

5.3 Cultural Resources

This section discusses the potential effects of the Mariposa Energy Project (MEP) on cultural resources. This section is consistent with state regulatory requirements for cultural resources pursuant to California Environmental Quality Act (CEQA). Cultural resources include prehistoric and historic archaeological sites;¹ districts and objects; standing historic structures, buildings, districts and objects; and locations of important historic events, or sites of traditional/cultural importance to various groups.² The study scope was developed in consultation with the California Energy Commission's (CEC) cultural resources staff and complies with *Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification* (CEC, 1992) and *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007). This study was conducted by Aaron Fergusson, M.A., RPA; Natalie Lawson M.A., RPA; and Jessica B. Feldman, M.A., Cultural Resource Specialists (CRS) who meet the qualifications for Principal Investigator stated in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation (U.S. National Park Service [NPS], 1983).

Section 5.3.1 describes the cultural resources environment that could be affected by MEP. Section 5.3.2 discusses the environmental consequences of construction and operation of the proposed project. Section 5.3.3 determines whether there will be any cumulative effects from the project. Section 5.3.4 presents mitigation measures that will be implemented to avoid construction impacts. Section 5.3.5 discusses the laws, ordinances, regulations, and standards (LORS) applicable to the protection of cultural resources. Section 5.3.6 lists the agencies involved and agency contacts, and Section 5.3.7 discusses permits. Section 5.3.8 lists reference materials used in preparing this section.

Per CEC Data Adequacy requirements, Appendix 5.3A provides copies of agency consultation letters. Appendix 5.3B provides the technical report. Appendix 5.3C provides archival research material, including copies of historic maps of the project and a complete copy of the California Historical Resources Information System (CHRIS) literature search results, which include copies of previous technical reports occurring within 0.25 miles of the project. Appendix 5.3D provides names and qualifications of personnel who contributed to this study. Appendix 5.3E provides maps of the project and previously conducted studies

¹ Site – "The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure...where the location itself possesses historic, cultural, or archeological value." (NPS, 1998: 5).

² The federal definitions of cultural resource, historic property or historic resource, traditional use area, and sacred resources are reviewed in this section and are typically applied to non-federal projects.

A cultural resource may be defined as a phenomenon associated with prehistory, historical events or individuals, or extant cultural systems. These include archaeological sites, districts, and objects; standing historic structures, districts, and objects; locations of important historic events; and places, objects, and living or non-living things that are important to the practice and continuity of traditional cultures. Cultural resources may involve historic properties, traditional use areas, and sacred resource areas.

Historic property or historic resource means any prehistoric district, site building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places. The definition also includes artifacts, records and remains that are related to such a district, site, building, structure or object.

Traditional use area refers to an area or landscape identified by a cultural group to be necessary for the perpetuation of the traditional culture. The concept can include areas for the collection of food and non-food resources, occupation sites and ceremonial and/or sacred areas.

Sacred resources applies to traditional sites, places or objects that Native American tribes or groups, or their members, perceive as having religious significance.

that occurred within 1 mile of the project. Appendixes 5.3C and 5.3E are being filed under a request for confidentiality. Figure 5.3-1 depicts the areas of intensive cultural resources survey conducted for the project and associated laydown areas.

MEP is subject to CEC and CEQA regulatory requirements. The project does not require review under federal regulations such as the National Historic Preservation Act (NHPA) and the Archaeological and Historic Preservation Act of 1974 (16 USC 469), among others, because it is not a federal undertaking (federally permitted or funded).

5.3.1 Affected Environment

In northern California, cultural resources extend back in time for at least 11,500 years. Written historical sources tell the story of the past 200 years. Archaeologists have reconstructed general trends of prehistory throughout California.

5.3.1.1 Regional Setting

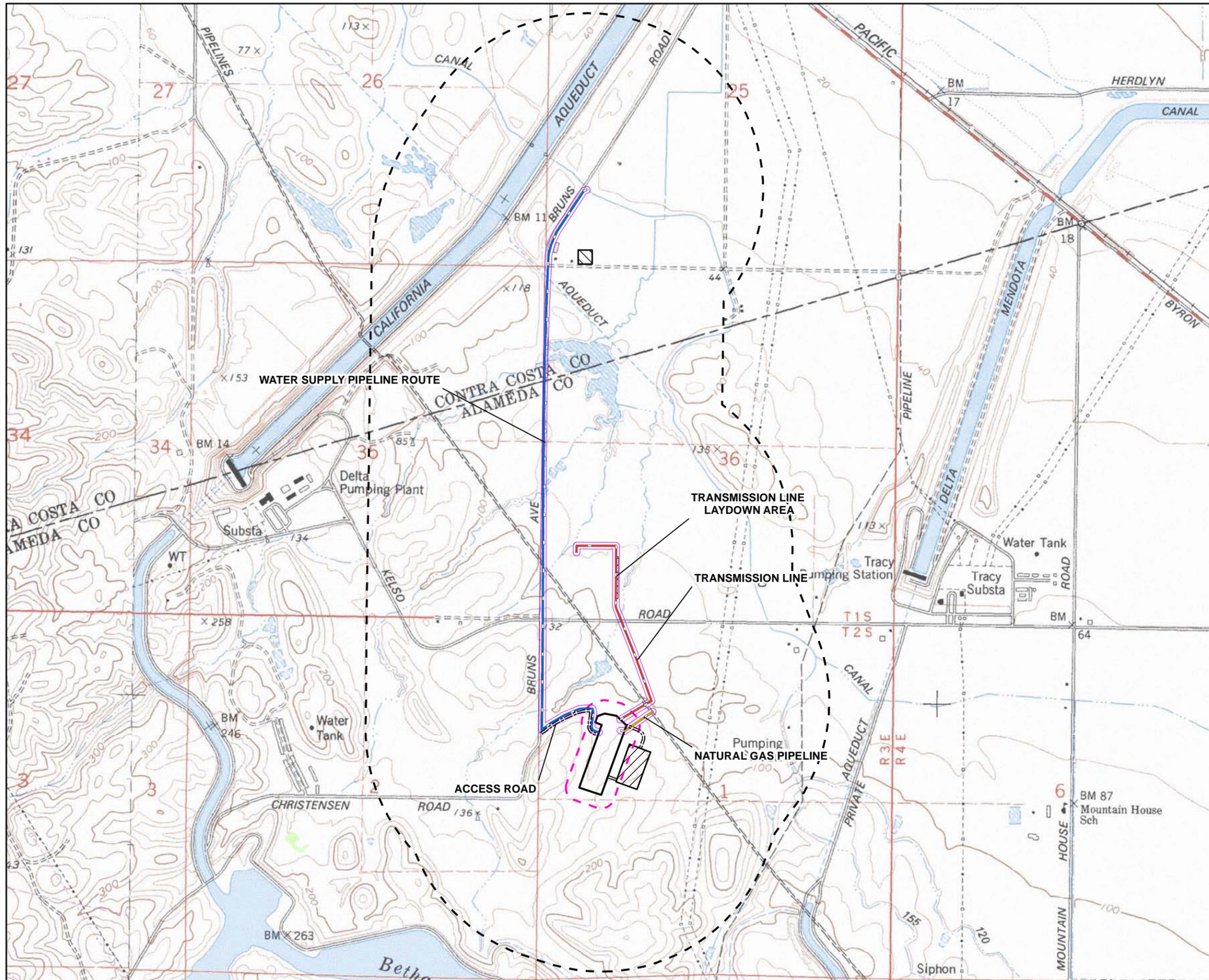
MEP is within the boundaries of the existing site known as the Lee Property, a 158-acre parcel located in the northeast corner of Alameda County, California.

5.3.1.2 Prehistoric Period

The project area lies within the historic Tulares or “Great Tule Swamp.” This formerly marshy region provided a favorable environment for human occupation during the prehistoric period (Cook and Elsasser, 1956:31). Local Native American inhabitants had easy access to the San Francisco Bay to the west, the confluence of the Sacramento and San Joaquin rivers, the freshwater Old and Middle rivers, and various sloughs that offered resources for subsistence and manufacture and provided travel vectors to the interior and bay.

Cook and Elsasser (1956), Heizer (1954), Cook and Heizer (1962), and Bennyhoff (1977) summarized aspects of Delta area prehistory (for areas north of MEP). Low mounds or sand islands throughout the tule marshes would have been excellent temporary occupation or village sites and suitable cemetery areas (Desgrandchamp and Chavez, 1984:14-17). Frequent and random accidental exposure of prehistoric Native American artifacts, sites, and skeletal remains in the Delta during levee building, land leveling, or ditching operations, coupled with the known historic era Native American population density, suggest that many unrecorded sites may be present in the region (Cook and Elsasser, 1956:32; Desgrandchamp and Chavez, 1984:16; Bickel, 1978a, 1978b; and Moratto et al., 1988, 1990).

Watercourses in the immediate project area, such as Old River, Mountain House Creek, and the former wetlands and marshes that once characterized the vicinity prior to Euroamerican settlement, were locations that favored prehistoric occupation in what now appears to be a large flat expanse of grasslands just east of the foothills behind the Delta-Mendota Canal. From such spots, Native Americans could have exploited one or more ecological niches on the alluvial plain and nearby foothills or the rich ecological niches associated with the rivers, streams, and sloughs of the Delta. Archaeologists believe that the population of the prehistoric San Francisco Bay Area slowly increased from the Early to the Late Horizon time periods (see Table 5.3-1). The population increase is thought to reflect more efficient resource procurement, increased ability to store food at village locations, and the development of increasing political complexity.



- LEGEND**
- ACCESS ROAD
 - NATURAL GAS PIPELINE ROUTE
 - TRANSMISSION LINE ROUTE
 - WATER SUPPLY PIPELINE ROUTE
 - CONSTRUCTION LAYDOWN/PARKING AREA
 - TRANSMISSION LINE LAYDOWN AREA
 - WATER SUPPLY PIPELINE LAYDOWN AREA
 - PROJECT SITE
- SURVEY FOR ARCHEOLOGICAL RESOURCES**
- 50 FT BUFFER
 - 200 FT BUFFER
- SURVEY FOR HISTORIC BUILT RESOURCES**
- 1/2 MI BUFFER

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

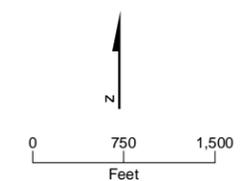


FIGURE 5.3-1
AREAS SURVEYED FOR
CULTURAL RESOURCES
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA

Prior to about 5,000 to 7,000 years ago, Native American occupation of the San Francisco Bay Area was intermittent and sparse. Evidence for early occupation along the bayshore was hidden by rising sea levels from about 15,000 to 7,000 years ago, or was buried under sediments caused by bay marshland infilling along estuary margins from about 7,000 years onward (c.f. Moratto, 1984). Early occupants concentrated on hunting and gathering various plant foods and collecting shellfish.

A three-part cultural chronological sequence, the Central California Taxonomic System (CCTS) was developed by archaeologists to explain local and regional cultural change in prehistoric central California from about 4,000 years ago to the time of European contact (c.f., Lillard, Heizer, and Fenenga, 1939; and Beardsley, 1948).

In 1969, several researchers met at University of California, Davis and worked out substantive taxonomic problems that had developed with the CCTS. Table 5.3-1 summarizes David Fredrickson's (1994) cultural periods model and provides CCTS classification nomenclature (such as "Early Horizon").

TABLE 5.3-1
Hypothesized Characteristics of Cultural Periods in California

| | |
|---|---|
| 1800 A.D. Upper Emergent Period Phase 2, Late Horizon | Clam disk bead money economy appears. More and more goods moving farther and farther. Growth of local specializations relative to production and exchange. Interpenetration of south and central exchange systems. |
| 1500 A.D. Lower Emergent Period Phase 1, Late Horizon | Bow and arrow introduced and replace atlatl and dart; south coast maritime adaptation flowers. Territorial boundaries well established. Evidence of distinctions in social status linked to wealth increasingly common. Regularized exchanges between groups continue with more material put into the network of exchanges. |
| 1000 A.D. Upper Archaic Period Middle Horizon Intermediate Cultures | Growth of sociopolitical complexity; development of status distinctions based on wealth. Shell beads gain importance, possibly indicators of both exchange and status. Emergence of group-oriented religious organizations; possible origins of Kuku religious system at end of period. Greater complexity of exchange systems; evidence of regular, sustained exchanges between groups; territorial boundaries not firmly established. |
| 500 B.C. Middle Archaic Period Middle Horizon Intermediate Cultures | Climate more benign during this interval. Mortars and pestles and inferred acorn economy introduced. Hunting important. Diversification of economy; sedentism begins to develop, accompanied by population growth and expansion. Technological and environmental factors provide dominant themes. Changes in exchange or in social relations appear to have little impact. |
| 3000 B.C. Lower Archaic Period Early Horizon Early San Francisco Bay Early Milling Stone Cultures | Ancient lakes dry up as a result of climatic changes; milling stones found in abundance; plant food emphasis, little hunting. Most artifacts manufactured of local materials; exchange similar to previous period. Little emphasis on wealth. Social unit remains the extended family. |
| 6000 B.C. Upper Paleo-Indian Period San Dieguito Western Clovis 8000 B.C. | First demonstrated entry and spread of humans into California; lakeside sites with a probable but not clearly demonstrated hunting emphasis. No evidence for a developed milling technology, although cultures with such technology may exist in state at this time depth. Exchange probably ad hoc on one-to-one basis. Social unit (the extended family) not heavily dependent on exchange; resources acquired by changing habitat. |

Moratto (1984) suggests the Early Horizon dated to ca. 4,500 to 3,500/3,000 years ago with the Middle Horizon dating to ca. 3,500 to 1,500 years ago and the Late Horizon dating to ca. 1,500 to 250 years ago. The Early Horizon is the most poorly known of the period with relatively few sites known or investigated. Early Horizon traits include hunting, fishing, use of milling stones to process plant foods, use of a throwing board and spear (“atlatl”), relative absence of culturally affected soils (midden) at occupation sites, and elaborate burials with numerous grave offerings.

Middle Horizon sites are more common and usually have deep stratified deposits that contain large quantities of ash, charcoal, fire-altered rocks, and fish, bird, and mammal bones. Significant numbers of mortars and pestles signal a shift to plant foods from reliance on hunted animal foods. Middle Horizon peoples generally buried their dead in a fetal position. Only small numbers of graves contain artifacts, which were most often utilitarian. Increased violence is suggested by the number of burials with projectile points embedded in the bones or with other marks of violence.

The Late Horizon emerged from the Middle Horizon with continued use of many early traits and the introduction of several new traits. Late Horizon sites are the most common and are noted for their greasy soils (midden) mixed with bone and fire-altered rocks. The use of the bow-and-arrow, fetal-position burials, deliberately damaged (“killed”) grave offerings, and occasional cremation of the dead are the best known traits of this horizon.

Acorn and seed gathering dominated the subsistence pattern with short and long-distance trade carried out to secure various raw materials. Compared to earlier peoples, Late Horizon groups were short in stature with finer bone structure; evidence perhaps of the replacement of original Hokan-speaking settlers by Penutian-speaking groups by ca. 1,500 years ago.

Another scheme proposed by Chartkoff and Chartkoff (1984) is also used by archaeologists; its features are summarized in Table 5.3-2.

TABLE 5.3-2

The Chartkoff and Chartkoff (1984) Model of Cultural Periods in California

Pre-Archaic Period -11500-9000 B.C.

Pre-Archaic populations were small and their subsistence included big game hunting of now extinct mammoth and mastodon. Research indicates that the Pre-Archaic economies were based on a wide-ranging hunting and gathering strategy, dependent to a large extent on local lake-marsh or lacustrine habitats.

Early to Middle Archaic Period – 9000-4000 B.C.

During the Early and Middle Archaic periods, prehistoric cultures began to put less emphasis on large-game hunting. Subsistence economies probably diversified somewhat, and Archaic era people may have started using such ecological zones as the coast littoral more intensively than before. Advances in technology (milling stones) indicate that new food processing methods became important, enabling more efficient use of certain plant foods, including grains and plants with hard seeds.

TABLE 5.3-2

The Chartkoff and Chartkoff (1984) Model of Cultural Periods in California

Late Archaic Period – 4000-2000 B.C.

An important technological advance was the discovery of a tannin-removal process for the abundant and nutritious acorns. Prehistoric trade networks developed and diversified, bringing raw materials and finished goods from one region to another. Resource exploitation, as during the Early and Middle Archaic, was generally seasonal. Bands moved between established locations within a clearly defined/defended territory, scheduling resource harvests according to their availability. Clustering of food resources along the shores of large lakes or the banks of major fish-producing rivers allowed for larger seasonal population aggregates. Dispersed resources, such as large and small game, during the winter prompted small family groups to disperse across the landscape for more efficient food harvesting. The spear thrower (atlatl) may have been introduced or increased in importance, accounting for a change in projectile point styles from the Western Stemmed to the Pinto and Humboldt series. Seed grinding increased in importance.

Early and Middle Pacific Periods – 2000 B.C.-A.D. 500

The Pacific Period is marked by the advent of acorn meal as the most important staple food. Increasing population densities made it desirable and necessary for Native American populations to produce more food from available land and to seek more dependable food supplies. The increasing use of seed grinding and acorn leaching allowed for the exploitation of more dependable food resources; increased use of previously neglected ecological zones (the middle and high Sierran elevations) may also have been part of this trend.

Late Pacific Period – A.D. 500-1400

Around A. D. 500 – 600, a cultural watershed was triggered by the introduction of the bow and arrow, which replaced the spear thrower and dart as the hunting weapon of choice. The most useful time markers for this period tend to be small projectile points/arrow tips. Another trend is the marked shift from portable manos/metates to bedrock mortars/pestles (Moratto, 1984). Moratto, et al. (1988) demonstrated that this was a time of cultural stress, during which trading activity abated, warfare was common, and populations shifted away from the Sierra Nevada foothills to higher mountain elevations. They explain these changes in terms of rapid climatic fluctuations, including a drier climate and a corresponding shift of vegetation zones.

Final Pacific Period – A.D. 1400-1789

Populations became increasingly sedentary and depended more on staple foods, even as the diversity of foods exploited increased. Permanent settlements with high populations were more common. Every available ecological niche was exploited, at least on a seasonal basis. Other trends included the resurgence of long distance trade networks and the development of more complex social and political systems.

5.3.1.3 Ethnographic Setting

MEP is in the territory associated with the ethnographic and historic boundaries of the *Julpun* tribelet of the Bay Miwok and the *Jalalon*, *Nochochomme*, and *Asirin* tribelets of the Northern Valley Yokuts (Figure 5.3-1. Maps of ethnographic and historic tribal boundaries are provided by Bennyhoff (1977: Map 2), Kroeber (1925), Schenck (1926:137), Levy (1978a, 1978b), and Wallace (1978b). For the most part, the MEP area appears to have been within Northern Valley Yokuts territory – a group that entered the San Joaquin drainage to displace Costanoans and/or Miwok groups (Wallace, 1978b:463).

Each Bay Miwok tribelet occupied a specific territory, using several more or less permanently inhabited settlements and a larger number of seasonal campsites at various times during their annual subsistence round (Levy, 1978a:398). The Northern Valley Yokuts relied on fishing and fowling and the harvesting of wild plant foods including tule roots (Wallace, 1978b:464). In historic times, the Yokuts trekked to Monterey Bay in Costanoan territory (Pilling, 1950; Wallace, 1978b:465) and also traded with the Miwok and Costanoan (Davis, 1961:33, after Barrett and Gifford, 1933:270; and Pilling, 1950:438).

Most of the main settlements occupied the top of low mounds, on or near the banks of large watercourses (Wallace, 1978b:466; Schenck, 1926:132; Schenck and Dawson, 1929:308). The village of Pescadero, located on the southwest side of Union Islands (“a mile or two northeast of Bethany”), is the closest known village to MEP (Wallace, 1978b:469).

The indigenous lifeway apparently disappeared by the early 1800s due to its disruption by new diseases, a declining birth rate, the impact of the mission system, depredation by prospectors on their way to the gold country, and later displacement by Euroamerican farming. As with other Native California groups, the Bay Miwok and Yokuts were transformed from hunters and gatherers into agricultural laborers who lived at the missions and worked with former neighboring groups such as the Costanoan and Esselen (Levy, 1978b:460). Thus, multi-ethnic Native American communities grew up in and around former Yokuts and Bay Miwok territory. The Native Americans that resided in these communities provided much of the ethnological data, along with the detailed accounts by contact explorers, which form the basis of the descriptions of the ethnographic inhabitants of the San Francisco Bay area and central California (Garaventa, et al., 1991:14). A more thorough review of the Native American groups in the San Joaquin Valley can be found in Kroeber (1925), Latta (1977), Levy (1978a), Wallace (1978a, 1978b), Silverstein (1978), Theodoratus et al. (1980), and Moratto et al. (1988, 1990).

5.3.1.4 Historic Setting

In 1542, Juan Rodriguez Cabrillo explored the California coast by ship. Much of the early exploration of California was conducted this way and the interior of California, including the San Joaquin Valley, remained unexplored by Europeans until the beginning of the Spanish Period.

The Spanish Period spans the years from 1769 to 1822 in California beginning with the founding of the first mission, the Mission San Diego de Alcala in 1769. It was not until March 1772 that the first formal European expedition, led by Pedro Fages, entered the northern San Joaquin Valley. Fages went in search of the first Europeans to actually enter the San Joaquin Valley, Spanish deserters. The other purpose of the Fages expedition was to find an overland route to Point Reyes, and the company kept to the shoreline until they reached the mouth of the San Joaquin River and first observed the valley (Smith, 2004). Shortly after the Fages expedition returned to Monterey, Father Francisco Garcés entered the San Joaquin Valley and made the first scientific observations of the valley, which included native villages, wide rivers, large tule swamps, and huge herds of tule elk.

In 1821, Mexico gained independence from Spain, and in 1848, the United States formally obtained California in the Treaty of Guadalupe Hidalgo (Cleland, 1941). The period from 1821-1848 is referred to as the Mexican Rancho Period. It was during this period that large tracts of land termed ranchos were granted by the various Mexican Governors of Alta California, usually to individuals who had worked in the service of the Mexican government.

In 1833, 11 years after gaining independence from Spain, the Mexican government’s Secularization Act changed missions into civil parishes, and those Native Americans who had inhabited regions adjacent to a Spanish Period mission were to obtain half of all mission possessions, including land. However, in most instances, this did not occur, and the

Secularization Act resulted in the transfer of large mission tracts to politically prominent individuals.

The closest rancho to MEP is the Rancho de los Franceses, approximately 19 miles east, situated on and around present day Stockton. Rancho de los Franceses was granted by Governor Micheltorena to William Gulnac, a native of New York on June 13, 1844. The rancho was comprised of eleven square leagues, or 48,747.03 acres. In 1845, shortly before the homestead deadline and after constructing several houses and corrals, planting a peach orchard, and raising several hundred cattle on the land, Gulnac sold the rancho to Captain Charles M. Weber for a \$60 grocery bill Gulnac owed the Weber Grocery Store in San Jose (Smith, 2004: 153-154).

Following the end of hostilities between Mexico and the United States in January 1847, the United States officially obtained California from Mexico through the Treaty of Guadalupe Hidalgo on February 2, 1848 (Cleland, 1941). Thus, the American Period began in 1848. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849.

In April 1848, gold was first discovered in the San Joaquin Valley at Captain Sutter's now-famous saw mill near present-day Sacramento. Gold was never found in great quantities in the San Joaquin Valley, although mining in the adjacent foothills was prolific. The southern mines stretched from the Mokelumne River to the Kern River and Stockton became the main supply city for miners headed to these southern mines (Smith, 2004: 179).

The cattle industry in California reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large, pastoral estates in California, and a high demand for beef during the Gold Rush led to a cattle boom that lasted from 1849 to 1855. In 1855, however, the demand for California beef began to decline as a result of sheep imports from New Mexico, cattle imports from the Mississippi and Missouri valleys, and the development of stock breeding farms. When the beef market collapsed, the California ranchers were unprepared. Many had borrowed heavily during the boom, mortgaging their land at interest rates as high as 10 percent per month. The collapse of the cattle market meant that many of these ranchos were lost through foreclosure, while others were sold to pay debts and taxes (Cleland, 1941: 108-114).

Although no land grants were given to the Central Pacific in the San Joaquin Valley, the company financed itself and construction of the first railroad in San Joaquin Valley began in 1870 at a new railroad town named Lathrop. By the close of 1870, this line reached the Stanislaus River. The Central Pacific connected to the main Southern Pacific line at Goshen, approximately 150 miles south of Lathrop. Subsequently, other rail lines were constructed in the San Joaquin Valley and served as feeders to this main line. In 1903, the Western Pacific Railway incorporated and, between 1905 and 1909, the company constructed a railroad that ran from Oakland through the San Joaquin Valley and into the Sierra Nevada Mountains (Smith, 2004).

During the American Period, in addition to cattle and sheep ranches, a growing number of farms appeared. A rural community cultural pattern existed in the study area from approximately 1870 to 1930. This pattern consisted of communities made up of population aggregates that lived within well-defined geographic boundaries, shared common bonds,

and cooperated to solve shared problems. They lived on farmsteads, tied together by a common school district, church, post office, and country store. These farmsteads and dispersed farming communities gave way to horse ranches, dairies, and nurseries, which in turn were replaced by the establishment of the roadside service complex. The roadside service industry thrived in the highly mobile, mechanized pre- and post-war society, which was linked by state and federal roadways.

The project is located south of the Central Valley community of Byron, California, and roughly 10 miles north of Tracy, California. Byron is a small community that was once a shipping center for apricot orchards (The Federal Writers' Project 1984) and the location of Byron Hot Springs, a small resort that touted the beneficial waters of thermal pools located at the property. The warm salt water springs had been popular since the mid-nineteenth century, with informal camps set up in the area, but the property was not developed until the 1870s, when the Risdon/Mead family began constructing permanent buildings. Byron Hot Springs operated as a resort until it was selected by the United States Army as a temporary internment camp for Japanese and German prisoners of war. The camp closed in 1945 and a year later, the property was sold to a Greek Orthodox diocese from New York State (www.byronhotsprings.com, accessed March 19, 2009).

The city of Tracy, California was founded in 1878, when the Central Pacific Railroad located a station at this site. Tracy is located south of the project location. The railroad later moved its headquarters to Tracy from Lathrop, which is roughly 8 miles to the northeast. Tracy was incorporated in 1910 and an irrigation district was formed a few years later (<http://www.ci.tracy.ca.us/about/history/>, accessed March 19, 2009).

5.3.1.5 Resources Inventory

All project components of MEP were subject to a cultural resources inventory. This inventory includes archival research, reconnaissance, and surface pedestrian survey. The area of potential effect for the project was determined in accordance with the latest CEC *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007) for assessing potential impacts on archaeological and architectural resources. The results of the resource inventory are presented in the following sections. Figure 5.3-1 depicts the areas of intensive cultural resource survey conducted for the project and associated laydown areas.

5.3.1.5.1 Archival Research

CH2M HILL commissioned a literature search of the MEP area from the staff of the California Historical Resources Information System (CHRIS) Northwest Information Center using a 1-mile buffer zone around the MEP site and associated laydown and/or parking areas and a 0.25-mile buffer zone around the proposed linear facilities. Appendixes 5.3C and 5.3E, containing the CHRIS records search and a map of previous studies and any previously recorded resources, are being filed under a request for confidentiality.

According to information available in the CHRIS files, there have been 23 previous cultural resource surveys conducted within 1 mile of this project area and proposed laydown areas (Table 5.3-3). Four previous cultural resource surveys have covered the same areas as the proposed project and laydown areas (marked with an asterisk in Table 5.3-3), resulting in complete coverage of all project components by previous surveys. Copies of all reports are provided in Appendix 5.3.C under a request for confidentiality.

TABLE 5.3-3

Authors, Dates, and CHRIS Catalog Number of Reports of Cultural Resource Reports of Surveys near MEP

| | |
|------------------------------------|--------------------------------------|
| Archeo-Tec (1989) – S-18762 | *Bard, James (2001) – S-24271 |
| Bramlette et al. (1990) – S-12800 | Canaday et al. (1991) – S-14712 |
| Fong et al. (1991) – S-14597 | *Garaventa et al. (1991) – S-13453 |
| *Greenway, Gregory (1977) – S-5208 | Holman, Miley (1982) – S-5862 |
| Holman, Miley (1983) – S-6125 | *Holman, Miley (1983) – S-6127 |
| Holman, Miley (1984) – S-6502 | Holman, Miley (1984) – S-7074 |
| Holman, Miley (1984) – S-7075 | Jensen & Associates (1986) – S-10509 |
| Killam, William R. (1987) – S-9119 | Killam, William S. (1988) – S-9995 |
| Moratto et al. (1990) – S-12300 | Moratto et al. (1995) – S-23674 |
| Peak, Melinda A. (2002) – S-26873 | Price, Barry A. (1992) – S-16208 |
| Ruckle, J.T. (1974) – S-8942 | Slater and Holman (1982) – S-5657 |
| Werner, Roger H. (1988) – S-11647 | |

*Indicates project covered all or part of MEP

Source: CHRIS, Northwest Information Center. See Appendix 5.3C for full bibliographic references.

The record search indicated that there are eight previously recorded properties within a mile of the project site and laydown areas (see Table 5.3-4). Despite four previous surveys of the proposed project site and laydown areas dating back to 1977, no cultural resources have been identified within any of the areas that will be directly impacted by MEP. Each recorded property is located well outside of the MEP facilities, and the project will have no effect on them.

The Delta-Mendota Canal is located within the 1 mile search area. In 2005, in consultation with the State Historic Preservation Officer, the Delta-Mendota Canal was determined to be eligible for the National Register of Historic Places (NRHP) under Criteria A and C. Also, a small section of the California Aqueduct is just within the boundary of the survey area; it does not meet the age criteria for evaluation for eligibility to the California Register of Historical Resources (CRHR) or the NRHP.

TABLE 5.3-4

Summary of Sites within 1 Mile of the Project Area

| Site | Description | NRHP/CRHR Status | MEP Potential Effect |
|-------------|---|-----------------------------|----------------------|
| P-01-10435 | Delta-Mendota Canal and Intake Channel (No. 27) | Determined Eligible in 2005 | None |
| P-01-10436 | Historic Jess Property | Not Evaluated | None |
| P-01-10437 | Historic Clark Ranch | Not Evaluated | None |
| P-01-10438 | Historic Griffith Property | Not Evaluated | None |
| P-01-10439 | Historic Peterson Ranch | Not Evaluated | None |
| P-01-10442 | Tracy Pumping Plant | Not Eligible | None |
| P-01-10445* | No Information (70 Canal?) | No Information | None |
| P-07-2547 | Byron Bethany Irrigation District (BBID) Main Canal (No. 9) | Not Evaluated | None |

*Site form P-01-10445 was supplied by Northwest Information Center (NWIC), but contained no information.

5.3.1.5.2 Field Survey

Site Conditions

The MEP site has been subject to intensive agricultural and ranching activities that have impacted the ground surface. Additionally, MEP will be located at the site of a previous wind farm development that has since been removed. Evidence of the wind farm is visible in the form of concrete foundations with PVC electrical conduit indicating the presence of buried electrical conduit that connected the individual windmills.

Ground visibility was fairly poor at the MEP site, access road, and gas line, averaging less than 25 percent visibility due to the grasses growing in active livestock pastures. The transmission line laydown area and the transmission line route north of Kelso Road had excellent visibility. The water pipe laydown area is within the fenced perimeter of the BBID facility and is currently graveled and used for parking. The proposed water pipeline is within a very narrow corridor between the road and active agricultural fields.

Given the amount of previous ground disturbance in the area and the number of previously conducted cultural resource inventories, the archaeological sensitivity of MEP is considered low.

5.3.1.5.3 Archaeological Survey

An archaeological survey of the proposed MEP site was conducted on March 18, 2009, by Aaron Fergusson, M.A., RPA, a CRS who meets the qualifications for Principal Investigator stated in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation (NPS, 1983). Using pedestrian transects spaced no more than 10 meters apart, Mr. Fergusson surveyed the project facilities and laydown areas, the proposed access road, the proposed gas line corridor, and the proposed transmission line corridor. As per the latest CEC *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007), the survey included a 200-foot minimum buffer around the project facilities and laydown areas and a 50-foot buffer on either side of the centerline around each linear corridor, resulting in a 100-foot wide buffer for the linear corridors. The proposed waterline corridor will be located along the edge of the pavement and within the right of way of Bruns Road. From the BBID facilities south to the project area, the right of way is only 5 feet wide from the edge of the pavement to the edge of the right of way and is entirely road fill. Outside of the right of way is a privately owned, unaccessible, agricultural field. The only portions of the waterline corridor that were surveyed are the 1,000-foot section from the northern terminus south to the BBID facilities, and the southern section where it leaves Bruns Road and follows the access road into the project area. The section along Bruns Road was not surveyed due to the high level of disturbance, the road base that completely covers the original ground surface, and the inaccessible agricultural field outside the right of way.

The ground visibility within the proposed plant location and all project facilities south of Kelso Road was poor with less than 10 percent visibility throughout most of the area due to thick vegetation. This area is a cattle pasture; a modern wind farm was located here earlier, but it has been demolished. Visible evidence of the former wind farm includes concrete tower foundations, concrete electrical box foundations with PVC conduit, and debris from broken/removed windmills. The PVC conduit in particular points to the degree of previous ground disturbance as these underground conduits connected the various windmills.

The transmission line and associated laydown area north of Kelso Road had much better ground visibility of approximately 70 percent. This area contains a denser cattle population, and grazing and trampling of the area has cleared most of the vegetation. The water pipeline laydown area is located within the fenced perimeter of the new BBID Pump Control Center and Maintenance Yard. The laydown area is in the southeastern corner in an area that has been graded and is now used for storage and parking. Just to the north is a storm water retention basin. The 1,000-foot water pipeline is within a recently disturbed corridor from the installation of another waterline to serve the BBID facility.

Given the local topography, distance to major stream drainages or other archaeologically sensitive features, and the scale and scope of previous ground disturbance in the area, archaeological sensitivity of the surface soils of the MEP site and appurtenant proposed facilities is considered low. The sensitivity of the underlying soils is considered moderate to low, given that the possibility exists for intact cultural deposits to be present beneath the plow zone. The archaeological sensitivity is low to moderate because the site is located in an area that has been previously disturbed by agricultural use and construction and demolition of a wind farm, and because of the low density of previous finds in this general area despite multiple surveys.

5.3.1.5.4 MEP Architectural Survey

The historic architecture survey was conducted on March 23 2009, by Jessica B. Feldman, who meets the Secretary of the Interior's Professional Standards for architectural history. The survey was inclusive of the project site and the project linear facility routes, extending no less than 0.5 miles out from the proposed plant site and from the routes of all above-ground linear facilities, as per the *CEC Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007).

The present built environment is a mix of residential and agricultural properties, dominated by a variety of utility facilities, such as the Tracy Substation and Tracy Pumping Station to the east along with the Delta-Mendota Canal, the California Aqueduct to the north, and the Delta Substation and Pumping Station to the west. There are several wind farms dotting the hills to the west and southwest of the project. The Table Mountain-Tesla transmission line corridor crosses the survey area on the north and east, transmission lines from the Pacific Gas and Electric Company (PG&E) Kelso Substation run along the east side of Bruns Road south of Kelso Road, and the Cottonwood and Tracy-Tesla transmission line corridors are farther east, outside the study area.

The Byron Power Cogen Plant, which was constructed in 1990, is located on the same parcel as the proposed MEP. To the north, across Kelso Road, is the PG&E Kelso Substation, which was constructed between 1982 and 1993. Within the survey area are several properties with residential buildings, particularly along Kelso Road to either side of Bruns Road. The remaining parcels are generally open fields, most undeveloped or fallow.

Buildings and structures that appeared to be more than 45 years of age were recorded during the survey of the built environment. Alameda and Contra Costa County assessor data were reviewed to establish building dates; in the absence of conclusive dates of construction, historical topographic maps and aerial images were reviewed to establish general dates of construction. The 1914, 1916, and 1968 historical topographic maps and the 1940, 1950, 1959, and 1965 historical aerial images were consulted. Based on these maps and

the field survey, it was determined that four properties contained buildings or structures that met the age criteria to be considered potential historical resources within 0.5 miles of MEP. The maps have been included in Appendix 5.3C.

Updated California Department of Parks and Recreation (DPR) forms for the Jess Property and Clark Ranch are provided in Attachment 5.3B; new DPR forms for the Reese Property and the BBID Canal 70 are also provided. None of these resources have been identified within any of the areas to be directly impacted by the proposed MEP.

- **Reese Property; Unnamed Farm at Christensen and Bruns Road.** This farm or ranch is located on the northwest side of the confluence of Christensen and Bruns Road. This property was mentioned in records received as part of the CHRIS archival research. The property was not formally evaluated but was noted in Site Record 6502 in 1984 (Holman, 1984). The buildings and structures are now gone and only the ruins of a building and two tanks remain at this location (Holman, 1984).
- **P-01-10436; Jess Property at 15547 Kelso Road.** The Jess Property, located at 15547 Kelso Road, was previously recorded in 2001, but not evaluated for CRHR or NRHP eligibility. The 2001 recordation of the Jess Property did not include a description of the buildings at this address and conversations with the owners of the property have indicated that the residential building burned down around that time. As in 2001, access to the Jess Property was not received from the owners, but communication with the owners indicated that the buildings on the property have burned down and/or have fallen down due to neglect.
- **P-01-10437; Clark Ranch at 15685 Kelso Road.** The Clark Ranch at 15685 Kelso Road, was recorded in 2001 but not evaluated for CRHR or NRHP eligibility. During the physical and visual inspection of the property no significant changes to the buildings previously recorded were noted.
- **BBID Canal 70.** A canal running between the California Aqueduct and the Delta-Mendota Canal was recorded, as it appears in the 1940 aerial image. It is located on several parcels to the northeast of the project site. It is an open dirt canal. The north end extends south from the California Aqueduct in Contra Costa County, crosses Bruns Road in Alameda County, and meanders in a southerly direction. It crosses Kelso Road west of the Clark Ranch, and then across the Jess Property to intersect with the Delta-Mendota Canal southeast of the project study area. Although it is not shown on the 1968 Clifton Court Forebay Quad map, it is shown on the 1978 Clifton Court Forebay Quad map and is labeled "70 Canal." It may not have been completed until after 1968. This resource does not appear to meet the CRHR or NRHP criteria.

No impacts on any of the four historic properties are expected as a result of the proposed project. The Reese Property is roughly 2,500 feet southwest of the project site, laydown area and linear features, and the hilly area south and southeast of the project area visually and physically separates the two properties. Furthermore, there are no resources remaining on the property. The Jess Property is more than 2,000 feet to the east and northeast of the project site and between 1,500 and 3,000 feet from the proposed transmission lines. The property lies south of the California Aqueduct; southeast of the PG&E Kelso Substation; west of the Tracy Pumping Station and Substation, as well as the Delta-Mendota Canal;

northeast of the Bethany Reservoir; and between the Vacaville-Tesla and Cottonwood transmission lines. All of these utility structures post-date the buildings on this property. There are no known resources remaining on the property.

The Clark Ranch is more than 3,000 feet northeast of the project site and 2,000 feet east of the proposed transmission line. The project site is partially obscured by landscape features and the topographical depression where the project would be sited. The property lies south of the California Aqueduct, southeast of the PG&E Kelso Substation; west of the Tracy Pumping Station and Substation, as well as the Delta-Mendota Canal; northeast of the Bethany Reservoir; and between the Vacaville-Tesla and Cottonwood transmission lines. All of these utility structures post-date the buildings on this property. The BBID Canal 70 is within 1,750 to 3,000 feet from the proposed project site and transmission lines and will not be impacted by the project.

5.3.1.5.5 Native American Consultation

A Sacred Lands File search and a Native American contacts list were requested from the Native American Heritage Commission (NAHC) on January 7, 2009. The NAHC responded on February 5, 2009, with a list of Native Americans interested in consulting on development projects. At this time, no sacred sites are known to exist within the proposed project area; however, Native American consultation with tribes and individuals provided by the NAHC was conducted. Letters describing the project and including maps of the project location were sent via email or fax and standard mail to all individuals or tribes provided by the NAHC, inviting comments and concerns regarding this project on March 27, 2009. As of the time of this printing, no responses have been received. Copies of the letters sent are provided in Appendix 5.3A. Also, a detailed summary table of the results of consultations with the individual Native American organizations on the NAHC contact list is included in Appendix 5.3A.

The NAHC record search of the Sacred Lands file did not indicate the presence of Native American cultural resources in the immediate project area. The record search conducted at the Northwest Information Center of CHRIS did not indicate the presence of Native American traditional cultural properties.

5.3.1.5.6 Local Historical Societies

Three local historical societies were contacted on April 10, 2009. No additional historical resources were identified. A summary of these contacts is provided as part of Appendix 5.3A. The groups contacted were the East Contra Costa Historical Society and Museum, the Tracy Historical Museum, and the Alameda County Historical Society. The Alameda County Historical Society responded on April 14, 2009, to indicate they had no information to provide and suggested contacting the Amador Livermore Valley Historical Society in Pleasanton and the Livermore Heritage Guild. A request for information was sent to the Amador Livermore Valley Historical Society on April 28, 2009. On April 26, 2009, the Tracy Genealogical Society responded that it had no information and said it would forward the request to the Tracy Historical Museum. No other responses have been received at the time of this printing.

5.3.2 Environmental Analysis

This subsection describes the environmental impacts of MEP construction and operations. CH2M HILL conducted a complete survey of the project area and associated laydown areas.

5.3.2.1 Significance Criteria

Appendix G, Environmental Checklist Form, of the CEQA guidelines addresses significance criteria with respect to cultural resources (Public Resources Code Sections 21000 et seq.).

Appendix G (V)(a, b, d) indicates that an impact would be significant if the project will:

- Cause a substantial adverse change in the significance of a historical resource
- Cause a substantial adverse change in the significance of an archaeological resource
- Disturb any human remains, including those interred outside of formal cemeteries

Project investigations included archival research; review of all cultural resource investigation reports within the MEP area; contacts with all other interested agencies, Native American groups, and historical societies; and a complete archaeological field survey. These studies indicated that there are no significant prehistoric or historic archaeological remains, traditional cultural properties, or historic resources in the MEP area of potential effect. Therefore, no impacts on cultural resources are expected to occur.

5.3.2.2 MEP Construction Impacts

The literature search, pedestrian inventory, and windshield survey have shown that there are no prehistoric or historic sites located within the MEP site or laydown areas. Although four historic sites are located within 0.5 miles of MEP facilities, all are located well outside the area of impact and none will be affected by MEP. Additionally, none of these four resources is considered eligible for the CRHR or NRHP. Therefore, the project is unlikely to have an adverse effect on significant historical or archaeological sites that are eligible for listing in the CRHR. Finally, there are no known cemeteries in the project area or laydown areas that project construction might disturb.

Due to the extensive disturbance by the construction and dismantling of the wind farm, the project is unlikely to encounter buried intact cultural resources that have not previously been disturbed or destroyed in sediments near the ground surface. However, some limited potential does exist for intact cultural resources to be discovered in soils below the plow zone.

5.3.2.3 Operation Impacts

No ground disturbance would be required during project operation; therefore, impacts on cultural resources are not anticipated during operation of the proposed facility.

Maintenance of all project facilities will not cause any effects outside of the initial construction area of impact.

5.3.3 Cumulative Effects

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Pub. Resources Code § 21083; Cal. Code Regs., tit. 14, §§ 15064(h), 15065(c), 15130, and 15355). Cumulative

projects are described in detail in Section 5.6, Land Use. Six projects were identified by Alameda County as in development; these projects are from 1 to 5 miles away from the MEP site. It is anticipated that impacts on cultural resources from the cumulative projects, if any, would be mitigated to a less-than-significant level.

As described above, MEP will not cause any adverse impacts on archaeological or historic resources or traditional cultural properties. The likelihood of encountering buried archaeological resources extremely low. The project is very unlikely, therefore, to have impacts that would combine cumulatively with those of other projects.

5.3.4 Mitigation Measures

Although significant archaeological and historical sites were not found during the survey for MEP, some possibility does exist that subsurface construction activities could encounter buried archaeological materials (i.e., artifacts). For this reason, MEP will include measures to mitigate any potential adverse impacts that could occur if buried cultural resources were inadvertently discovered. These measures include: (1) designation of a CRS to be on call to investigate any cultural resource finds made during construction, (2) implementation of a construction worker training program, (3) monitoring during initial clearing of the power plant site and excavation at the plant site, (4) procedures for halting construction in the event that there is an inadvertent discovery of archaeological deposits or human remains, (5) procedures for evaluating an inadvertent archaeological discovery, and (6) procedures to mitigate adverse impacts on any inadvertent archaeological discovery determined significant.

5.3.4.1 Designated Cultural Resources Specialist

Mariposa Energy will retain a designated CRS who will be available during the earth-disturbing portion of the MEP construction period to inspect and evaluate any finds of buried archaeological resources that might occur during the construction. If there is a discovery of archaeological remains during construction, the CRS, in conjunction with the construction superintendent and environmental compliance manager, will make certain that construction activity stops in the immediate vicinity of the find until the find can be evaluated. The CRS will inspect the find and evaluate its potential significance, in consultation with CEC staff and the CEC compliance project manager (CPM). The CRS will make a recommendation as to the significance of the find and any measures that would mitigate adverse impacts of construction on a significant find.

The CRS will meet the minimum qualifications for Principal Investigator on federal projects under the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. The CRS will be qualified in site detection, evaluation of the significance of the deposits, consultation with regulatory agencies, and development of site evaluation and mitigation activities.

5.3.4.2 Construction Worker Training

Mariposa Energy will prepare a construction worker sensitivity training program to ensure implementation of procedures to follow in the event that cultural resources are discovered during construction. This training will be provided to each construction worker as part of their environmental, health, and safety training. The training will include photographs of

various types of historic and prehistoric artifacts and will describe the specific steps that will be taken in the event of an unanticipated discovery of cultural material, including human remains. It will explain the importance of, and legal basis for, the protection of significant archaeological resources. The training will be presented in the form of a written brochure or videotape presentation.

5.3.4.3 Emergency Discovery

If construction workers or others identify archaeological resources during construction, they will immediately notify the CRS and the site superintendent, who will halt construction in the immediate vicinity of the find, if necessary. The CRS will use flagging tape, rope, or some other means as necessary to delineate the area of the find within which construction will halt. This area will include the excavation trench from which the archaeological finds came as well as any piles of dirt or rock spoil from that area. Construction will not take place within the delineated find area until the CRS, in consultation with the CEC staff and CEC CPM, can inspect and evaluate the find.

5.3.4.4 Site Recording and Evaluation

The CRS will follow accepted professional standards in recording any find and will submit the standard DPR historic site form (Form DPR 523) and locational information to the CHRIS Northwest Information Center.

If the CRS determines that the find is not significant, and the CEC CPM concurs, construction will proceed without further delay. If the CRS determines that further information is needed to determine whether the find is significant, the designated CRS will, in consultation with the CEC, prepare a plan and a timetable for evaluating the find.

5.3.4.5 Mitigation Planning

If the CRS, CEC staff, and CPM determine that the find is significant, the CRS will prepare and carry out a mitigation plan in accordance with state guidelines. This plan will emphasize the avoidance, if possible, of significant archaeological resources. If avoidance is not possible, recovery of a sample of the deposit from which archaeologists can gather scientific data to address archaeological research questions will be considered an effective mitigation measure for damage to or destruction of the deposit.

The mitigation program, if necessary, will be carried out as soon as possible to avoid construction delays. Construction will resume at the site as soon as the field data collection phase of any data recovery efforts is completed. The CRS will verify the completion of field data collection by letter to the project owner and the CPM so that the project owner and the CPM can authorize resuming construction.

5.3.4.6 Curation

The CRS will arrange for curation of archaeological materials collected during an archaeological data recovery mitigation program. Curation will be at a qualified curation facility meeting the standards of the California Office of Historic Preservation. The CRS will submit field notes, stratigraphic drawings, and other materials developed as part of the data recovery/mitigation program to the curation facility along with the archaeological collection, in accordance with the mitigation plan.

5.3.4.7 Report of Findings

If a data recovery program is planned and implemented during construction as a mitigation measure, the CRS will prepare a detailed scientific report summarizing results of the excavations to recover data from an archaeological site. This report will describe the site soils and stratigraphy, describe and analyze artifacts and other materials recovered, and draw scientific conclusions regarding the results of the excavations. This report will be submitted to the curation facility with the collection.

5.3.4.8 Inadvertent Discovery of Human Burials

If human remains are found during construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the County Coroner with jurisdiction within 48 hours and there should be no further disturbance to the site where the remains are found. If the Coroner determines that the find is Native American, he/she must contact the NAHC. The NAHC, as required by the Public Resources Code (Section 5097.98) determines and notifies the Most Likely Descendant with a request to inspect the burial and make recommendations for treatment or disposal.

5.3.5 Laws, Ordinances, Regulations and Standards

Among the local LORS discussed in this section are certain ordinances, plans, or policies of Contra Costa and Alameda counties and the State of California. Federal LORS are not applicable because the project is not a federal undertaking (federal ownership, funding, or permit).

A summary of applicable LORS is provided in Table 5.3-5.

TABLE 5.3-5
Laws, Ordinances, Regulations, and Standards for Cultural Resources

| Law, Ordinance, Regulation, or Standard | Applicability | Project Conformity? |
|---|---|---------------------|
| CEQA Guidelines | Project construction may encounter archaeological and/or historical resources | Yes |
| Health and Safety Code Section 7050.5 | Construction may encounter Native American graves; coroner calls the NAHC | Yes |
| Public Resources Code Section 5097.98 | Construction may encounter Native American graves; NAHC assigns Most Likely Descendant | Yes |
| Public Resources Code Section 5097.5/5097.9 | Would apply only if some project land were acquired by the state (currently no state land) | Yes |
| Contra Costa County General Plan 1995-2020 | Sets goals to identify and preserve important archaeological and historic resources within the county | Yes |
| East Alameda County General Plan | Sets goals to protect cultural resources from development | Yes |

5.3.5.1 State LORS

CEQA requires review to determine if a project will have a significant effect on archaeological sites or a property of historic or cultural significance to a community or ethnic group eligible for inclusion in the CRHR (CEQA Guidelines). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Section 21084.1 of the Public Resources Code) and defines substantial adverse change as demolition, destruction, relocation, or alteration that would impair historical significance (Section 5020.1). Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the CRHR³ is presumed to be historically or culturally significant.⁴

Resources listed in a local historic register or deemed significant in a historical resource survey (as provided under Section 5024.1g) are presumed historically or culturally significant unless the preponderance of evidence demonstrates they are not.

A resource that is not listed in or determined to be eligible for listing in the CRHR, is not included in a local register of historic resources, nor deemed significant in a historical resource survey, may nonetheless be historically significant (Section 21084.1; see Section 21098.1).

CEQA requires a Lead Agency to identify and examine environmental effects that may result in significant adverse effects. Where a project may adversely affect a unique archaeological resource,⁵ Section 21083.2 requires the Lead Agency to treat that effect as a significant environmental effect and prepare an Environmental Impact Review. When an archaeological resource is listed in or is eligible to be listed in the CRHR, Section 21084.1 requires that any substantial adverse effect on that resource be considered a significant environmental effect. Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. Either of these benchmarks may indicate that a project may have a potential adverse effect on archaeological resources.

Other state-level requirements for cultural resources management appear in the California Public Resources Code, Chapter 1.7, Section 5097.5 (Archaeological, Paleontological, and

³ The CRHR is a listing of "...those properties which are to be protected from substantial adverse change." Any resource eligible for listing in the CRHR is also to be considered under CEQA.

⁴ A historical resource may be listed in the CRHR if it meets one or more of the following criteria: "(1) is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; (2) is associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or (4) has yielded or has the potential to yield information important in prehistory or history (...of the local area, California, or the nation)" (Public Resources Code §5024.1, Title 14 CCR, Section 4852). Automatic CRHR listings include NRHP-listed and determined eligible historic properties (either by the Keeper of the NRHP or through a consensus determination on a project review); State Historical Landmarks from number 770 onward; and Points of Historical Interest nominated from January 1998 onward. Landmarks prior to 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

⁵ Public Resources Code 21083.2 (g) defines a unique archaeological resource to be: An archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

Historical Sites), and Chapter 1.75, beginning at Section 5097.9 (Native American Historical, Cultural, and Sacred Sites) for lands owned by the state or a state agency.

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the Public Resources Code, and falls within the jurisdiction of the NAHC.

5.3.5.2 Local LORS

As discussed above, among the local LORS discussed in this section are certain ordinances, plans, or policies of Contra Costa and Alameda counties. For informational purposes, this section reviews compliance of the project with these requirements.

5.3.5.2.1 Contra Costa County

The Contra Costa County General Plan (1995-2010) includes the goal to identify and preserve important archaeological and historic resources within the county (Contra Costa County, 1996). Contra Costa's historic, archaeological, and cultural resource policies urge:

- Preservation of areas that have identifiable and important archaeological or historic significance, preferably in public ownership
- Protection of buildings or structures that have visual merit and historic value
- Development of districts near areas of historic significance to have compatible and high-quality design to protect and enhance the historic quality of the area

Within the southeast county area, applicants for subdivision or land use permits to allow non-residential uses shall provide information to the county on the nature and extent of the archeological resources that exist in the area. The County Planning Agency shall be responsible for determining the balance between the multiple uses of the land with the protection of resources.

Implementation of Cultural Resource Policies

Contra Costa's historic, archaeological, and cultural resource policies are implemented by:

- Development of Review Process
 - Develop an archaeological sensitivity map to be used by staff in the environmental review process for discretionary permits to determine potential impact upon cultural resources.
 - As a condition of approval of discretionary permits, include a procedure to be followed in the event that archaeological resources are encountered during development or construction.
- Ordinance Revisions
 - Review existing county ordinances and guidelines and make amendments as necessary to ensure that they provide adequate safeguards for archaeological and historic resources.
 - Develop design guidelines for areas adjacent to or within scenic corridors or historic sites.

- Other Programs
 - Promote the use of the State of California Historic Building Code to protect historic sites in the county.
 - Encourage owners of eligible historic properties to apply for state and federal registration of these sites and to participate in tax incentive programs for historic restoration.
 - Seek coordination and cooperation with federal, state, and local governments, and with private and non-profit organizations, to establish funding sources to preserve, restore, and enhance unique historic sites. Such funding sources may be used to acquire and preserve sites or to acquire easements over sites and building facades.
 - Identify funding mechanisms, including funding from the County to the extent possible, to support programs to preserve, restore, and enhance unique historic sites.

5.3.5.2.2 Alameda County

The Alameda County General Plan for the East County Area Plan includes the goal to protect cultural resources from development (Alameda County, 1994). Alameda County's historic, archaeological, and cultural resource policies urge:

- Preservation and identification of significant archaeological and historical resources, including structures and sites which contribute to the heritage of Alameda County
- Development to be designed to avoid cultural resources

Alameda County has implemented a program to carry out the policies associated with protecting historic, archaeological, and cultural resources. The county requires a background and records check of a project area if a project is located within an extreme or high archaeological sensitivity zone as determined by the county. If there is evidence of an archaeological site within a proposed project area, an archaeological survey by qualified professionals is required as a part of the environmental assessment process. If any archaeological sites are found during construction, all work in the immediate vicinity shall be suspended pending site investigation by a qualified archaeology professional. Proposed structures or roads on property that contains archaeological sites should be sited in consultation with a professional archaeologist to avoid damaging the archaeological sites. Appropriate measures for preserving a historic structure include renovation or relocation. Proposals to remove historic structures are reviewed by qualified professionals.

5.3.6 Agencies and Agency Contacts

Table 5.3-6 lists the state agencies involved in cultural resources management for the project and a contact person at each agency. These agencies include the NAHC and, for federal undertakings, the California Office of Historic Preservation.

TABLE 5.3-6
Agency Contacts for Cultural Resources

| Issue | Agency | Contact |
|---|--------------------------------------|---|
| Native American traditional cultural properties | NAHC | Dave Singleton Associate Governmental Program Analyst Native American Heritage Commission 915 Capitol Mall, Room 364 Sacramento, CA 95814 (916) 653-4082 |
| Federal agency NHPA Section 106 compliance | DPR, Office of Historic Preservation | Milford Wayne Donaldson State Historic Preservation Officer 1416 9th Street, Room 1442 Sacramento, CA 95814 (916) 653-6624 |

5.3.7 Permits Required and Permit Schedule

Other than certification by the CEC, no state, federal, or local permits are required by the project for the management of cultural resources. Consultation with the State Historic Preservation Officer and Advisory Council on Historic Preservation would be required under Section 106 of the NHPA if, for example, as the result of a later project change, the project were to become a federal undertaking (including federal permits such as a Clean Water Act Section 404 Permit) and significant cultural resources would likely be affected by the project.

5.3.8 References

- Alameda County. 1994. East Alameda County General Plan.
- Bancroft, Hubert Howe. 1886. *The History of California: The Words of Hubert Howe Bancroft*. History Company. San Francisco, CA.
- Barrett, S.A, and E.W. Gifford. 1933. *Miwok Material Culture*. Bulletin of the Public Museum of the City of Milwaukee. 2(4):117-376.
- Beardsley, R.K. 1948. Cultural Sequences in Central California Archaeology. *American Antiquity* 14(1):1-29.
- Beck, Warren A. and Ynez D. Haase. 1974. *Historical Atlas of California*. University of Oklahoma, Norman, OK.
- Bennyhoff, J.A 1977. *The Ethnogeography of the Plains Miwok*. Center for Archaeological Research at Davis Publications 5. University of California, Davis.
- Bickel, P. McW. 1978a. Changing Sea Levels along the California Coast: Anthropological Implications. *The Journal of California Anthropology* 5(1):6-20.
- Bickel, P. McW. 1978b. *Corrections to Sea Level Article*. *The Journal of California Anthropology* 5(2):296-297.
- Bridges, R.W. 1983. Eighty Candles on the Final Cake. Mileposts. March 1983.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1973a. *The California History Plan. Volume One – Comprehensive Preservation Program*. State of California, The Resources Agency, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1973b. *The California History Plan. Volume Two – Inventory of Historic Features*. State of California, The Resources Agency, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1976. *California Inventory of Historic Resources*. State of California, The Resources Agency, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1988. *Five Views: An Ethnic Sites Survey for California*. State of California, The Resources Agency, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1990. *California Historical Landmarks*. Office of Historic Preservation, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1992. California Points of Historical Interest. May 1, 1992.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1995. DRAFT How to Read the Legal Statuses of Properties from the Directory. November. Office of Historic Preservation, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1997. Title 14 Chapter 11.5. Regulations for California Register of Historical Resources. Effective January 1, 1998. Office of Historic Preservation, Department of Parks and Recreation, Sacramento.

California Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 2002. *Historic Properties Directory*. Office of Historic Preservation, Department of Parks and Recreation, Sacramento.

California Energy Commission (CEC). 1992. *Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification*. California Energy Commission, Energy Facilities Siting and Environmental Protection Division, Sacramento.

California Energy Commission (CEC). 2007. *Rules of Practice and Procedure & Power Plant Site Certification*. Sacramento.

California Governor's Office of Planning and Research (CAL/OPR). 1994a. *CEQA and Archaeological Resources*. CEQA Technical Advice Series, Governor's Office of Planning and Research, Sacramento, CA.

California Governor's Office of Planning and Research (CAL/OPR). 1994b. *CEQA and Historical Resources*. CEQA Technical Advice Series, Governor's Office of Planning and Research, Sacramento, CA.

- Chartkoff, J.L., and K.K. Chartkoff. 1984. *The Archaeology of California*. Stanford University Press, Stanford, CA.
- Cleland, Robert Glass. 1941. *The Cattle on a Thousand Hills: Southern California, 1850-1870*. The Huntington Library, University of California.
- Contra Costa County. 1996. Contra Costa County General Plan.
- Cook, S.F., and A.B. Elsasser. 1956. Burials in Sand Mounds of the Delta Region of the Sacramento-San Joaquin River System. University of California Archaeological Survey Reports 35:26-46, Berkeley.
- Cook, S.F., and R.F. Heizer. 1962. *Part I: Chemical Analysis of the Hotchkiss Site (CA-CCo-138)*. University of California Archaeological Survey Report 57, Berkeley.
- Davis, J.T. 1961. Trade Routes and Economic Exchange Among the Indians of California. University of California Archaeological Survey Reports 54, Berkeley.
- Desgrandchamp, C., and D. Chavez. 1984. Preliminary Cultural Resources Evaluation for the Elsasser, Albert B. 1978. Development of Regional Prehistoric Cultures. In California, edited by Robert F. Heizer, pp. 37-57. Handbook of North American Indians, Volume 8; William C. Sturtevant, general editor. Smithsonian Institution, Washington, DC.
- The Federal Writers' Project. 1984. *The WPA Guide to California*. Pantheon Books, New York.
- Fredrickson, David A. 1994. *Archaeological Taxonomy in Central California Reconsidered*. In R.E. Hughes (ed.), *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*. Contributions of the University of California Archaeological Research Facility No. 52, Berkeley.
- Garaventa, D.M., S.A. Jarvis, S.J. Rossa, and M.E. Tannam. 1991. Cultural Resources Assessment, McDonald Island Gas Storage Expansion Project, Alameda, Contra Costa, and San Joaquin Counties, California. Report on file, California Historical Resources Information System, Sonoma State University, Rohnert Park, CA.
- Heizer, R.F. 1954. The Archaeology of Central California I: The Early Horizon. University of California Anthropological Records 12(1):1-84.
- Hillman, Raymond W. and Leonard Covello. 1985. *Cities and Towns of San Joaquin County since 1847*. Panorama West Books, Fresno, CA.
- Holman & Associates. 1984. *Letter Re: Proposed Windfarm at Christensen and Kelso Roads, S-6502*. On file, California Historical Resources Information System, Sonoma State University, Rohnert Park, CA.
- Jenson, Sean Michael. 2004. *Site Record for Site P-39-000098, CA-SJO-00292H*. Ms. on file, Central California Information Center, California State University, Stanislaus, CA.
- Kneiss, Gilbert H. 1953. *Fifty Candles on the Western Pacific Cake*. Mileposts. March.
- Kroeber, A.L. 1925. *Handbook of the Indians of California*. Smithsonian Institution, Bureau of American Ethnology Bulletin 78. Washington, DC.

- Larson, B. and E. Johnson. 2003. *Site Record for Site P-39-000098, CA-SJO-00292H*. Ms. on file, Central California Information Center, California State University, Stanislaus, CA.
- Latta, F.F. 1977. *Handbook of Yokuts Indians* (Second edition, revised and enlarged). Bear State Books, Santa Cruz, CA.
- Levy, R. 1978a. *Eastern Miwok*. In *California*, edited by R.F. Heizer, Volume 8. Handbook of North American Indians, W.G. Sturtevant, general editor, pp. 398-413. Smithsonian Institution, Washington, DC.
- Levy, R. 1978b. *Costanoan*. In *California*, edited by R.F. Heizer, Volume 8. Handbook of North American Indians, W.G. Sturtevant, general editor, pp. 485-497. Smithsonian Institution, Washington, DC.
- Lillard, J.B., R.F. Heizer, and F. Fenenga. 1939. *An Introduction to the Archaeology of Central California*. Sacramento Junior College, Department of Anthropology, Bulletin 2.
- Luomala, Katherine. 1978. Tipai-Ipai. In: *California*, edited by Robert F. Heizer, pp. 592-609. Handbook of North American Indians, William C. Sturtevant, general editor, vol. 8. Smithsonian Institution, Washington, DC.
- Moratto, M.J., R. Boyd, D. Chance, R. Conrad, S. Davis-King, S.K. Goldberg, C.G. Lebow, H. McCarthy, R.M. Pettigrew, and T.M. Van Bueren. 1988. Preliminary Assessment of Cultural Resources along the Proposed Route of the PGT-PG&E Pipeline Expansion Project, Idaho, Washington, Oregon, and California. Report on file, Pacific Gas & Electric Company, San Francisco, CA.
- Moratto, M.J., T.L. Jackson, R.M. Pettigrew, R.F. Schalk, D. Chavez, E.C. Gibson, C.B. Hemphill, C.J. Miss, B.A. Price, M.C. Romano, C.K. Roper, B.P. Wickstrom, M.S. Burney, C.G. Lebow, J. Silvermoon, and M.K. Crist. 1990. *Final Cultural Resources Assessment Report PGT-PG&E Pipeline Expansion Project, Idaho, Washington, Oregon, and California. Phase I: Survey, Inventory, and Preliminary Evaluation of Cultural Resources*. Report CCIC-621 on file, California Historical Resources Information System, Stanislaus State University, Turlock, CA.
- Moratto, M.J. 1984. *California Archaeology*. Academic Press. New York.
- Pilling, A.R. 1950. The Archaeological Implications of an Annual Coastal Visit for Certain Yokuts Groups. *American Anthropologist* 52(3):438-440.
- Schenck, W.E. 1926. *Historic Aboriginal Groups of the California Delta Region*. University of California Publications in American Archaeology and Ethnology 23(2), Berkeley.
- Schenck, W.E., and E.J. Dawson. 1929. Archaeology of the Northern San Joaquin Valley. University of California Publications in American Archaeology and Ethnology 25(4), Berkeley.
- Silverstein, M. 1978. *Yokuts: Introduction*. In, R.F. Heizer (ed.), Handbook of North American Indians, Volume 8, California, pp. 8446-447. Smithsonian Institution, Washington, DC.
- Smith, Wallace. 2004. *Garden of the Sun: A History of the San Joaquin Valley, 1772-1939*. Max Hardison. Fresno, CA.

Strand, Rudolph G. and James B. Koenig. 1965. *Geologic Map of California, Sacramento Sheet*. California Division of Mines and Geology, Scale 1:250,000.

Theodoratus, D.L, M.P. Peters, CM. Blount, P.J. McGuire, R.D. Ambro, M. Crist, RJ. Peck, and M. Saxe. 1980. *Mountezuma I and II Cultural Resources*. Report S-11,826 on file, California Historical Resources Information System, Sonoma State University, Rohnert Park, CA.

United States Bureau of Reclamation Mid-Pacific Regional Office 2005. Delta-Mendota Canal/California Aqueduct Intertie, Central Valley Project, Alameda County, California, Consultation under Section 106 of the National Historic Preservation Act. On file, California Historical Resources Information System, Sonoma State University, Rohnert Park, CA.

U.S. Department of the Interior, National Park Service (NPS). 1983. *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. Washington, DC.

U.S. Department of the Interior, National Register of Historic Places, National Park Service (NPS). 2002. *National Register of Historic Places Index by Property Location*.

U.S. Department of the Interior, National Register of Historic Places, National Park Service. 1998. *How to Apply the National Register Criteria for Evaluation*. Washington, D.C.

Wallace, W.J. 1978a. *Southern Valley Yokuts*. In, R.F. Heizer (ed.), *Handbook of North American Indians*, Volume 8, California, pp. 448-461. Smithsonian Institution, Washington, DC.

Wallace, W.J. 1978b. *Northern Valley Yokuts*. In, R.F. Heizer (ed.), *Handbook of North American Indians*, Volume 8, California, pp. 462-470. Smithsonian Institution, Washington, DC.