

SECTION 8.3

Cultural Resources

8.3 Cultural Resources

8.3.1 Introduction

Cultural resources are historic and prehistoric archaeological sites, historic architectural and engineering features and structures, and sites and resources of traditional cultural significance to Native Americans and other groups. Section 8.3.2 describes the laws, ordinances, regulations, and standards (LORS) applicable to the protection of cultural resources. Section 8.3.3 provides background information needed to place the Project into its cultural resource setting. Section 8.3.4 describes the cultural resources in the Project area, and Section 8.3.5 discusses the environmental consequences (impacts) of construction of the proposed plant and linear corridors. It also describes any cumulative impacts that might result from construction or operation and maintenance of the Project. Section 8.3.6 presents mitigation measures that will be implemented to avoid impacts from construction of the proposed plant and linear corridors. Section 8.3.7 lists involved agencies and agency contacts; Section 8.3.8 describes any needed permits; and Section 8.3.9 provides references cited or consulted.

This study determines whether cultural resources are present and could be affected adversely by the Modesto Irrigation District (MID) Electric Generation Station (MEGS) Project (Project). The MEGS Project, as described in Section 2, Project Description, will consist of a 95-megawatt (MW) simple-cycle power generating plant and associated linear facilities (potable water, non-potable water, wastewater discharge, sewer, stormwater pipelines, 69-kV subtransmission line, and natural gas supply). The significance of any potentially affected resources is assessed and measures are proposed to mitigate potential adverse Project effects. This study was directed by Dr. James C. Bard, who meets the *Standards and Guidelines for Archaeology and Historic Preservation* (National Park Service, 1983) and this study was performed consistent with CEQA compliance procedures and Section 106 of the National Historic Preservation Act (NHPA) set forth at 36 CFR 800. The study scope was developed in accordance 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, 1997).

Significant cultural resources (as defined for federal undertakings) include those prehistoric and historic sites, districts, buildings, structures, and objects, as well as properties with traditional religious or cultural importance to Native Americans or other groups, which are listed, or are eligible for listing, on the National Register of Historic Places (NRHP), according to the criteria outlined in 36 CFR 60.4. Cultural resources that do not meet the NRHP criteria but may qualify as a unique characteristic of an area are considered under NEPA, and resources that may qualify for the California Register of Historic Resources (CRHR) are considered under CEQA. Any substantial adverse change in the significance of a historical resource listed in or eligible to be listed in the CRHR is considered a significant effect on the environment.

Impacts to cultural resources would result from activities that affect the characteristics that qualify a property for the NRHP or substantially adversely change the significance of a resource that is qualified to be listed in the CRHR. Therefore, impacts to cultural resources from the proposed Project will be considered significant if the Project:

- Physically destroys or damages all or part of a property
- Changes the character of the use of the property or physical features within the setting of the property which contribute to its historic significance
- Introduces visual, atmospheric, or audible elements that diminish the integrity of the significant historic features of a property

With the exception of isolated artifacts or features that appear to lack integrity or potentially important information, all new cultural resource findings would be treated as though they are eligible for the NRHP/CRHR. If possible, all recorded resources will be avoided completely. However, if avoidance is not possible through Project redesign, the significance of the affected resources will be evaluated formally using NRHP/CRHP and/or CEQA criteria and guidelines. If a resource is determined to be significant, a data recovery program or some other appropriate mitigative effort will be undertaken in consultation with the CEC.

At this time the Project will not require the involvement of any federal agencies. However, if the MEGS Project becomes subject to federal agency involvement (permitting, licensing, etc.), additional federal authorities related to cultural resources may be triggered. These may include the National Environmental Policy Act (NEPA) and the Archaeological and Historic Preservation Act (AHPA) of 1974 (16 USC 469), among others. The AHPA includes requirements to coordinate with the Secretary of the Interior for notification, data recovery, protection and/or preservation when a federally licensed project may cause the irreparable loss or destruction of significant scientific, prehistoric, historic, or archaeological data. In 1983, the Secretary of the Interior established standards for gathering and treating data related to cultural resources in Standards and Guidelines for Archaeology and Historic Preservation.

8.3.2 Laws, Ordinances, Regulations, and Standards

A discussion of the applicable laws, ordinances, regulations, and standards (LORS) follows. Federal regulations that generally only apply to federal undertakings (which do not apply to this Project), are included here for the sake of completeness. Cultural resources that might be present in the MEGS Project area could include some or all of the following types of resources:

- **Historic Properties.** Historic properties are places eligible for inclusion in the National Register of Historic Places (NRHP). Historic properties eligible for inclusion in the NRHP can include districts, sites, buildings, structures, objects, and landscapes significant in American history, prehistory, architecture, archaeology, engineering, and culture. Historic properties include so-called “traditional cultural properties.” Historic properties must be given consideration under NEPA and the National Historic Preservation Act (NHPA).
- **Native American Cultural Items.** Native American cultural items may include human remains (skeletal remains), funerary items, sacred items, and cultural patrimony. Native American cultural items must be given consideration under NEPA, NHPA, the Native American Graves Protection and Repatriation Act (NAGPRA) and the American Indian Religious Freedom Act (AIRFA).

- **Archaeological Sites.** Archaeological sites and other scientific data must be given consideration under NEPA, the Archaeological Resources Protection Act (ARPA), the Archaeological Data Protection Act (ADPA), and to some extent under NHPA and NAGPRA.
- **Native American Sacred Sites.** Native American sacred sites must be considered under AIRFA and Executive Order 13007.
- **Other Cultural Resources.** Cultural institutions, lifeways, culturally valued viewsheds, places of cultural association, and other valued places and social institutions must be considered under NEPA, Executive Order 12898, and sometimes other authorities.

8.3.2.1 Federal

Archaeological and architectural resources (buildings and structures) are protected through the National Historic Preservation Act (NHPA) of 1966 (16 USC 470f) and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Section 106 of the NHPA requires federal agencies (BIA, BLM, Reclamation, Corps of Engineers, etc.), prior to implementing an “undertaking” (e.g., issuing a federal permit), to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Office (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing on the National Register of Historic Places (NRHP). Section 101(d)(6)(A) of the NHPA allows properties of traditional religious and cultural importance to a tribe to be determined eligible for inclusion in the NRHP.

Under the NHPA, a find is significant if it meets the NRHP listing criteria at 36 CFR 60.4:

- The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
 - That are associated with events that have made a significant contribution to the broad patterns of our history, or
 - That are associated with the lives of persons significant in our past, or
 - That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
 - That have yielded, or may be likely to yield, information important in prehistory or history.

Cultural institutions, lifeways, culturally valued viewsheds, places of cultural association, and other valued places and social institutions must also be considered under the National Environmental Protection Act (NEPA), Executive Order 12898 and sometimes other authorities (Executive Order 13006, Executive Order 13007, NAGPRA).

The American Indian Religious Freedom Act of 1978 allows access to sites of religious importance to Native Americans. On federal land, the Archaeological Resources Protection Act (ARPA) and Native American Graves Protection and Repatriation Act (NAGPRA) would apply. ARPA assigns penalties for vandalism and the unauthorized collection of archaeological resources on federal land and provides for federal agencies to issue permits for scientific excavation by qualified archaeologists. NAGPRA assigns ownership of Native American graves found on federal land to their direct descendants or to a culturally affiliated tribe or organization and provides for repatriation of human remains and funerary items to identified Native American descendants.

If a Federal permit of any kind is needed (such as a Clean Water Act (CWA) Section 404 permit from the US Army Corps of Engineers), the NHPA and its implementing regulations (16 USC 470 et seq., 36 CFR 800, 36 CFR 60, and 36 CFR 63) will apply. The NHPA establishes the federal government's policy on historic preservation and the programs, including the NRHP, through which that policy is implemented. Under the NHPA, historic properties include *"any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places"* (16 USC 470w (5)).

8.3.2.2 State

CEQA review requires a determination 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. A historical resource for purposes of CEQA compliance is defined as a resource listed in, or determined eligible for listing in the CRHR. The CRHR lists properties that are to be protected from substantial adverse change and includes properties which are listed or have been formally determined to be eligible for listing in the NRHP, State Historic Landmarks, and eligible Points of Historical Interest (CAL/OHP, 1997).

Historical Resources - CEQA

CEQA applies to discretionary projects and equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Section 21084.1) 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 CRHR is presumed to be historically or culturally significant.

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, not included in a local register or historic resources, or not deemed significant in a historical resource survey may nonetheless be historically significant (Section 21084.1). Public Resources Code (PRC) Section 21098.1 stipulates:

A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For the purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources. Historical resources included in a local

register of historical resources, as defined in subsection (k) of Section 5020.1 [see below], are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register or historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 [see below] shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.

Public Resources Code Sections 5020.1 and 5024.1 provide the following definitions:

- **Historic district** means a definable unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.
- **Historical landmark** means any historical resource that is registered as a state historical landmark pursuant to Section 5021.
- **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, educational, social, political, military, or cultural annals of California.
- **Local register of historic resources** means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.
- **Substantial adverse change** means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.

Archaeological Resources - CEQA

New CEQA guidelines became effective January 1, 1999 (see below). Where a project may adversely affect a unique archaeological resource, Section 21083.2 requires the Lead Agency to treat that effect as a significant environmental effect and prepare an Environmental Impact Report (EIR). When an archaeological resource is listed in, or eligible to be listed in, the CRHR, Section 21084.1 requires that any substantial adverse effect to 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 proposal may have a potential adverse effect on archaeological resources.

Public Resources Code 21083.2 (g) defines 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.

Formerly, Appendix K of the CEQA Guidelines (deleted from the new January 1999 guidelines) took a broader approach, using the term “important” in place of “unique.” Appendix K went beyond Section 21083.2 suggesting additional criteria to guide the Lead Agency in determining uniqueness (the resource must be at least 100 years old and possess “substantial stratigraphic integrity” and the resource involves “important” research questions that historical research has shown can be answered only with archaeological methods). Now, Section 21084.1 requires treatment of any substantial adverse change in the significance of a *historical resource* listed in or eligible to be listed in the CRHR as a significant effect on the environment. A historical resource can be an archaeological resource listed in or formally determined eligible for listing in the CRHR and by reference, the NRHP, California Historical Landmarks, Points of Historical Interest, and local registers (see Section 5020.1 and 5024.1).

Although Appendix K was deleted, its still-relevant guidance on impact evaluation was moved into the body of CEQA in new sections 15064.5 and 15126.4. To resolve conflicts between the narrow and limiting statutory provision for mitigation of archaeological resources and the broadly protective statutory provision for determining the significance of historical resources, Section 15064.5(c) provides that to the extent an archaeological resource is also an historical resource, the provisions regarding historical resources apply. These new provisions endorse the first set of standardized mitigation measures for historic resources by providing that projects following the Secretary of the Interior’s Standards for Treatment of Historic Properties shall be considered as mitigated to a less-than-significant level.

Other provisions put lead agencies on notice that, in many circumstances, the very popular method of mitigating impacts on historical resources by way of documentation (e.g., narrative, photographs, architectural drawings) will not mitigate the effects to a point where clearly no significant effect on the environment would occur. In Section 15331, a new categorical exemption is added for projects limited to restoration or rehabilitation of historic resources consistent with the Secretary of the Interior’s Standards (Gorsen, 1999).

Native American Burials – Other California Laws and Regulations

Other state-level requirements for cultural resources management are written into the California PRC Chapter 1.7, Section 5097.5 (Archaeological, Paleontological, and 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 PRC and fall within the jurisdiction of the Native American Heritage Commission (NAHC). If human remains are discovered, the San Joaquin County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found.

If the remains are determined by the coroner to be Native American, the Coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to Section 5097.98 will immediately notify those persons it believes to be most likely descended

from the deceased Native American so they can inspect the burial site and make recommendations for treatment or disposal.

8.3.2.3 Local Laws and Regulations

Programs of cultural and historic preservation exist at the county level and are linked with those of cities and with state and federal preservation programs. The City of Ripon's (City's) General Plan and EIR (City of Ripon, 1998) describes cultural resources within the Ripon area and establishes policies and programs to protect and maintain cultural resources:

Goal C: Protect Archaeological Sites

Policy C1

The City will not knowingly approve any public or private project that may adversely affect important archaeological sites.

Policy C2

Development of proposals that may adversely impact archaeological sites will be referred to the California archaeological inventory at Stanislaus State University. Archaeological site evaluations will be conducted at the expense of development proponents.

Policy C3

The City will require site-specific archaeological surveys for sites determined to be highly sensitive for cultural resources and evaluation of potential historical structures. Surveys and evaluations shall be conducted at the expense of development proponents.

Policy C4

The City will advise Applicants that, in accordance with State law, if any cultural resources are discovered during project-related construction activities, all work is to stop and the City and a qualified professional are to be consulted to determine the importance and appropriate treatment of the find. If Native American remains are found, the County Coroner and the Native American Heritage Commission, Sacramento ([916] 653-4082), are to be notified immediately for recommended procedures.

Goal F: Protect and Preserve Historically Significant Buildings, Sites, and Structures

Policy F1

Establish regulations that encourage the preservation of important historic resources, including flexible parking and other associated requirements which allow historic structures to remain in use in the future.

8.3.3 Setting

The MEGS site lies on the southern edge of the City of Ripon; a small agricultural town located near the southeastern boundary of San Joaquin County just north of the Stanislaus River.

8.3.3.1 Native American Prehistory

Prior to about 5,000 to 7,000 years ago, Native American occupation of central California was intermittent and sparse. Evidence for early occupation along the bayshores 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 (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 4,500 years ago to the time of European contact (Lillard, Heizer, and Fenenga, 1939; and Beardsley, 1948 and 1954).

In 1969, several researchers met at University of California at Davis and worked out substantive taxonomic problems that had developed with the CCTS. Table 8.3-1 summarizes David Fredrickson's (1994) cultural periods model and provides CCTS classification nomenclature (such as "Early Horizon," etc). Another scheme proposed by Chartkoff and Chartkoff (1984) is also used by archaeologists; its features are summarized in Table 8.3-2.

TABLE 8.3-1
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 specialization's 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, 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 <i>Kuksu</i> 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.

TABLE 8.3-2

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

Pre-Archaic Period - 11,500-9,000 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 - 9,000-4,000 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.

Late Archaic Period - 4,000-2,000 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 - 2,000 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 Indian 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 tool/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. (1978) 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. Moratto, et al. (1978) 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.

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 and only small numbers of graves contain artifacts (and these are 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.

8.3.3.2 Ethnography

The Project vicinity lies within the ethnographic territory of the Northern Valley Yokuts. The Project area itself lies within the territory attributed to the *Chelumne* tribelet of the Northern Valley Yokuts (Latta, 1977:97). The Northern Valley Yokuts were a successful gathering, fishing, and hunting people who used the great variety and abundance of resources along the San Joaquin River and its tributaries.

The Yokutsan-speaking people numbered about 18,000 individuals dispersed in 40 to 50 small tribelets speaking distinctive dialects (Cook, 1955). There may have been up to 12 Yokutsan language divisions (Shipley, 1978:83 after Kroeber, 1925:883). Subsistence relied on hunting and gathering, especially salmon and acorns, but also on fowling and tule root consumption. At best, big-game hunting was a minor pursuit (Wallace, 1978b:464).

Before Euro-American agricultural practices dramatically altered the environment, the area adjoining the San Joaquin River and its tributaries (e.g., the Stanislaus River), was a region of extensive wetlands teeming with fish, freshwater clams and beaver and otter. Migratory waterfowl nested in the waterways in great numbers. Vast herds of elk, antelope, deer, and after the Spanish introduction, horses roamed the plains. Closer to the foothills, acorns provided a staple food that was available in enormous quantities. The abundance of rich wildlife and the omnivorous eating practices of the Yokuts offered a rich subsistence regime (Baker, 1982:1).

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; Cook, 1960:242, 259, 285). The Northern Yokuts secured mussels and abalone shells from the Costanoan and baskets, bows and arrows from the Miwok in exchange for dog pups (Barrett and Gifford, 1933:270 in Wallace, 1978b:465; Davis, 1961:33 after Barrett and Gifford, 1933 and Pilling, 1950).

Generally, little is known of the aboriginal inhabitants of the San Joaquin Valley. The aboriginal lifeway apparently disappeared by 1810 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. The Indians of the San Joaquin Valley were transformed from hunters and gatherers into agricultural laborers who lived at Mission San Jose, Santa Clara, Soledad, San Juan Bautista, and San Antonio (Swernoff, 1982:3-12 after Merriam, 1955:188-225; 1968:48-77) and worked with former neighboring groups such as the Costanoan and Esselen (Cook, 1957:143; Levy, 1978b:486). Thus, multi-ethnic Indian communities grew up in and around former Yokuts 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 Project area can be found in Kroeber (1925), Latta (1977), Levy (1978a), Wallace (1978), Silverstein (1978), Theodoratus et al. (1980), and Moratto, et al. (1988, 1990).

8.3.3.3 Euro-American History

From the settlements in the San Francisco Bay Area, the Spanish began to explore California's interior regions for additional mission sites and to resettle the Indians from these areas into the mission's agricultural communities. Many local Indians were moved to Mission San Jose. A baptized Indian named Estanislao led a group of Indians in acts of rebellion against the Spanish and fled to the San Joaquin Valley, past the site that later became the French encampment of Livermore. They settled by a river named after him (Stanislaus). Their encampment was located at what is now the Spring Creek Country Club at the edge of Ripon (City of Ripon, 1999).

On May 5, 1829, Sergeant Sanchez left the Presidio at San Francisco with 40 men and reinforcements from San Jose to recapture "their" Indians. After three days of fierce fighting, the defeated Sanchez went back to the Presidio in disgrace. Estanislao and his warriors celebrated their victory. On May 29, General Mariano Vallejo undertook to destroy the rebellious Indians with the help of calvary, artillery and reinforcements from Monterey. This time, only Estanislao and a few of his group survived. After Estanislao's defeat, José Jesus, another deserting neophyte, was made chief. The Mokelumne, Consumnes and Siyakumnes, all led by Chief José Jesus, continued to plunder and raid the missions and cattle ranches. However, he eventually became friends with Captain Charles Weber and they signed a peace treaty, ending the uprisings (City of Ripon, 1999).

Gabriel Moraga was the first Spanish explorer to enter San Joaquin County. The Moraga expedition crossed the San Joaquin Valley from the Tuolumne River to the Stanislaus River in October 1806 (Cutter, 1950:95; Smith, 1932:28). A second Moraga expedition explored

San Joaquin County in 1810. The Spanish resettled the Indian populations living along the San Joaquin, Stanislaus and Tuolumne Rivers primarily to the San Juan Bautista and San Jose missions (Gooch, 1988:25). The Spanish did not find suitable mission sites in San Joaquin County so this area was not developed (Smith, 1932:30). Under Spanish control, all land was owned by the government under the jurisdictions of the missions or pueblos with the result that land was not developed aggressively for additional settlements.

After Mexico seceded from Spain in April 1822, the development of private ranchos began. At first, government land grants were limited to Indians or to retired soldiers as a reward for service (Krell, 1979:64). By 1830, only 21 properties were in private hands. The secularization of the Missions ordered by the Mexican Congress in 1833 greatly accelerated the process of land privatization and the secularization decree freed the Indians and took control of the land away from the mission friars and gave it to administrators (Branch, 1881:20). Over the next 15 years, the Mexican government made over 800 land grants to private citizens that covered one quarter of California (26 million acres). By the mid 1840s, the Mexican government had made land grants in the region but none of the grants included what is now the City of Ripon. The single land grant in San Joaquin County was *Rancho Del Campo de los Franceses* (French Camp – many French-Canadian trappers had camps along the San Joaquin River starting in 1832), awarded in 1844 to William Gulnack.

The earliest Anglo American explorer to enter Stanislaus County was Jedediah Smith who led a company of trappers into California in 1826. Smith crossed the Stanislaus River in April 1827 (Cutter, 1950:41) and met with then California Governor Jose Echeandia in Monterey (who ordered Smith to leave the territory). Smith's exploration however, led to increased Anglo American fur trapping in the San Joaquin Valley. Trapping was so lucrative that the Hudson Bay Company obtained permission to open a permanent camp ("French Camp") near what is today the City of Stockton in 1832. An early effort to develop an agricultural settlement was the 1846 Mormon community called New Hope, which lasted less than one year. Prior to the 1848 gold rush, the main economic activity in the San Joaquin Valley was trapping and grazing.

California's isolation from Mexico and the continuing influx of Americans culminated in the 1846-47 war with Mexico. In 1848, California became a U.S. territory as a result of the Treaty of Guadalupe Hidalgo, which ended the Mexican War. During the 1850s, gold seekers that became discouraged with mining started small ranches in Stanislaus County. The land was mostly used for grazing until the boom in wheat cultivation began in 1867. For almost 30 years, wheat growing dominated California agriculture as its primary export (Hilkert and Lewis, 1984). In 1874, just south of the Stanislaus River, it was reported that Stanislaus County produced more wheat than any county in California (Cutter, 1950:169).

The story of wheat growing in the San Joaquin Valley is closely linked with the development of the Southern Pacific railway through the region. Transporting wheat by wagons was difficult and the rivers were not passable in the dry seasons. In 1868, the Central Pacific announced plans to build a railroad down the San Joaquin Valley to serve the agricultural communities.

John James Atherton purchased land that would be the site of a railroad town near the center of Stanislaus County and the railroad reached the site of this new town on October 10, 1870. The new town was purportedly to be named Ralston for William Ralston who

helped finance the railroad. Ralston purportedly declined the honor and the town was named Modesto, the Spanish word for “modesty,” to recognize Ralston’s decision.

Wheat growing in California declined in the 1890s due to declining crop yields and competition from other wheat growing areas. Other factors contributed to a major shift in the agricultural economy in the 1890s. The development of irrigation systems meant that a wider variety of crops could be produced that were more profitable than wheat. The La Grange Dam, completed in 1893, became Modesto Irrigation District’s water source. By 1903, with the settlement of several water disputes and lawsuits, the irrigation water became available (and wheat was rapidly replaced by fruit and vegetable crops). The growth of the new agricultural economy was further stimulated by the development in 1888 of the refrigerator rail car that could ship fresh produce, and the expansion of the drying and canning industries. Irrigation also stimulated growth of the dairy industry (Harlow, 1935:2).

Ripon—Local Historical Sketch

The following historical sketch is borrowed in large part from *A Brief History of the City of Ripon* (City of Ripon, 1999). The first documented legal Euro-American landowner was William Gulnack, a Danish-born New Yorker. He and Danish-born Peter Lassen formed a partnership in 1842. Later Gulnack developed a business relationship with Captain Charles Weber, the same man who secured a peace treaty with Indian chief Jose Jesus and who later helped found the Port of Stockton. Gulnack furnished money and secured credit, while Weber supplied the enthusiasm, energy and merchandising know-how. They opened a general store, a blacksmith shop, and a flour mill in San Jose. Then they expanded: manufactured their flour into sea biscuits to sell to merchant seamen; started a salt works near San Francisco Bay, a shoe factory, and the Weber House hotel. Gulnack became overwhelmed by all the business activities and sold out to Weber for some flour and a little cash. Longing for a quieter life, in 1843, Gulnack took his son, Lassen, their cattle, horses, and mules and set out for the San Joaquin. On June 12, 1844, Gulnack obtained a land grant (Land Grant No. 20) for over 48,000 acres. Shortly after Gulnack procured the grant, he gave the northern half (Stockton) to Weber.

At about the same time, Captain John C. Fremont and his corps of topographical engineers went through the Stockton and Ripon areas to map to vicinity. They followed the Stanislaus river from its source in the Sierra to a point where it empties into the San Joaquin at a place now part of Ripon. With the blessings of the U. S. government, Fremont fought to overthrow the Mexican government. Most Mexicans fought against the Americans, though not strenuously due to close intermarriage and friendship ties. However, when Gulnack returned to his homestead, everything had been burned to the ground, his livestock slaughtered or stolen, and Lassen's body had four arrows in the back. With the grant improvement deadline due, the discouraged Gulnack sold the remaining half of his ranch to Weber for a \$60.00 grocery bill charged at Weber's San Jose store. On April 3, 1845, Ripon land became Weber property. On June 14, 1846, Fremont and a small group of soldiers seized the town of Sonoma and raised the Bear Flag. On July 4th, 1846, Fremont proclaimed the independence of California. On August 15, 1846, California was declared a Territory of the United States.

The City of Ripon, originally known as Murphy's Ferry (located two miles southeast of Ripon), was one of several river crossings that sprang up in 1850 to carry gold seekers and settlers to and from the Stanislaus River. Up through 1857, ranches and farms were getting a

solid foothold along the Stanislaus River. A settler named W. H. Hughes bought a settler's right to 160 acres by the Stanislaus River, and by 1870, he acquired another 761 acres encompassing practically all of what is now Ripon. Establishing Stanislaus City, he built a home for his family at the river (at the end of Robert Avenue). Hughes soon divided his property and sold the first lots in Stanislaus City. The City became permanently established when he granted a right-of-way, including a depot site, to the Southern Pacific Railroad in 1872. The settlement was then renamed Stanislaus Station. The renamed community was a terminus during the construction of the railroad to Fresno. The railroad location contained livestock corrals used to transport mostly cattle to market and shipped large quantities of wheat and barley to Stockton and Point Costa for storage (Ripon Record 1967). In 1912, a new station was built to the north of this original structure (near Locust Avenue).

The nucleus of the town was started in 1874, when a man named Amplias B. Crooks, born in Ripon, Wisconsin, came to this area and started a store. Not pleased with the name Stanislaus City, he renamed it Ripon after his birthplace. The name was officially changed on December 21, 1874. Crooks had the post office established in 1875 under the name of Ripon and had himself appointed the postmaster. Ripon, at this time, consisted of a hotel, blacksmith shop, a school, two warehouses, and fourteen homes. By 1879, Ripon had a population of about 50, one blacksmith shop, one hotel and one store (Thompson and West, 1879:107).

The first school was a renovated old shack that had been a residence. Some years later, a new school was built in a grove of locust trees which were planted to protect the school from the sun. This school, known as the Crow School, started in Ripon in 1862, and it was located about two miles from the town. Crow School later became San Joaquin School. In 1864, a second school (Cady School) was established about a mile southeast of Ripon on Murphy Ferry Road (Ripon Record, 1967).

Murphy's Ferry continued to be the only way to cross the river until a wooden bridge was built in 1885. This bridge was replaced with a concrete bridge in 1905. Murphy Road also got its name from this crossing and was known, until not long ago, as Murphy's Ferry Road. The first brick building, the General Store and Warehouse, was erected by Perry Yaples, another of the early settlers, who fired the brick in the summer of 1886. Remains of his kiln were seen during the reconstruction of Main Street in the summer of 1995. This building still stands on East Main Street.

Perry Yaple's home was built next to a common burying ground. When the land was donated for a cemetery, the Women's Improvement Club was organized in 1884 to care for the graves. The Ripon Cemetery Association was established on July 2, 1899. The oldest grave belongs to Luizann Roberts, daughter of J.W. and C.A. Roberts, who died at the age of 14 months on February 24, 1861.

The history of Ripon's agricultural and industrial development has been a varied one. During the 1870s, dryland wheat and barley were the primary crops produced in the area. Dryland agriculture was quickly replaced with the introduction of irrigation in 1909 by the South San Joaquin Irrigation District (SSJID).

Irrigation provided an opportunity to diversify the local agricultural economy (Gardner 1967). Many types of row crops and vineyards were produced over the years; however, the

most significant crop was almonds. At one time, Ripon was known as the almond capitol of California. The SSJID remains an important part of the continuing development of Ripon.

To support the local community, the Bank of Ripon was founded by Alney J. Nourse in 1910. About 1912, Ripon was a railroad stop for the purpose of transporting grain and cattle. At this time, the community relied mainly upon dry farming for its support. Somewhere around 1916, the first Dutch settlers came, attracted by the rich farmlands. These were mainly immigrants from the Netherlands, and soon wrote to their families in the "Old Country" and encouraged them to come to California. This group of ten families and nine single men built the first "Holland Church" on the corner of Locust and First Streets. The official name of the church was the First Christian Reformed Church of Ripon, California. After 1924, the First Reformed Church of Ripon moved to the corner of Second Street and Orange Avenue.

Frederick H. Kincaid was elected in 1909 to be the first Ripon director to serve on the South San Joaquin Irrigation District. The years between 1920 and 1930 brought progressive development. In 1921, the Ripon Fire Department was formed and Meyenberg Bros. built the first milk plant in the community. The Chamber of Commerce was formed in 1923 and in 1925, the Ripon Sanitary District was formed by purchasing 45 acres of sewer disposal land near the Stanislaus River, south of town. Meyenberg Bros. built a second milk plant and the original plant was sold to the Pet Milk Company. Then the Nestle Company purchased the plant and moved from Salida to Ripon in 1929. In 1930, Meyenberg came back and built a plant on Stockton Avenue (this building was destroyed by fire in 1994).

The City of Ripon was incorporated in 1945, with the Chamber of Commerce as the leading sponsor and financial backer. Today, the incorporated area of the City comprises about 4.3 square miles. The principal object of incorporation was to obtain police protection, to operate the water company, and to expand the sanitary district.

During the depression years, the Works Progress Administration (WPA) put in curbs and gutters in the City and built an additional industrial sewer line. Extensive plantings of watermelons and a variety of truck crops were followed shortly by vineyards and orchards. Today, the farming community of Ripon is made up primarily of almond orchards and vineyards.

The first Portuguese residents came to Ripon in 1919 and were primarily dairymen. Portuguese-operated dairies were an important part of Ripon's economy for over 30 years (Ripon Record, 1967). A steady influx of people of Dutch descent brought not only immigrants directly from the Netherlands, but also Dutch who had settled first in other areas of the United States and Canada. The period of 1930 to 1940 saw continued slow growth of the City, especially with the coming of more Dutch settlers. As their number increased, another church and a private high school were added to the City's educational and religious facilities.

Considerable changes in the civic structure of Ripon developed between 1940 and 1950. In 1944, the Ripon County Water District was formed and the Water Company was purchased from the Alney J. Nourse Estate. At the time of acquisition, the City had 318 users.

Following World War II, the Ripon Lions Club inaugurated a drive for public subscriptions to build the Ripon Memorial Library Building. When completed, this building was

dedicated to all the service men from the Ripon area that served in the Armed Forces During World War II. The building has since been enlarged to four times its original size. This library is part of the San Joaquin County Public Library System.

The 1950s saw continued steady growth in Ripon. Small manufacturing shops developed to meet the needs of the almond industry which had grown tremendously. Several small housing subdivisions had to be added to fill the needs that were created with the industrial growth in Ripon. In 1960, the Simpson-Lee Paper Company opened an \$8 million plant to manufacture fine papers. To celebrate the acquisition of the new industry that would provide a sizeable payroll, interested citizens and the Chamber of Commerce planned a weekend of festivities that culminated with a parade on Saturday, September 30, 1961. This celebration proved to be the forerunner of Ripon's Annual Almond Festival, first held in 1963 on the last weekend in February. The Festival has continued to grow every year to the present time.

The stability of the earliest settlers has remained a characteristic of the Community of Ripon. Its growth has been slow but steady; the population has increased from approximately 600 in 1939 to 10,000 in 1999. With an eye to the future, Ripon provides adequate schools and is continually improving its public facilities to meet the needs of a growing community.

8.3.4 Cultural Resources

This study relies upon available information and a field inventory of the Project area. Contact with the Native American Heritage Commission (NAHC) did not result in the identification of traditional cultural properties in the Project area (see Appendix 8.3).

CH2M HILL conducted a record search at the Central California Information Center (CCIC) of the CHRIS at Stanislaus State University in Turlock (CCIC File No. 4810/L) for the Project area located in San Joaquin County. The search included the Project area of potential effect (APE) and areas within 0.5 mile of the APE. The search resulted in the following findings:

- No prehistoric or historic archaeological resources or historic properties have been reported to the Information Center within the MEGS Project area.
- No prehistoric sites have been reported within the 0.5-mile radius; however, one has been reported east of Ripon, on the west side of the Stanislaus River: P-39-000338/CA-SJO-000224 (see Peak & Associates, 1989).

Cultural Resource P-39-000338.CA-SJO-224. This is a prehistoric archaeological site discovered in 1976 by Lynne Mounday. It was recorded as a plowed-disturbed midden site with a surface scatter of aboriginal debris such as flakes, pieces of shell, and a hammer-stone. Mounday drilled seven 4-inch diameter borings into the site to establish depth, extent and the nature of the site (Peak & Associates, 1989: 5). This site is located more than a mile away from the MEGS plant site; it will not be affected by the Project.

- No historic archaeological sites have been reported within the 0.5-mile radius; however, historic foundations/structure remains have been recorded southeast of Ripon, west of the Stanislaus River: P-39-000307/CA-SJO-000190H. This historic site will not be affected by the Project.

- No National Register sites, California Register sites, properties determined eligible for either register, or State Points of Historical Interest were found within the Project area or 0.5-mile radius. One State Historical Landmark monument/plaque (listed below) is within 0.5-mile (at the Ripon City Park), although the actual site is approximately 6 miles to the west.

Cultural Resource P-39-000530 (State Registered Landmark No. 436). This historic property is the commemorative plaque of New Hope located at Fourth and Locust Streets in the Ripon City Park. *Approximately six miles west of this spot, 20 Mormon pioneers from the ship Brooklyn founded the first known agricultural colony in San Joaquin Valley, planting the first wheat and crops that they irrigated by the pole and bucket method. They erected three log houses and operated a sawmill and a ferry across Stanislaus. Their settlement later became known as Stanislaus City (CAL/OHP 1990:228).*

- Four properties (304 North Acacia, 721 North Acacia, 209 North Locust and 543 South Acacia) are present within the 0.5-mile radius. The CCIC reports that one of these properties has not been evaluated but was probably submitted as part of a clearance for a telecommunications facility project and may not represent an historic property. The other three properties are not considered eligible for the NRHP. The CCIC has now other available documentation for these addresses.
- Examination of the historic Government Land Office (GLO) map for T2S/R8E, Sheet #44-113 (1852-1854) shows a “Swamp,” “Slough,” and “River Stanislaus” in the Project vicinity; no cultural references (e.g., homesteads, roads, etc.) were found on this GLO map within the Project area or within a one-half-mile radius.
- Resources known to have value to local cultural groups have not been reported to the CCIC.

No previous investigations have been conducted in the Project area. Within the one-half-mile radius of the Project area are five previous investigations (Peak & Associates, 1989; Hatoff, et al., 1995; Jensen, 1999; Mounday, 1976; Nelson, 2000).

8.3.4.1 Field Survey

An intensive archaeological survey was completed by CH2M HILL staff (James C. Bard, Ph.D., RPA and James J. Sharpe, M.S.) on October 23, 2002 and January 15-16, 2003 using 30-meter transects (Specific methods and results are presented below for each project element; resumes are included in Appendix 8.3A). A windshield reconnaissance of the historic built environment in the Project area was conducted by Mr. Sharpe on January 15-16, 2003 to check for the presence/absence of buildings and structures older than 45 years of age that might be located within the area of potential effect by the MEGS Project. A follow-up windshield survey of the MEGS Project area and its historic built environment was conducted by John Carrier (CH2M HILL) and Gary Reinoehl (CEC Cultural Resources Staff) to further clarify and define an architectural/historical APE.

Architectural resources include standing homes, farmsteads, and commercial/industrial facilities as well as fences, transmission lines, irrigation ditches, and visible wells that lie within the defined architectural/historical APE. Typically only properties 50 years of age or older that meet the National Park Service criteria for historical significance can be

considered eligible for inclusion in the NRHP. Properties less than 50 years old may be listed, but they must be of exceptional significance. There are four criteria for listing on the NRHP:

- A. association with an event,
- B. association with a person,
- C. significant example of architecture, or
- D. the potential to yield important information in prehistory or history.

Several subdivisions or tracts built in the 1940s and 1950s are within 0.5 mile of the Project site. Consequently, there are over 100 houses more than 45 years of age within a 0.5 mile radius. Rather than prepare DPR 523 inventory forms for each building, it was determined, in consultation with Gary Reinoehl of the CEC, that DPR forms would be prepared for the two churches in the area and for two of the houses. These DPR forms are provided in Appendix 8.3B. Evaluation of potentially historic buildings and structures was conducted by Ms. Elizabeth Calvit, a Secretary of the Interior, qualified Architectural Historian (see Appendix 8.3A for her resume).

Plant Site

The plant site is located on a 12.25-acre parcel (currently designated APN Nos. 259-640-05, 259-640-06, 259-640-07, and 259-640-08) for which MID has obtained the purchase option at the intersection of the future extensions of South Stockton Avenue and Doak Blvd., in San Joaquin County, California (see Figure 1.2). The plant site will occupy 8 acres (6 acres for the plant site on the northern side of the parcel and 2 acres for access, emergency access and transmission lines). The size of the area to be graded is 8 acres (permanently disturbed). The remaining 4.25 acres will be used for equipment laydown and parking during construction. After construction, the 4.25 acres will be available for sale, equipment storage, or future development, as determined by the MID Board of Directors.

The site is generally square in shape, and although it was used for agricultural crop production in the past, at the present time the entire acreage is out of production. Local residents stated that the Project area was once an almond orchard and that it had been in agricultural production since at least the early 1950s.

The archaeological survey was completed using 30 meter transects in a north/south direction. About one-half of the abandoned agricultural field contained swathed grasses and the remainder had recently burned, effectively removing all vegetation. Visibility in the unburned area was about 10 percent and about 100 percent in the burned area. The entire Project area contained a large number of squirrel holes and back dirt mounds providing excellent opportunities for the inspection of potential subsurface cultural deposits. No cultural resources were observed.

Transmission Line

The proposed 0.25-mile-long 69-kV subtransmission line will connect the plant site with MID's existing substation along 60-foot-tall subtransmission poles.

Gas Line

The gas line for the facility will extend approximately 0.25 mile from the plant site, north along South Stockton Avenue, to the local Pacific Gas and Electric Company (PG&E) gas main at 4th Street.

CH2M HILL staff surveyed the gas line from the centerline of South Stockton Avenue 100 feet on each side of the center line. The pipeline will be placed beneath South Stockton Avenue, which is currently paved. The entire route on both sides of South Stockton Avenue was heavily disturbed from previous construction-related activities. No cultural resources were observed.

Potable Water

Connection to potable water will be made in the South Stockton Avenue line (approximately 30 feet in total length). To avoid having to repair the surface of the newly paved road, the City of Ripon is planning to stub out the potable water line to the site before paving the road.

CH2M HILL staff surveyed the raw water route using a pair of 30-meter spaced pedestrian transects to inspect the pipeline centerline and 100 feet on each side of the center line. Ground disturbance was extensive for the route from construction and agricultural related activities. No cultural resources were observed.

Non-Potable Water Route

Connection to non-potable water from the City of Ripon non-potable water system will be made in the South Stockton Avenue line (approximately 30 feet in total length). To avoid having to repair the surface of the newly paved road, the City of Ripon is planning to stub out the non-potable water line to the site before paving the road.

CH2M HILL staff surveyed the raw water route using a pair of 30-meter spaced pedestrian transects to inspect the pipeline centerline and 100 feet on each side of the center line. Ground disturbance was extensive for the route from construction and agricultural related activities. No cultural resources were observed.

Wastewater/Stormwater Routes

Connection of the wastewater and stormwater lines to the City of Ripon sewer and stormwater lines on South Stockton Avenue line will be made (approximately 30 feet in total length). To avoid having to repair the surface of the newly paved road, the City of Ripon is planning to stub out the wastewater and stormwater lines to the site before paving the road.

CH2M HILL staff surveyed the wastewater and storm water routes using a pair of 30-meter spaced pedestrian transects to inspect the pipeline centerline and 100 feet on each side of the center line. Ground disturbance was extensive for the route from construction and agricultural related activities. No cultural resources were observed.

8.3.4.2 Native American Consultation

CH2M HILL wrote to the NAHC on December 18, 2002, requesting information about traditional cultural properties such as cemeteries and sacred places in the Project area. The NAHC responded on December 26, 2002 (Pilas-Treadway, 2002) that a search of the Sacred Lands file failed to indicate the presence of Native American cultural resources in the immediate Project area.

The NAHC provided CH2M HILL with the names of individuals that should be contacted for further information: Katherine Erolinda Perez – an individual of Ohlone/Costanoan/Northern Valley Yokut/Bay Miwok heritage and Ms. Reba Fuller – an individual of Me-Wuk (Miwok) heritage. Ms. Perez and Ms. Fuller were contacted by letter

on December 31, 2002 (see Appendix 8.3C). As of April 8, 2003, neither Ms. Perez or Ms. Fuller has responded to the December 18, 2002 letter. A summary of the results of consultations with Ms. Perez and Ms. Fuller, should such consultations take place, will be included in a future filing.

8.3.5 Impacts

The record search conducted at the Central California Information Center of the California Historical Resources Information System revealed that no historic or archaeological sites are recorded at the Project plant site and at the various facility alignment linears and/or their alternatives and that no known/recorded Native American traditional cultural properties are present. Although no known/recorded sites are present, it is possible that presently undetected archaeological sites could be affected by the proposed Project.

8.3.5.1 Environmental Checklist

Table 8.3-3 provides the CEQA Checklist questions that are used in this SPPE Application to assess the significance of potential impacts.

TABLE 8.3-3
CEQA Checklist Questions

	Potentially Significant Impact	Less than Significant w/Mitigation	Less than Significant	No Impact
CULTURAL RESOURCES —Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

8.3.5.2 Discussion of Impacts

As proposed, the MEGS Project will have no impact to known/recorded archaeological resources. It is possible that heretofore unknown or unrecorded archaeological resources could be encountered during subsurface construction that penetrates native soils. Mitigation measures described below would reduce such possible impacts to archaeological resources to a less-than-significant level. Possible impacts to the historic built environment are not yet determined

8.3.5.3 Cumulative Impacts

Since the Project would not affect known significant archaeological resources, it would not be likely to cause significant cumulative impacts.

If construction of the MEGS Project were to encounter a large, stratified, buried prehistoric archaeological site, the possibility of cumulative impacts would arise because such sites are highly significant, and many have been destroyed or damaged by agricultural activity and/or commercial, industrial, or residential development in the Project area. Given the relative low level of impact to such a site that the Project's linear features would cause, it is also possible that proposed activities would not lead to significant cumulative impacts, depending on the extent of Project impact to any such discovered archaeological deposits. Any potential impact to an unknown site would be minimized by monitoring during construction and by stop-work procedures if a site were uncovered.

8.3.6 Mitigation

The best mitigation measure is to avoid impact to cultural resources that may be located in the Project area. Avoidance can be accomplished by having the archaeologist and Project engineer demarcate cultural resource site boundaries on the ground to ensure that proposed Project improvements do not impinge on the resource(s). Where a tower, road, pipeline or other facility must be placed within 100 feet of a known archaeological site, the site can be temporarily fenced or otherwise marked on the ground as an Environmentally Sensitive Area (ESA). Construction equipment can then be directed away from the ESA, and construction personnel directed to avoid entering the ESA. In some cases, additional archaeological work will be needed to better delineate ESA boundaries.

Prior to starting construction near a designated ESA, the construction crew should be informed of the resource values involved and of the regulatory protections afforded to the resources. The crew can also be informed of procedures relating to designated ESAs and cautioned not to drive into these areas to park or operate construction equipment on them. The crew can be cautioned not to collect artifacts and asked to inform their supervisor, should cultural remains be uncovered.

Though no known/recorded archaeological or historical sites are present within the footprint of the proposed Project elements, it is possible that subsurface construction could encounter buried archaeological remains. Since prehistoric archaeological sites and isolated artifacts have been found in the general vicinity, monitoring of subsurface construction is recommended. The recommended monitoring can be conducted on a part-time basis, to be determined at the discretion of the assigned Project Archaeologist (PA). The Project Archaeologist or his/her designated Archaeological Monitor (AM) should conduct the recommended construction monitoring. A PA and AM can be the same person, if properly qualified.

Proper qualifications for a PA are 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 AM should have 5 years of experience in conducting archaeological field projects or hold a Bachelor of Arts degree in anthropology, with an emphasis in archaeology, and have at least 1 year of experience in conducting archaeological field projects. The AM should be qualified to detect archaeological deposits in the field. In addition to site detection, the PA should be qualified to evaluate the significance of the deposits, consult with regulatory agencies, and plan site evaluation and mitigation activities.

If archaeological site testing and/or data recovery operations are triggered as a consequence of prehistoric archaeological remains being discovered during construction, it is recommended that a Native American monitor be present. Selection of the participating Native American should be made through the NAHC, and the Native American monitor could be retained either directly by the Applicant or through the subconsultant conducting the actual archaeological fieldwork.

If appropriate, a six-point archaeological monitoring program would be implemented as follows:

1. **Preconstruction Assessment and Construction Training** – The PA and AM will visit the Project area before construction begins to become familiar with site conditions. As construction begins, the PA will conduct a worker education session for construction supervisory personnel to explain the importance of, and legal basis for, the protection of significant archaeological resources. Subsequent training sessions may be in the form of a video. Information about archaeological resources may be combined with information about cultural resources in the training brochure that will be distributed to construction supervisory personnel.
2. **Construction Monitoring** – The AM should be present at the construction site at all times when excavation is taking place within the zone of archaeological sensitivity. The AM's role will be to watch for buried archaeological deposits during excavation for roads, natural gas and water pipelines and during at-grade construction of electrical subtransmission poles.

If the AM identifies archaeological remains during construction, the AM should immediately notify the PA and Site Superintendent, who should halt construction in the immediate vicinity of the find, as necessary. The Superintendent and AM will use flagging tape, rope, or other means to delineate the area of the find within which construction will halt. This area should include the excavation trench from which the archaeological finds came and any piles of dirt or rock spoil from that area. Construction should not take place within the delineated find area until the PA, in consultation with CEC staff, can inspect and evaluate the find.

3. **Site Recording and Evaluation** – The PA and/or AM should follow accepted professional standards in recording any find and should submit the standard Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and locational information to the CHRIS office (Central California Information Center).

If the PA determines that the find is insignificant, construction will proceed. If the PA determines that further information is needed to evaluate significance, the CEC and SHPO will be notified, and the consultant will prepare a plan and a timetable for evaluating the find, in consultation with the CEC and SHPO. Under CEQA, a find would be considered significant (would be classified as an "important archaeological resource") if it meets any of the following criteria:

- It is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory.

- It can provide information that is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions.
- It has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind.
- It is at least 100 years old and possesses substantial stratigraphic integrity.
- It involves important research questions that historical research has shown can be answered only with archaeological methods.

Under the NHPA, a find is significant if it meets the NRHP listing criteria at 36 CFR 60.4:

- The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
 - That are associated with events that have made a significant contribution to the broad patterns of our history, or
 - That are associated with the lives of persons significant in our past, or
 - That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
 - That have yielded, or may be likely to yield, information important in prehistory or history.

If human remains are found during construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the appropriate County Coroner. 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 (MLD), and requests the MLD to inspect the burial and make recommendations for treatment or disposal. The CEC will require that all pertinent California state laws be followed if human remains are found during construction.

If human remains are encountered on federally owned/administered land, the applicable federal agency would be required to negotiate under the Native American Graves Protection and Repatriation Act the repatriation of the remains to a lineal descendant or a culturally affiliated organization.

4. **Mitigation Planning** – If the PA and the consulting parties determine that the find is significant, they should prepare and carry out a mitigation plan in accordance with state and federal guidelines. This plan should emphasize the avoidance, if possible, of significant archaeological resources. If avoidance is not possible, the recovery of a sample of the deposit from which the archaeologist can define scientific data to address archaeological research questions should be considered an effective mitigation measure for damage to or destruction of the deposit.

The mitigation program, if necessary, should be carried out as soon as possible to avoid construction delays. Construction should resume at the site as soon as the field data collection phase of any data recovery effort is completed. The PA will verify the completion of field data collection by letter to Modesto Irrigation District and the CEC so that MID can resume construction.

5. **Curation** – The PA will arrange for the curation of archaeological materials collected during the monitoring and mitigation program at a qualified curation facility. A qualified curation facility is a recognized, non-profit, archaeological repository with a permanent curator. The PA shall submit field notes, stratigraphic drawings, and other materials developed as part of the archaeological excavation program to the curation facility along with the collection.
6. **Report of Findings** – If buried archaeological deposits are found during construction, the PA will prepare a report summarizing the monitoring and archaeological investigation program implemented to evaluate the find or to recover data from an archaeological site as a mitigation measure. This report should describe the site soils and stratigraphy, describe and analyze artifacts and other materials recovered, and explain the site’s significance. This report should be submitted to the curation facility with the collection.

Following these mitigation measures would lower any potential project effects on archaeological resources below the threshold of significance. Though it is possible that the project would encounter significant archaeological deposits, the monitor would be present to detect, evaluate, and recover them. The monitoring and mitigation program would, therefore, be effective.

Emergency maintenance and repair could cause impacts to cultural resources. Specific mitigative measures will be developed to address impacts that cannot be avoided during construction. The potential for ongoing impacts to any resource that cannot be avoided through project redesign must be considered. Any mitigative data recovery should be properly scoped, in conjunction with the appropriate agencies, to address potential long-term ongoing impacts.

8.3.7 Involved Agencies and Agency Contacts

Table 8.3-4 lists the state agencies involved in cultural resources management for the Project and a contact person at each agency. These agencies include the California NAHC and, for federal lands, the California Office of Historic Preservation.

TABLE 8.3-4
Agency Contacts

Issue	Contact	Title	Telephone
Native American traditional cultural properties	Ms. Debbie Pilas-Treadway NAHC	Associate Government Program Analyst	(916) 653-4040
Federal agency NHPA Section 106 compliance	Mr. Knox Mellon California Office of Historic Preservation	SHPO	(916) 653-6624

8.3.8 Permits Required and Permit Schedule

No permits are expected to be required.

8.3.9 References Cited or Consulted

Baker, S. 1982. *An Archaeological Reconnaissance of the Turpstra-Overgaauw Property, Ripon, California*. National Archaeological Data Base Report 1361520 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

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. 1954. *Temporal and Areal Relationships in Central California Archaeology*. University of California Archaeological Survey Reports 24 and 25, Berkeley.

Beardsley, R.K. 1948. Cultural Sequences in Central California Archaeology. *American Antiquity*. 14(1):1-29.

Beck, W.A., and Y.D. Haase. 1974. *Historical Atlas of California*. University of Oklahoma Press, Norman.

Beck, W.A. and D.A. Williams. 1972. *California: A History of the Golden State*. Doubleday, Garden City, New York.

Bennyhoff, J.A. 1994. *Central California Augustine: Implications for Northern California Archaeology*. 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.

Bennyhoff, J.A. 1977. *The Ethnogeography of the Plains Miwok*. Center for Archaeological Research at Davis Publications 5. University of California, Davis.

Branch, L.C. 1914. *The Story of Stanislaus*. The Modesto Herald, Modesto.

Branch, L.C. 1881. *History of Stanislaus County, California*. Elliott and Moore Publishers, San Francisco. 1990 Reproduction by Windmill Publications, Inc., Mt. Vernon.

California (State of), Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 2002. *Directory of Properties in the Historic Property Data File for San Joaquin County*. Office of Historic Preservation, Department of Parks and Recreation.

California (State of), Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP). 1998. *Historic Properties Directory*. Office of Historic Preservation, Department of Parks and Recreation, Sacramento.

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

California (State of), 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 (State of), 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 (State of), 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 (State of), 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 (State of), 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 (State of), 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, California.

California (State of), 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, California.

California, Energy Commission (CEC). 1997. *Rules of Practice and Procedure & Power Plant Site Certification*. California Energy Commission, 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.

Chartkoff, J.L. and K.K. Chartkoff. 1984. *The Archaeology of California*. Stanford University Press, Stanford, California.

Cook, S.F. 1960. *Colonial Expeditions to the Interior of California: Central Valley*. University of California Anthropological Records 16(6), Berkeley.

Cook, S.F. 1955. *The Aboriginal Population of the San Joaquin Valley, California*. University of California Anthropological Records 16(2), Berkeley.

- Coy, O.C. 1973. *California County Boundaries: A Study of the Division of the State into Counties and the Subsequent Changes in their Boundaries* (Revised edition). California Historical Survey Commission. Valley Publishers, Fresno.
- Cutter, D. 1950. *Spanish Exploration of California's Central Valley*. Ph.D. dissertation, Department of History, University of California, Berkeley.
- Davis, J.T. 1961. *Trade Routes and Economic Exchange Among the Indians of California*. University of California Archaeological Survey Reports 54, Berkeley.
- Elsasser, A.B. 1978. *Development of Regional Prehistoric Cultures*. In *California*, edited by R.F. Heizer, Volume 8. Handbook of North American Indians, W.G. Sturtevant, general editor, pp. 37-57. Smithsonian Institution, Washington, D.C.
- Fredrickson, D.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.
- Gardner, Natalie W., 1967, "History of Ripon," dated February 1967, Vol. III, San Joaquin Historical Society, Lodi, California.
- 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, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.
- Gerry, R.A. and J.R. Oglesby. 1994. Cultural Resources Assessment of the North Point Annexation Water Treatment Project, City of Ripon, San Joaquin County, California. Report CCIC 2528 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.
- Gilbert, F.T. 1968. *Reproduction of Thompson and West's History of San Joaquin County, California with Illustrations*. Howell-North Books, Berkeley.
- Goddard, G. 1857. *Britton & Rey's Map of the State of California*. Britton and Rey, San Francisco. Reprinted by The Friends of the Bancroft Library, University of California, Berkeley.
- Gooch, K.M. 1988. *Stanislaus County - An Illustrated History*. Windsor Publications, Northridge.
- Gorsen, M.F. 1999. *The New and Improved CEQA Guidelines Revisions: Important Guidance for Controversial Issues*. Environmental Monitor, Winter 1999. Association of Environmental Professionals, Sacramento.
- Gudde, E.G. 1974. *California Place Names: The Origin and Etymology of Current Geographical Names* (Third edition revised and enlarged, Second printing). University of California Press, Berkeley.
- Harlow, N. 1935. *History of Modesto*. Modesto Chamber of Commerce, Modesto.

Harmon, R.M., J.C. Bard, D.M. Garaventa, S.J. Rossa and J. Yelding-Sloan. 1992. *Negative Archaeological Survey Report, Modesto Track Consolidation Corridor, Lathrop, San Joaquin County and Modesto, Stanislaus County, California*. National Archaeological Data Base Report No. 1360511 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

Hart, J.D. 1978. *A Companion to California*. Oxford University Press, New York.

Hatoff, B., B. Voss, and S. Waechter. 1995. *Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project*. National Archaeological Data Base Report No. 1362256 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

Heizer, R.F. 1954. *The Archaeology of Central California I: The Early Horizon*. University of California Anthropological Records 12(1):1-84.

Hickert, R. And O. Lewis. 1984. *Breadbasket of the World – The Great Wheat Growing Era 1860-1890*. California Historical Society, San Francisco.

Hoover, M.B., H.E. Rensch, E.G. Rensch and W.N. Abeloe. 1990. *Historic Spots in California*. 1990 edition revised by Douglas Kyle. Stanford University Press, Stanford.

Hoover, M.B., H.E. Rensch, E.G. Rensch and W.N. Abeloe. 1966. *Historic Spots in California*. Stanford University Press, Palo Alto.

Hughes, R.E. (ed.). 1994. *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.

Jensen, P.M. 1999. *Archaeological Inventory Survey, Ripon-Escalon Electrical Distribution Line, Route II Project, ca. 4.75 Mile Corridor near Ripon, San Joaquin County, California*. National Archaeological Data Base Report No. 1363845 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

Jensen, P.M. 1996. *Archaeological Inventory Survey, Tracy to Fresno Longhaul Fiberoptics Data Transmission Line, Portions of Fresno, Madera, Merced, Stanislaus, and San Joaquin Counties, California*. National Archaeological Data Base Report No. 1362791 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

King, C.D. 1978. *Protohistoric and Historic Archaeology*. In *California*, edited by R.F. Heizer, Volume 8. Handbook of North American Indians, W.G. Sturtevant, general editor, pp.58-68. Smithsonian Institution, Washington, D.C.

Krell, D. 1979. *The California Missions*. Lane Publishing Company, Menlo Park.

Kroeber, A.L. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Government Printing Office, Washington, D.C.

Kyle, D.E. 1990. *Historic Spots in California* (Fourth edition of M.B. Hoover, H.E. Rensch and E.G. Rensch). Stanford University Press, Stanford.

- Latta, F.F. 1977. *Handbook of Yokuts Indians* (Second edition, revised and enlarged). Bear State Books, Santa Cruz.
- Lavender, D. 1976. *California: A Bicentennial History*. W.W. Norton, New York.
- 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, D.C.
- 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, D.C.
- 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.
- Manteca Bulletin, 1976, "Ripon: the South County's Earliest Days," dated January 21, Manteca California.
- Merriam, C. H. 1968. *Village Names in Twelve California Mission Records* (edited by R.F. Heizer). University of California Archaeological Survey Reports 74, Berkeley.
- Merriam, C. H. 1955. *Studies of California Indians*. University of California Press, Berkeley.
- Milliken, R.T. 1995. *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*. Ballena Press Anthropological Papers No. 43.
- Moratto, M.J. 1984. *California Archaeology*. Academic Press, New York.
- Moratto, et al. 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.
- Moratto, et al. 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.
- Moratto, M.J. and T.F. King, and W.B. Woolfenden. 1978. *Archaeology and California's Climate*. *Journal of California Anthropology* 5:127-140.
- Mounday, L.H. 1976a. *Archaeological Assessment of the Ripon City Hall Site*. National Archaeological Data Base Report No. 1363942 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.
- Mounday, L.H. 1976b. *Archaeological Survey of the Manley-Ripona Park Site Conducted for the City of Ripon-September 1976*. Report CCIC No. 3902 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.
- National Park Service (NPS). 1983. *Archaeology and Historic Preservation. Secretary of the Interior's Standards and Guidelines*. Department of the Interior, Washington, D.C.

Nelson, W.J. 2000. *Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project, Segment WS04: Sacramento to Bakersfield*. National Archaeological Data Base Report No. 1363956 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

Peak & Associates, Inc. 1989. *Cultural Resource Assessment of the Ripon Bluffs Project, San Joaquin County, California*. National Archaeological Data Base Report No. 1361640 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.

Pilas-Treadway, D. 2002. *Proposed Ripon Power Plant Project, San Joaquin County*. Letter from the Native American Heritage Commission dated December 26, 2002 to CH2M HILL. Native American Heritage Commission, Sacramento.

Pilling, A.R. 1950. *The Archaeological Implications of an Annual Coastal Visit for Certain Yokuts Groups*. *American Anthropologist* 52(3):438-440.

Ripon, City of. 1999. A Brief History of the City of Ripon.
<http://www.cityofripon.org/Community/history.htm>. City of Ripon, California.

Ripon, City of. 1998a. *Archaeological and Historical Resources*. Volume II – Chapter Four, Environmental Setting, Impacts and Mitigation Measures, Ripon General Plan and EIR, Certified September 15, 1998. City of Ripon, California.

Ripon, City of. 1998b. *Goals and Policies*. Volume I – Chapter Five, Open Space and Conservation, Ripon General Plan and EIR, Adopted September 15, 1998. City of Ripon, California.

Ripon Record, 1967, “*History of Ripon Started in 1857,*” dated February 23, 1967, Ripon, California.

San Joaquin County. 1989. *San Joaquin County General Plan 2010 (Draft)*. San Joaquin County Community Development Services, Planning Division, Stockton.

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.

Schenck, W.E. 1926. *Historic Aboriginal Groups of the California Delta Region*. University of California Publications in American Archaeology and Ethnology 23(2), Berkeley.

Seidel, W. 1989. *Caltrans Local Bridge Survey*. Report on file, California Historical Resources Information Center, Stanislaus State University, Turlock.

Shipley, W. 1978. *Native Languages of California*. In, R.F. Heizer (ed.), *Handbook of North American Indians*, Volume 8, California, pp. 80-90. Smithsonian Institution, Washington, D.C.

Silverstein, M. 1978. *Yokuts: Introduction*. In, R.F. Heizer (ed.), *Handbook of North American Indians*, Volume 8, California, pp. 8446-447. Smithsonian Institution, Washington, D.C.

Smith, W.P. 1932. *The Development of the San Joaquin Valley, 1772-1882*. Ph.D. dissertation, Department of History, University of California, Berkeley.

Thompson, J. 1957. *The Settlement Geography of the Sacramento-San Joaquin Delta, California*. Ph.D. dissertation, Department of Geography, Stanford University.

Thompson and West. 1879. *History of San Joaquin County, California with Illustrations*. Howell-North Books, Berkeley, California (1968).

United States Department of Interior, Geological Survey (USGS). 1994. *Ripon, California*. [Quadrangle]. Topographic map (scale 1:24,000) on file, United States Geological Survey, Menlo Park.

United States Department of Interior, Geological Survey (USGS). 1987. *Salida, California*. [Quadrangle]. Topographic map (scale 1:24,000) on file, United States Geological Survey, Menlo Park.

United States Department of the Interior, National Register of Historic Places, National Park Service (USNPS). 2001. *National Register of Historic Places Index by Property Location*. Properties in California, listed determined, and pending.

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

Werness, H.B. 1978. *An Architectural Survey of the San Joaquin Valley*. Report CCIC 2594 on file, Central California Information Center, California Historical Resources Information System, Stanislaus State University, Turlock.