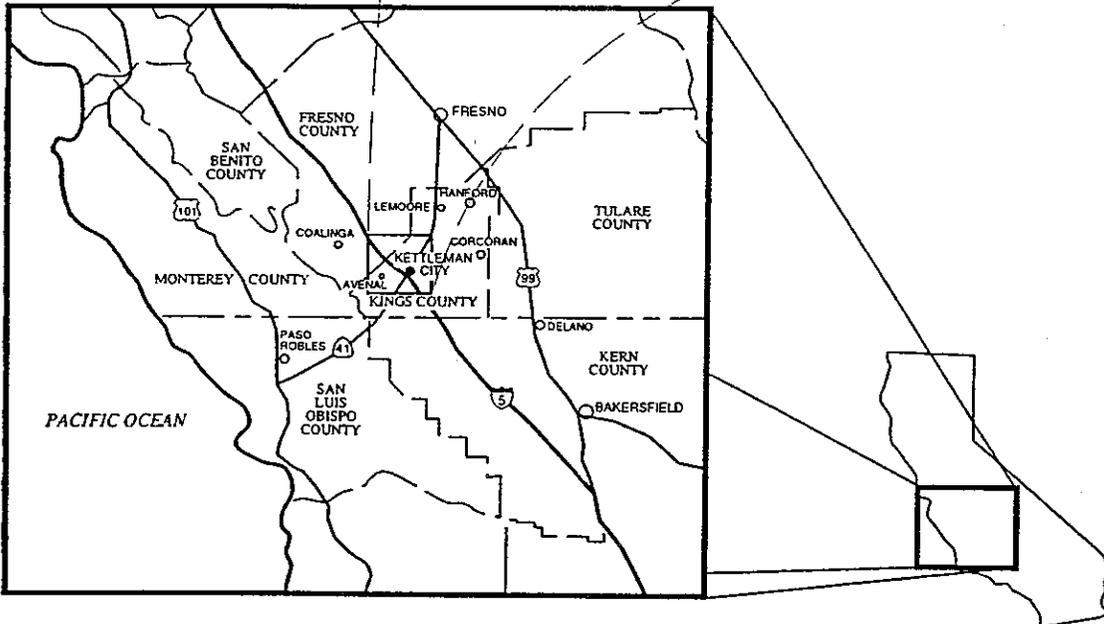
Sincerely,



Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



VICINITY MAP  
NOT TO SCALE



REGIONAL MAP

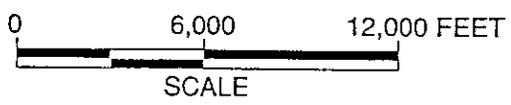
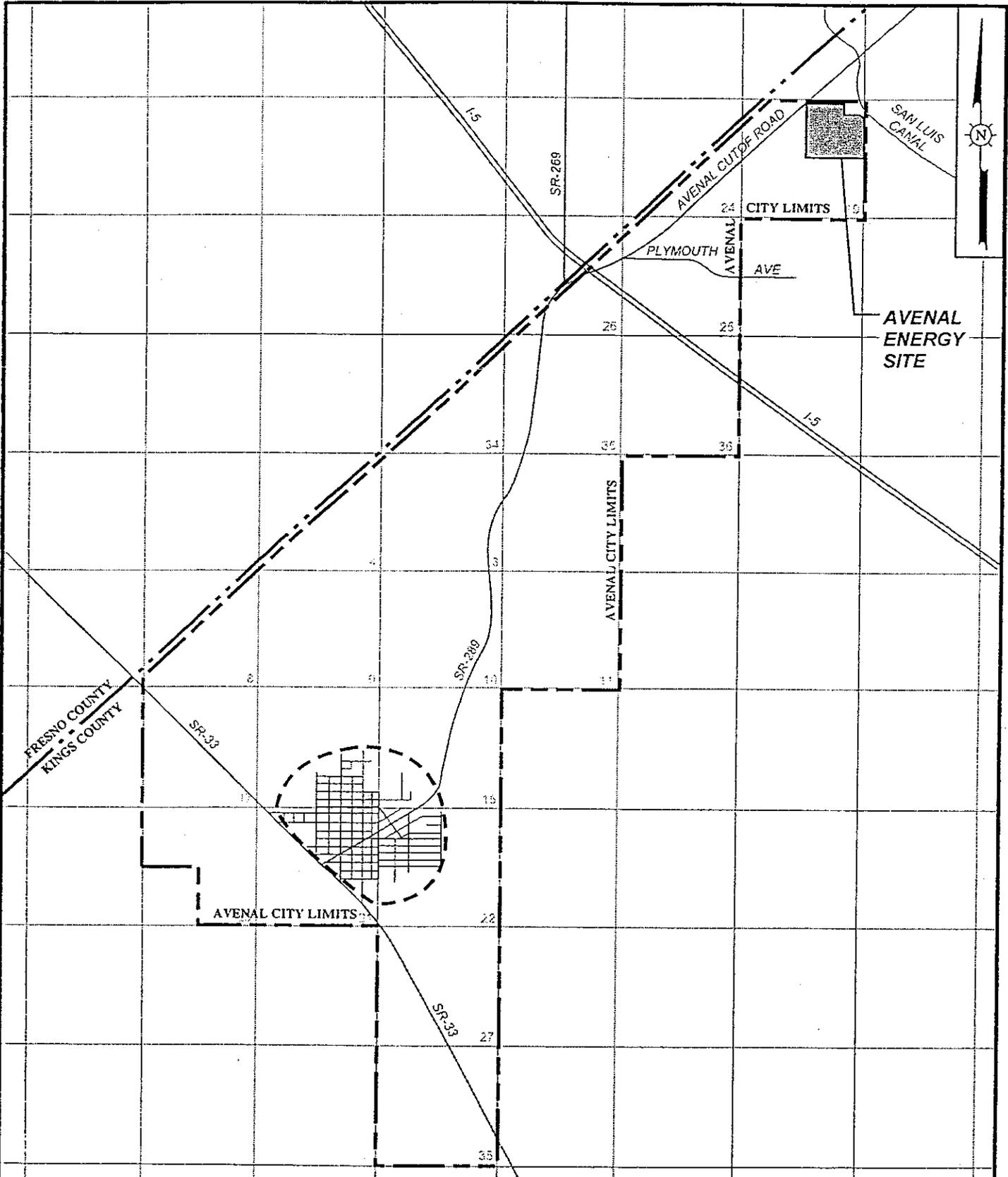


**REGIONAL LOCATION MAP**

**DUKE ENERGY AVENAL, LLC**

**AVENAL ENERGY**

**FIGURE 1.0-1**



NOTE: MULTIPLE SENSITIVE RECEPTORS ARE LOCATED WITHIN DASHED LINE AROUND THE MAIN PART OF THE CITY OF AVENAL.

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

<b>SITE LOCATION</b>	
<b>DUKE ENERGY AVENAL, LLC</b>	
<b>AVENAL ENERGY</b>	<b>FIGURE 1.0-2</b>



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Mr. Lawrence Bill, Tribal Chair  
Cold Springs Rancheria  
P.O. Box 209  
Tollhouse, CA 93667

Dear Mr. Bill,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

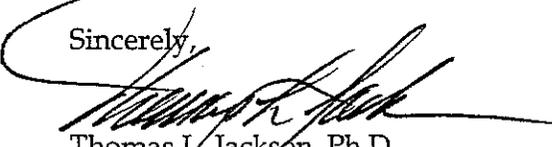
We understand that your membership may have cultural affiliations with the area of the proposed project and they may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your community cares to communicate.

If you or other members of your community would like to respond to this letter, please provide written comments to:

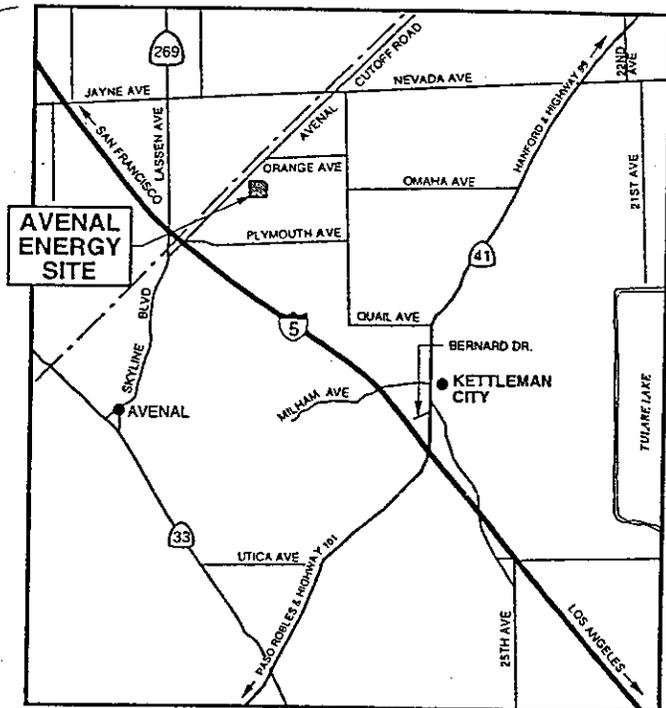
Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

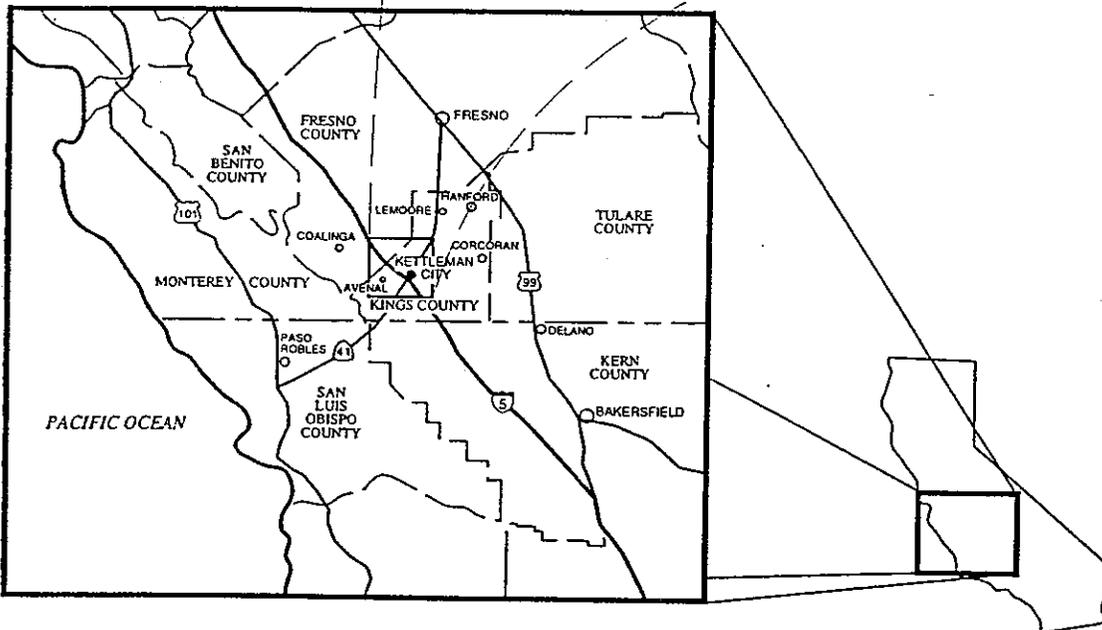
Sincerely,



Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



VICINITY MAP  
NOT TO SCALE



REGIONAL MAP

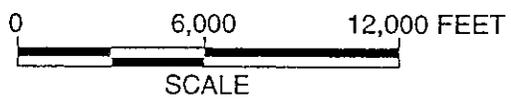
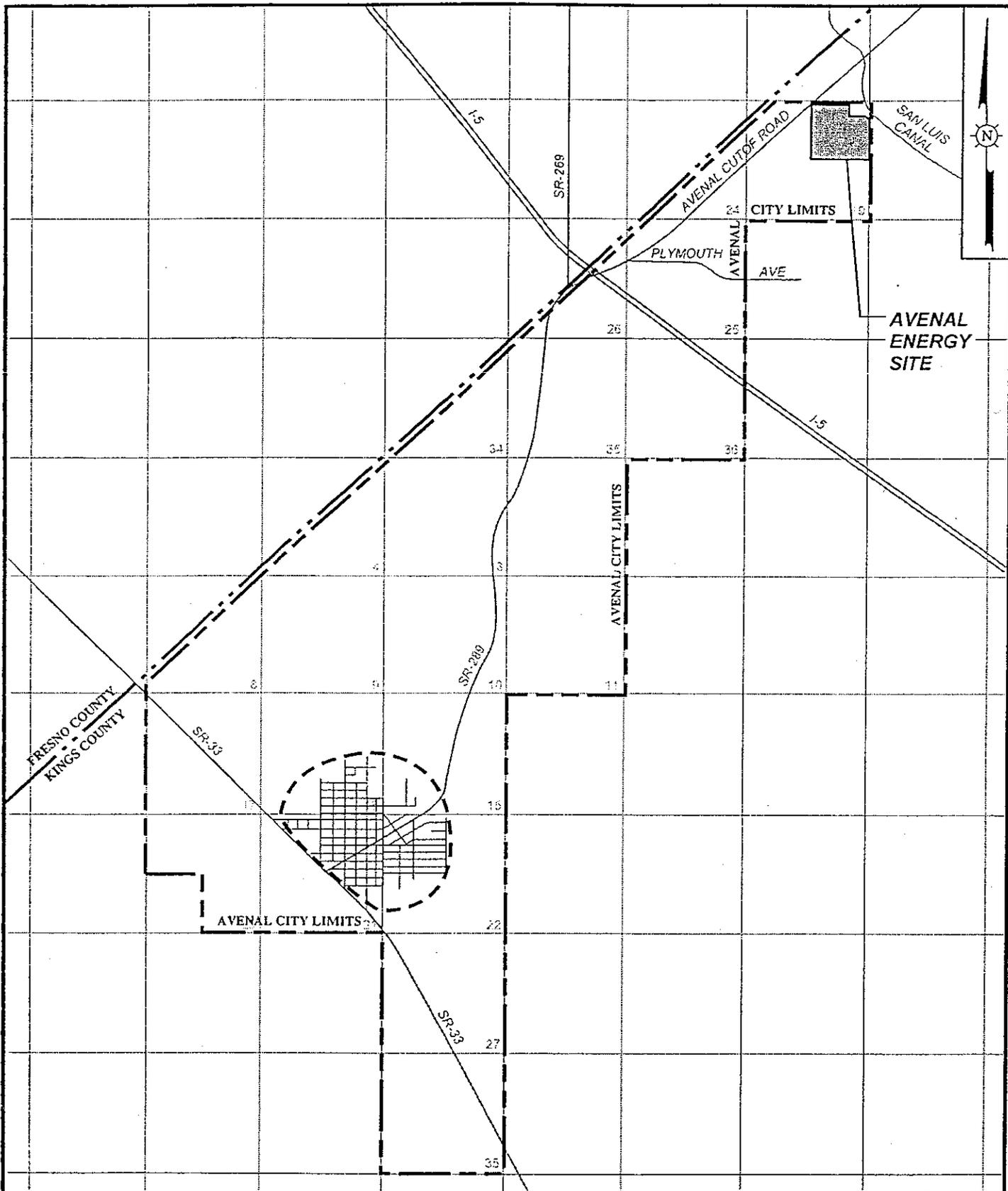


REGIONAL LOCATION MAP

DUKE ENERGY AVENAL, LLC

AVENAL ENERGY

FIGURE 1.0-1



NOTE: MULTIPLE SENSITIVE RECEPTORS ARE LOCATED WITHIN DASHED LINE AROUND THE MAIN PART OF THE CITY OF AVENAL.

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

<b>SITE LOCATION</b>	
<b>DUKE ENERGY AVENAL, LLC</b>	
<b>AVENAL ENERGY</b>	<b>FIGURE 1.0-2</b>



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Central Valley and Retirement Association  
2736 Palo Alto  
Clovis, CA 93611

Greetings,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

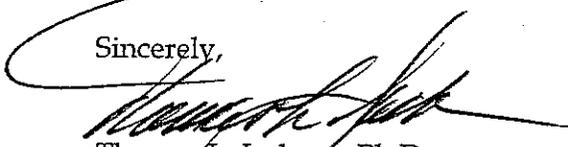
We understand that your organization may have cultural affiliations with the area of the proposed project and your members may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your organization cares to communicate.

If you or other members of your community would like to respond to this letter, please provide written comments to:

Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

Sincerely,



Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



Central Coast Division/Administration  
1525 Seabright Ave.  
Santa Cruz, California 95062

Phone: 831.423.0588  
Fax: 831.423.0587  
www.pacificlegacy.com

September 11, 2001

Mr. Ben Charley, Sr., Chair  
Dunlap Band of Mono Indians  
P.O. Box 45  
Dunlap, CA 93621

Dear Mr. Charley,

Duke Energy of North America proposes to construct a 640-megawatt electric power generating facility on 153 acres near Avenal in Kings County, California. The enclosed maps show the location of the proposed plant. The plant would also require construction of a gas line along Avenal Cutoff road and approximately 6200 feet of electrical transmission line to link the plant with existing transmission lines along Highway 5.

The Native American Heritage Commission has been contacted regarding this site. They report no known cultural resources in the immediate project area in their Sacred Lands files. There are no recorded archaeological resources.

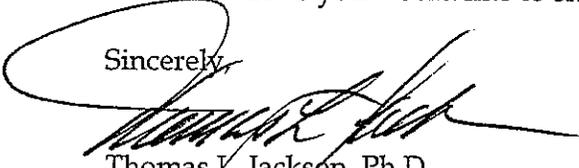
We understand that members of your organization may have cultural affiliations with the area of the proposed project and may wish to express any interest regarding cultural resources that may be affected by the project. Duke Energy respects the views of Native Americans and will take into account whatever information your membership cares to communicate.

If you or other members of your community would like to respond to this letter, please provide written comments to:

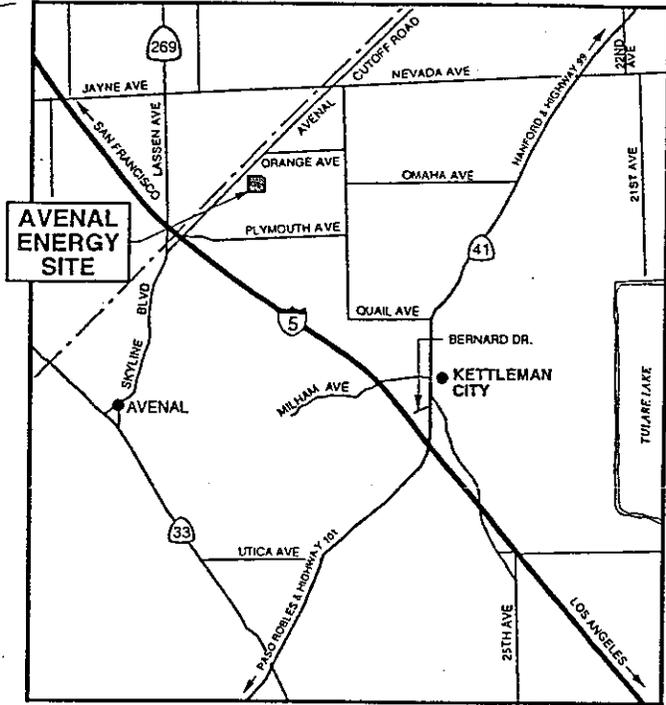
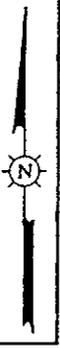
Tom Jackson  
Pacific Legacy, Inc.  
1525 Seabright Avenue  
Santa Cruz, CA 95062

Or call (831) 423-0588 ext. 15 (e-mail: [jacksontom@pacificlegacy.com](mailto:jacksontom@pacificlegacy.com)). We would welcome whatever views you would like to share.

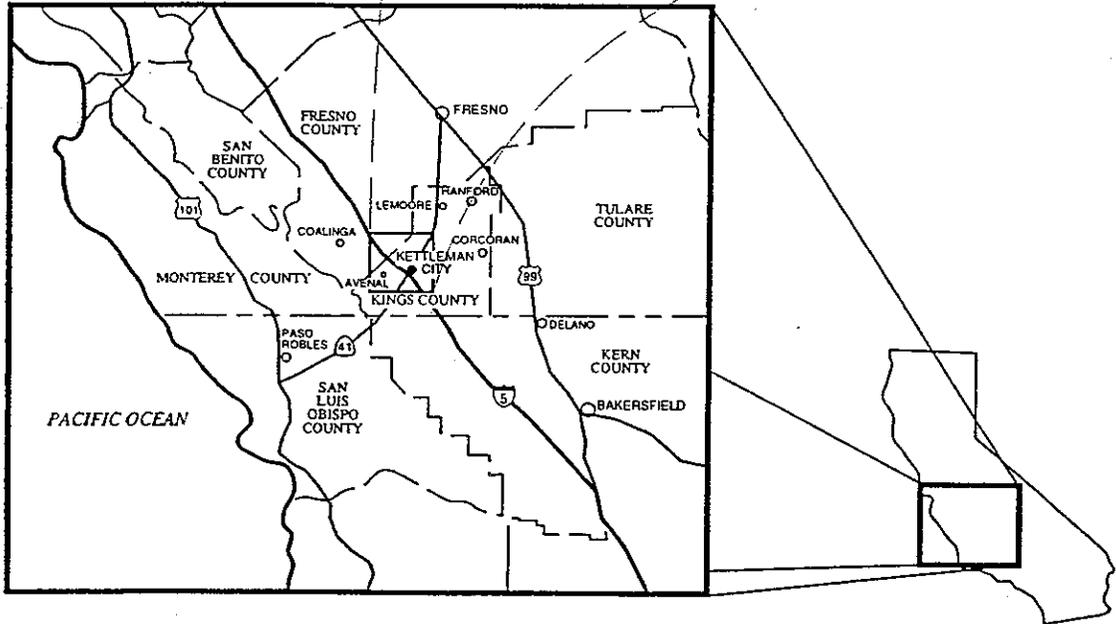
Sincerely,



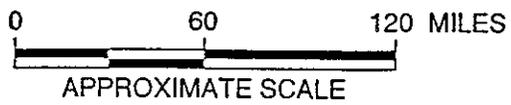
Thomas L. Jackson, Ph.D.  
Senior Archaeologist  
Central Coast Division



**VICINITY MAP**  
NOT TO SCALE



**REGIONAL MAP**

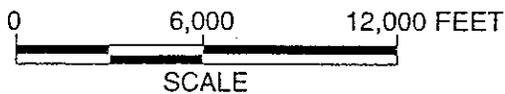
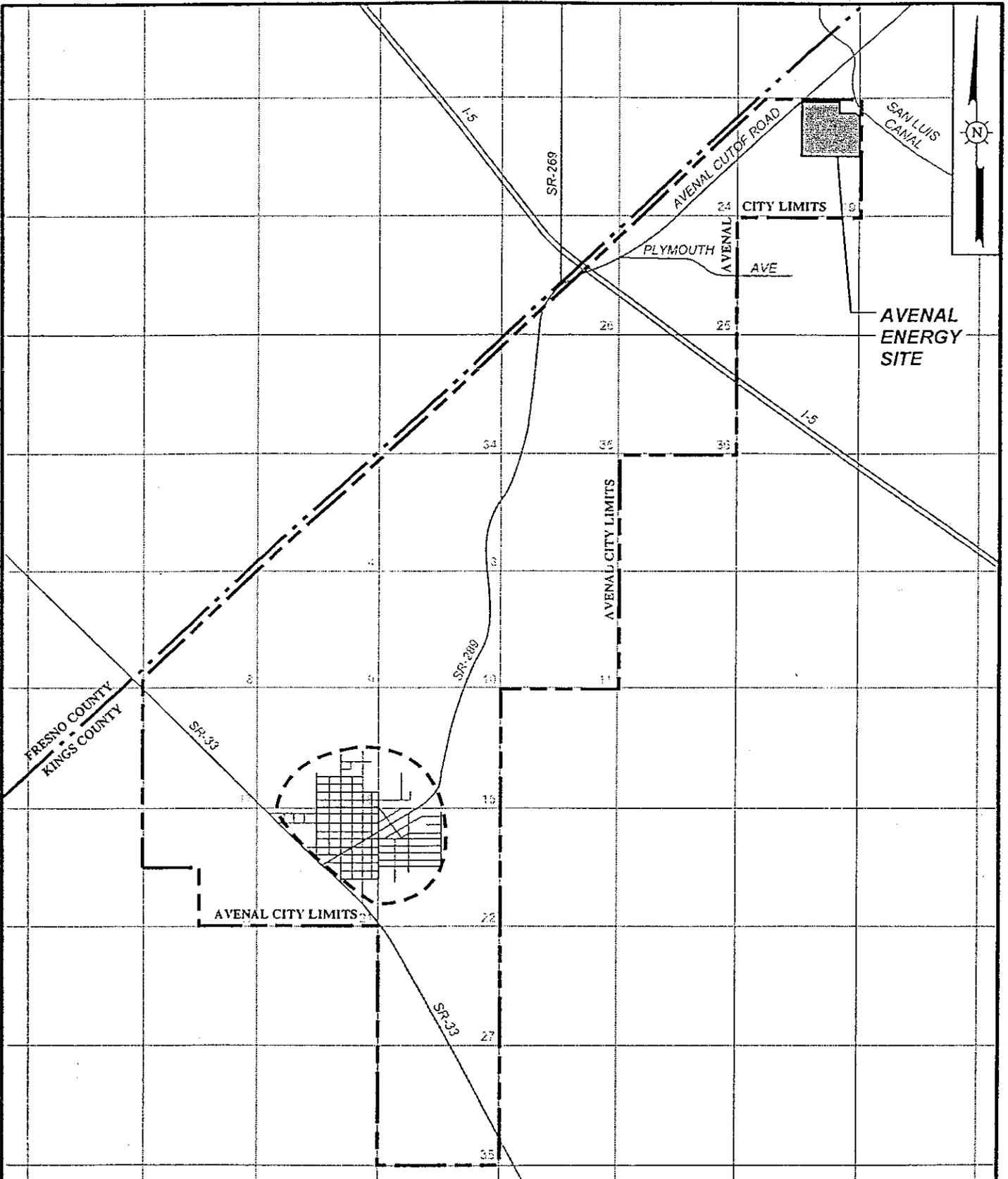


**REGIONAL LOCATION MAP**

DUKE ENERGY AVENAL, LLC

AVENAL ENERGY

FIGURE 1.0-1



NOTE: MULTIPLE SENSITIVE RECEPTORS ARE LOCATED WITHIN DASHED LINE AROUND THE MAIN PART OF THE CITY OF AVENAL.

REFERENCE: CITY OF AVENAL GENERAL PLAN, EXHIBIT 2.

**SITE LOCATION**

**DUKE ENERGY AVENAL, LLC**

**AVENAL ENERGY**

**FIGURE 1.0-2**

**APPENDIX B**  
**PERSONNEL RESUMES**

**THOMAS L. JACKSON, Ph.D.**  
**SENIOR ARCHAEOLOGIST, PACIFIC LEGACY INCORPORATED**

---

**EDUCATION:**

Ph.D., Anthropology, Stanford University, Stanford, California, 1986

M.A., Anthropology, San Francisco State University, California, 1974

B.A., Anthropology (major), Geology (minor), San Francisco State University, California, 1971

**SUMMARY OF EXPERIENCE:**

Dr. Jackson has 27 years of experience in cultural resource management and has been involved in archeology for more than 30 years. He has extensive experience (since 1973) conducting archaeological studies throughout California for local, state and federal government and private clients. Projects completed under these contracts have included archeological survey, test excavations, data recovery excavations, National Register of Historic Places evaluations, Native American Graves Protection and Repatriation Act inventories, preparation of Cultural Resource Management Plans, Historic Preservation Plans, Programmatic Agreements, State Historic Preservation Officer and Advisory Council on Historic Preservation consultation. Dr. Jackson is a Principal of Pacific Legacy, Inc. (since 1994). He is certified for the courses *Federal Projects and Historic Preservation Law (GSA/ACHP)* and *Native American Graves Protection and Repatriation Act* (Univ. of Nevada, Reno) and meets the Secretary of Interior's standards as an archeological Principal investigator.

Dr. Jackson's areas of expertise include:

- Cultural resources project scoping and management
- Compliance with Federal and State historic preservation laws and policies including the National Historic Preservation Act (Section 106, 110), Archeological Resource Protection Act, Native American Graves Protection and Repatriation Act, and American Indian Religious Freedom Act
- Development of archeological Research Designs, Historic Contexts and Property Types
- Archeological survey, resource documentation, National Register of Historic Places evaluations, data recovery and other treatment studies
- Historic Property Treatment Plans, Historic Preservation Plans and programs
- Obsidian hydration dating and geochemical sourcing of volcanic tool stone

Dr. Jackson's geographical experience in archeology includes California, the Hawaiian Islands (O'ahu and Maui), Wake Island, Isla de Pascua (Easter Island) and Mongolia; and technical research on archeological collections from Canada, Guatemala, Mexico and Peru. He has taught anthropology courses at San Jose State University and the University of California at Santa Cruz, as well as Cultural Resources Management at the University of California at Berkeley.

**EXAMPLES OF RECENT KEY PROJECTS:**

1999-2004 Principal Investigator for cultural resources studies for re-licensing of the Southern California Edison Big Creek Hydroelectric System.

1999-2001 Principal Investigator for the cultural resources inventory for the Sunrise Power Project; preparation of the cultural resources element of the Application for

Certification; testimony given before the California Energy Commission (CEC); designated project Cultural Resource Specialist approved by CEC.

- 1997-1999 Principal Investigator for prehistoric cultural resources management for Department of Energy (DOE) divestiture of Naval Petroleum Reserve No. 1, Kern County, CA., the most valuable (\$3.65 billion) single divestiture of federal property in U.S. history. Dr. Jackson designed and implemented the Cultural Resource Management Plan covering all historic property types at NPR-1; prepared National Register of Historic Places eligibility assessments; directed archeological survey, test excavations, laboratory analyses and reporting for 91 prehistoric sites; drafted and assisted the DOE in successfully negotiating a Programmatic Agreement with the California State Historic Preservation Officer and the Advisory Council on Historic Preservation and continues to assist the DOE in implementing the PA. Prepared for ICF Resources, Inc.
- 1997-1998 Principal Investigator for archaeological data recovery excavations at 10 sites in the Rush Meadow Archeological District, Inyo National Forest. Prepared for Southern California Edison Company.
- 1997-1998 Principal Investigator for archeological survey, testing and National Register of Historic Places evaluation of prehistoric and historic cultural resources, California Army National Guard Camp San Luis Obispo (complete/intensive survey of 5,400 ac. installation and shovel testing at archeological sites). Prepared for U.S. Army Corps of Engineers, Sacramento District., under contract to Jones & Stokes Associates
- 1996-1997 Principal Investigator for Native American Graves Protection and Repatriation Act Inventory, H.V. Eastman Lake (Buchanan Reservoir) and CA-GLE-10 (Black Butte Reservoir); 13 archeological site collections, MNI=352 burials. Tasks included development of protocols, museum inventory, Native American consultation and reporting. Prepared for U.S. Army Corps of Engineers, Sacramento District, under contract to Jones & Stokes Associates.
- 1995-1998 Principal Investigator/Project Director for cultural resources inventory, NRHP eligibility evaluation, Twelve Bridges Project (4,800 ac., 23 archeological sites); development of a Programmatic Agreement among U.S. Army Corps of Engineers-Sacramento District, California State Historic Preservation Officer, and Advisory Council on Historic Preservation.; archeological data recovery at four prehistoric and historic sites.
- 1996 Principal Investigator/Project Director for test excavations and National Register of Historic Places Eligibility Assessment for CA-TUL-72, Sequoia National Park, CA. Prepared for USDI National Park Service, Sequoia National Park.
- 1996 Principal Investigator/Project Director for Springville-Magunden/Big Creek 4 Transmission Line archeological survey/evaluation. Archeological inventory and test excavations at 67 sites along the 110-mile right-of-way of Southern California

Edison Company. Corrected numerous errors from earlier archeological inventory, evaluated sites for NRHP eligibility and assisted Edison in consulting with the California State Historic Preservation Officer.

- 1995 Principal Investigator. Historic Preservation Plan for Hawaii Army National Guard Kanaio Training Area, Island of Maui, Hawaii. Prepared for U.S. Army Corps of Engineers-Honolulu District.

**PRIOR EMPLOYMENT:**

- 1974-1985 Principal/Senior Archaeologist. Archaeological Consulting and Research Services, Inc. Managed all phases and aspects of prehistoric and historic archaeological CRM projects throughout California. Geochemical sourcing and obsidian hydration specialist. Regulatory compliance specialist.
- 1985-1988 Senior Archeologist. Theodoratus Cultural Research. Directed prehistoric archaeological programs throughout California.
- 1988-1994 Senior Archaeologist/Cultural Resources Division Director/Principal. BioSystems Analysis, Inc. Directed all cultural resources management programs for three offices in California and one Hawaii office; Director of obsidian hydration dating and geochemical sourcing programs.

**SELECTED PUBLICATIONS, REPORTS AND ACCOMPLISHMENTS:**

- 1998 (M. Davis, T. Jackson, M. Shackley, T. Teague and J. Hampel) Factors Affecting the Energy-Dispersive X-Ray Fluorescence (EDXRF) Analysis of Archaeological Obsidian. In *Archaeological Obsidian Studies: Method and Theory*, edited by M.S. Shackley, pp. 159-180. Plenum Press, New York.
- 1994 (T. Jackson and J. Ericson) Prehistoric Exchange Systems in California. In *Prehistoric Exchange Systems in North America*, edited by T.G. Baugh and J.E. Ericson, pp.385-415. Plenum Press, New York.
- 1994 Estimation of [Obsidian] Hydration Rates from Chemical Composition: A Case Example from Xaltocan, Mexico (with C. M. Stevenson). Paper presented at the Annual Meeting of the Society for American Archaeology, Anaheim, California.
- 1993 Archaeological Monitoring, Reconnaissance and Test Excavations at Nu`upia Fishpond, Kane`ohe, O`ahu. Submitted to U.S. Army Corps of Engineers-Honolulu District.
- 1993 Archaeological Research Design for Bellows Air force Station and Windward Settings in the Hawaiian Islands (64 pages). In *Cultural Resources Management Plan for Native Hawaiian Archaeological Resources, Bellows Air Force Station*, prepared by J. Eidsness. Submitted to U.S. Army Corps of Engineers-Honolulu District.
- 1992 Small Scale World Systems in Prehistoric North America. Symposium organizer and presenter. with C. Chase-Dunn. Annual Meeting of the Society for American Archaeology, Pittsburgh.

- 1991 Pounding Acorn: Women's Production as Social and Economic Focus. In *Engendering Archaeology*, edited by M. Conkey and J. Gero, pp. 301-328. Basil Blackwell, Inc., Cambridge, England.
- 1991 A funny thing happened on the way from the quarry . . . Analysis of the Great Blades Cache of Northern California. In *Stone Tool Procurement, Production, and Distribution in California Prehistory* (with J. W. Rick). Edited by J. E. Arnold, pp. 5-66. Perspectives in California Archaeology, Volume 2, Institute of Archaeology, University of California, Los Angeles.

#### ADDITIONAL PUBLICATIONS:

Author, co-author, editor or contributor to more than 300 cultural resource reports, environmental impact statements, environmental impact assessments, California Environmental Quality Act documents, archaeological research designs, book reviews, professional presentations and obsidian hydration dating and source determination technical reports.

#### PROFESSIONAL REFERENCES:

- Patti Johnson Archeologist, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814-2922. Phone Number: (916) 557-6611.
- Polly Quick The IT Group, 4005 Port Chicago Highway, Concord, CA 94520-1120. Phone Number: (925) 288-2302.
- Thomas T. Taylor Regulatory Specialist, Southern California Edison Company, P.O. Box 800, Rosemead, CA 91770. Phone Number: (626) 302-9540.

**THOMAS NAVE**  
**HISTORIAN, PACIFIC LEGACY INCORPORATED**

---

**EDUCATION:**

M.A., American History, California State University, Fresno 1994  
B.A., Industrial Arts, California State University, Fresno 1982

**SUMMARY OF EXPERIENCE:**

Mr. Nave has been conducting historic resource surveys and in-depth archival/record searches since 1992 and has written numerous historic architectural survey reports. He has evaluated properties in association with National Register of Historic Places and California Environmental Quality Act projects for various state and local governments, and is Acting Historic Preservationist for the City of Fresno.

**EMPLOYMENT HISTORY:**

1999 - Present    Historian/ Archivist, Pacific Legacy, Inc.  
1992 - 2001      Forest Historian, Sierra National Forest, Clovis, CA.  
1991 - 1992      Research Assistant, California State University, Fresno Auxiliary Foundation,  
Fresno, CA.

**SELECTED RECENT REPORTS**

- 2001 *Historic Property Survey Report for the Florence Lake Work Camp at Florence Lake, Sierra National Forest, Fresno County, California.* Submitted to Southern California Edison Company, Rosemead, CA.
- 2001 *Historic Property Evaluation for Vermilion Valley Reservoir Facilities (FERC 2086) Sierra National Forest, Fresno County, California.* Submitted to Southern California Edison Company, Rosemead, CA.
- 2000 *Historic Resources Report #05-15-52-58-00, Mono Hot Springs Report: Historic Evaluation and Determination of Significance.* Submitted to Sierra National Forest, Clovis, CA.

**PROFESSIONAL AFFILIATIONS**

Fresno City and County Historical Society's Historic Preservation Committee  
Fresno City and County Historic Society

**WILLIAM AUGUST SHAPIRO**  
**PROJECT SUPERVISOR, PACIFIC LEGACY INCORPORATED**

---

**EDUCATION:**

M.A., Anthropology, California State University, Chico, California, 1990

B.A., Anthropology, California State University, Chico, California, 1982

**SUMMARY OF EXPERIENCE:**

Mr. Shapiro is a professional archeologist with 19 years experience in archeological research including 17 years in cultural resource management. During this period, he has worked with private consulting firms on numerous Department of Defense (DOD), U.S. Army Corps of Engineers (CE), and National Forest Service projects throughout California and the Hawaiian Islands. He has been approved by the California Energy Commission as a project supervisor. He has also worked on other federal, state, and local agency projects and is familiar with historic preservation laws and regulations at the federal and state level, including Section 106. Mr. Shapiro has extensive experience in California, Nevada, southern Oregon, the Hawaiian Islands, central Florida, Saipan and American Samoa. He is certified to work at sites with hazardous waste/materials (40-hr HAZWOPER).

Mr. Shapiro's areas of expertise include:

- Project management and supervision of cultural resource investigations.
- Conducting cultural resource surveys, inventories, and evaluations for National Register eligibility
- Prehistoric and historic archeological site test excavations and data recovery
- Compliance with cultural resource regulations under National Historic Preservation Act (Section 106) and California Environmental Quality Act
- Archival and background research for prehistoric and historic resources
- Technical report writing and production

**KEY PROJECTS (examples):**

2000-2001

Archaeological supervisor for Sunrise Power Project; Caltrans 06-KER-46 Phase II excavations at CA-KER-2107, KER-2108 and KER-5582; burial recovery of Japanese remains on Saipan; Grand Island 3-D Seismic project.

1999-2000

Archaeological supervisor for California Department of Transportation ISTE A and on-call services contracts for projects in Caltrans Districts 2, 3, 6, and 10, including inventory (Phase 1), evaluation (Phase 2), and mitigation (Phase 3) studies.

1998 Archeological supervisor for monitoring, and sampling, project (DERP/FUDS) at Chalan Kanoa, Saipan. Documented early deposits associated with initial human occupation of Saipan. Also recorded numerous trash pits associated with Japanese

occupation of the island. Prepared for U.S. Army Corps of Engineers, Honolulu District.

- 1997-1998 Project supervisor and senior report writer for a cultural resources inventory and evaluation for the U.S. Army Corps of Engineers, Sacramento District, PL 84-99 Levee Rehabilitation on the Feather, Bear, Sacramento, and San Joaquin River Systems. Mr. Shapiro managed 58 separate task orders under this emergency contract between approximately April 1997 and April 1998 and participated in all aspects of fieldwork, GPS mapping, and reporting.
- 1996-1998 Project Supervisor for Twelve Bridges Project, conducted survey and inventory of 4,800 acre property, test excavations at 23 prehistoric and historic archeological sites, and data recovery excavations at 4 prehistoric and historic archeological sites. Prepared for Placer Holdings, Inc.
- 1995-1997 Project supervisor and co-author of a surface survey and data recovery project for a proposed Phase III Highway on Ta'u Island in the Manu'a Islands, American Samoa. Supervised field survey and test excavation crews during documentation and testing of 21 feature complexes within the ancient village of Faga, located on the north side of Ta'u Island. Prepared for American Samoa Department of Public Works/U.S. Federal Highways Administration..
- 1994-1995 Project supervisor and co-author of a heritage resources inventory and evaluation for a proposed land exchange between Western States Minerals Corporation and the Humboldt-Toiyabe National Forest in Nye County, Nevada. Twenty-eight sites including prehistoric lithic scatters, overhang shelters, and rock ring features as well as historic mining sites were subjected to detailed recording and exploratory excavation to determine NRHP eligibility. Prepared for Western States Minerals Corporation (Reno, NV) and Environmental Management Services Corp. (Ft. Collins, CO).
- 1994-1995 Field supervisor and co-author of inventory surveys at the Hanalei and Huleia National Wildlife Refuges on Kauai Island, Hawaii. Work included survey and inventory of historic and prehistoric sites, test excavation and preliminary National Register of Historic Places significance assessments. Reports submitted to the U.S. Department of the Interior, Fish and Wildlife Service, Pacific Region.
- 1992-1994 Field supervisor and co-author of two inventory and evaluation surveys at the Pahakuloa Training Area (PTA) on Hawaii Island. Work included Explosive Ordnance Demolition (EOD) safety training, coordination with range control and training activities, and escort by EOD specialists. Reports submitted to the U.S. Army Corps of Engineers, Honolulu District.

#### **PRIOR EMPLOYMENT:**

- 1985-1987 Field Supervisor/Director. Florida State University, Tallahassee. Directed all aspects of fieldwork for archeological excavations at the Windover Site, an Early Archaic bog cemetery.

- 1988 Field Supervisor. Paul H. Rosendahl, Ph.D., Inc. Directed excavation and construction monitoring projects on O`ahu and Maui islands, Hawaii.
- 1989-1990 Field Supervisor. Jensen and Associates. Directed archeological survey and excavation projects in northern California, Oregon and Hawaii.
- 1990-1992 Field Director and Project Manager. PAR Environmental Services. Directed archeological projects under contract to the USDA Forest Service, Lassen, Plumas, Stanislaus and Klamath national forests. Extensive historical archival research.
- 1992-1995 Field Director and Project Manager. BioSystems Analysis, Inc. Directed all aspects of archaeological fieldwork for projects in California, Nevada, Hawaii and American Samoa.

#### SELECTED PUBLICATIONS, REPORTS AND ACCOMPLISHMENTS:

- 1995 *Redleg Trail Archaeological Investigations for the Legacy Resource Management Program at Pohakuloa Training Area, Hawaii Island, Hawaii* (with P. Cleghorn and L. Shapiro).. Submitted to the U.S. Army Corps of Engineers, Pacific Division.
- 1995 "Of Passing Interest": Heritage Resources of the Northcumberland Mine Land Exchange, Nye County, Nevada (with R. Jackson and L. Shapiro). Submitted to Western States Minerals Corporation and Environmental Management Services Company.
- 1995 *Archaeological Investigations of the Hanalei national Wildlife Refuge, Hanalei, Island of Kauai, Hawaii* (with L. Shapiro). Submitted to the U.S. Department of the Interior, Fish and Wildlife Service.
- 1995 Final Report for the Archaeological Investigation of the Wiegand Property, Dixon, California (with K. Tremaine). Submitted to Lewis Homes of California.
- 1994 *Archaeological Services for the Construction of the Tafuna Plains Sewage Collection System, Tutuila Island, American Samoa* (with P. Cleghorn). Submitted to the American Samoa Power Authority, Water Division.
- 1993 *Archaeological Inventory Survey of the Mauna Loa Borrow Site Ohipili Pond Project Areas for the Kalamaula Landfill on west Molokai, Hawaii* (with P. Cleghorn, R. Quebral, and L. Shapiro). Submitted to Brown and Caldwell Consultants.
- 1987 "Age, Abstract Thinking, and the American Concept of Person." (with L. Shapiro). *American Anthropologist*, Vol. 89(3), September 1987.

**ADDITIONAL PUBLICATIONS:**

Author, co-author and contributor to numerous (100+) cultural resource management reports for local, state, and federal compliance.

**PROFESSIONAL REFERENCES:**

Ms. Patti Johnson Archeologist, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814-2922. Phone Number: (916) 557-6611.

Mr. Charles Streck Archeologist, U.S. Army Corps of Engineers, Honolulu District, Building 230. Ft. Shafter, HI 95814-2922. Phone Number: (808) 438-6934.

**BRENDAN J. CULLETON**  
**STAFF ARCHAEOLOGIST, PACIFIC LEGACY INCORPORATED**

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**EDUCATION:**

B.A. , Anthropology, University of California at Santa Cruz, 1996

**SUMMARY OF EXPERIENCE:**

Mr. Culleton has 3 years of experience in cultural resource management, which includes: archaeological survey and excavation of prehistoric sites, construction monitoring, laboratory preparation, report writing and production. He has served as a crew chief for one year.

**EMPLOYMENT HISTORY:**

2000 -Present      Crew Chief, Pacific Legacy, Santa Cruz, CA.  
1998-2000         Archaeological Technician, Pacific Legacy, Santa Cruz, CA.

**REPORTS**

- 2001 *Draft Archaeological Test Excavations at Site CA-MNT-2049 on Handley Ranch, near Gonzales, Monterey County, California.* Report prepared by Pacific Legacy, Inc.. On file, Northwest Information Center, Sonoma State University, Rohnert Park, California (With Thomas L. Jackson and Robert H. Gargett).
- 2001 *Phase 2 Archaeological Excavations at Sites CA-KER-2107, Ker-2108, and KER-5582 for the 06-KER-46 Shoulder Widening and Pavement Rehabilitation Project near Lost Hills, Kern County, California.* On file, Southern San Joaquin Valley Information Center, Bakersfield State University, Bakersfield, California (with Robert H. Gargett, Thomas L. Jackson, and Kelly Long). [Report prepared for the California Department of Transportation, District 6, Fresno, California].
- 2000 *Sunrise Power Project (98-AFC-4) Supplemental Cultural Resources Inventory - Natural Gas Line.* On file, Pacific Legacy, Inc., Santa Cruz, California (with Thomas L. Jackson [Principal Investigator], Michael Elliott, and Mary O'Neill). [Report prepared for the Sunrise Power Company, Bakersfield, California].
- 2000 *Phase II Archaeological Test Excavations at Sites P-05-002048 and P-05-002049 on State Route 4, KP 33.95/37.65 (PM 21.1/23.4), Calaveras County, California (10-CAL-4 PM 21.1/23.4 - EA 10-362500).* On file, Central California Information Center, Stanislaus State University, Turlock, California (with Thomas L. Jackson [Pacific Legacy, Inc.]; Julia Costello, Judith Marvin, and Jane Russell [Foothill Resources, Ltd.]; and Shelley Davis-King [Davis-King & Associates]). [Report prepared for the California Department of Transportation, District 10, Stockton, California].

## FIELDWORK

- Elk Hills, California.** Pacific Legacy, Inc. Compliance Specialist and CEC-approved Cultural Resources Trainer for Elk Hills Power Project (May - present 2001).
- Fellows, California.** Pacific Legacy, Inc. Archaeological Monitor for pipeline and transmission lines at the Sunrise Cogeneration Plant near Fellows, Kern County (March 2001).
- Elk Hills, California.** Pacific Legacy, Inc. Crew member for Data Recovery at CA-KER-3079 at Occidental of Elk Hills, Kern County (March 2001).
- Moss Landing, California.** Pacific Legacy, Inc. Crew Chief for data recovery excavations at CA-MNT-229 (January 2001).
- Watsonville, California.** Pacific Legacy, Inc. Crew Chief for data recovery excavations at CA-SCR-60/130 (October 2000).
- Owens Valley, Inyo County, California.** Pacific Legacy, Inc. Crew Member for test excavations at eleven prehistoric sites along Highway 395 near Aberdeen Station and Blackrock (June - September 2000).
- Lost Hills, California.** Pacific Legacy, Inc. Crew Member for test excavations at three prehistoric sites along Highway 46 near Lost Hills, Kern County (May 2000).
- Angels Camp, California.** Pacific Legacy, Inc. Crew Member for test excavations at two prehistoric sites along Highway 4 near Angels Camp, Calaveras County, California (January-February 2000).
- Antelope Hills, California.** Pacific Legacy, Inc. Crew Member for survey ahead of 3-D Seismic testing in the Antelope Hills northeast of McKittrick, Kern County California (November 1999).
- Watsonville, California.** Pacific Legacy, Inc. Crew member for test excavations at CA-SCR-60 (June - July 1999).

## PROFESSIONAL MEMBERSHIPS

Society for California Archaeology

MARY M. O'NEILL

STAFF ARCHAEOLOGIST, PACIFIC LEGACY INCORPORATED

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**EDUCATION:**

B.A. in Anthropology, University of California at Santa Cruz, 2000

**SUMMARY OF EXPERIENCE:**

Ms. O'Neill has 2 years of experience in cultural resource management, which includes: archaeological survey and excavation of prehistoric and historic sites, construction monitoring, laboratory preparation, archival curation and report writing.

**EMPLOYMENT HISTORY:**

2000 -Present Archaeological Technician, Pacific Legacy, Santa Cruz, CA.  
2000 Crew Chief, Cabrillo College Field School, Santa Cruz, CA.  
1999- 2000 Project Coordinator, UCSC Archaeology Archives, Santa Cruz, CA.

**REPORTS**

2000 *Sunrise Power Project (98-AFC-4) Supplemental Cultural Resources Inventory - Natural Gas Line.*  
On file, Pacific Legacy, Inc., Santa Cruz, California (with Thomas L. Jackson [Principal Investigator], Michael Elliott, and Mary O'Neill). [Report prepared for the Sunrise Power Company, Bakersfield, California].

**FIELDWORK**

**Elk Hills, California.** Pacific Legacy, Inc. Crew member for data recovery at Occidental of Elk Hills, Kern County (June 2001).

**Fallon, Nevada.** Pacific Legacy, Inc. Crew Member for data recovery at Fallon Naval Air Station, Churchill County (May 2001).

**Palo Alto, California.** Pacific Legacy, Inc. Crew Member for data recovery at CA-SCL-237, (April 2001).

**Gonzales, California.** Pacific Legacy, Inc. Crew Member for test excavations at CA-MNT-2049 (April 2001).

**Clearlake, California.** Pacific Legacy, Inc. Crew Member for data recovery excavations at seven prehistoric sites along Highway 20 near Clear Lake, Lake County (March-April 2001).

**Moss Landing, California.** Pacific Legacy, Inc. Crew Member for data recovery excavations at CA-MNT-229 (January 2001).

**Fellows, California.** Pacific Legacy, Inc. Crew Member for archaeological survey for pipeline and transmission lines at the Sunrise Cogeneration Plant near Fellows, Kern County (December 2000).

(December 2000).

**Watsonville, California.** Pacific Legacy, Inc. Crew Member for data recovery excavations at CA-SCR-60/130 (October 2000).

**Lost Hills, California.** Pacific Legacy, Inc. Crew Member for mapping at three prehistoric sites along Highway 46 near Lost Hills, Kern County (August 2000).

**Laramie, Wyoming.** University of Wyoming, Laramie. Crew Member for data recovery excavations of Upper Republican prehistoric sites in Colorado and Wyoming (June-July 1999).

#### **PROFESSIONAL MEMBERSHIPS**

Society for California Archaeology

**CARA MONROE**

**STAFF ARCHAEOLOGIST, PACIFIC LEGACY INCORPORATED**

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**EDUCATION:**

B.A. in Anthropology, University of Michigan, 1999

**SUMMARY OF EXPERIENCE:**

Ms. Monroe has over 2 years of experience in cultural resources management which includes archaeological survey and excavation of prehistoric and historic sites, archaeological illustration, faunal identification, construction monitoring and report preparation.

**EMPLOYMENT HISTORY:**

2000 -Present Archaeological Technician, Pacific Legacy, Santa Cruz, CA.  
1999 - 2000 Tremaine & Associates, Sonoma, CA.  
2000 Crew Chief, University of Texas Field School in Belize.

**FIELDWORK**

University of California at Davis, California. Pacific Legacy, Inc. Crew member for survey and data recovery at (1999-2000).

San Mateo, Contra Costa, Alameda Counties, California. Pacific Legacy, Inc. Crew Member for cell phone tower surveys, various projects (1999-2000).

Glenn County, California. Pacific Legacy, Inc. Crew Member for bridge construction monitoring (June 2000).

San Louis Obispo, California. Pacific Legacy, Inc. Crew Member for fiber optic construction monitoring (July-August 2000).

Lake Tahoe, California. Pacific Legacy, Inc. Crew Member for data recovery at [site] for University of California at Davis (June 2001).