

Chapter 9

# **Cultural Resources**

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## Chapter 9

# Cultural Resources

This chapter examines the proposed action's potential impacts on cultural resources. *Cultural resources* include prehistoric and historic archaeological sites; historic buildings and structures; historic districts with multiple buildings or structures; districts of archaeological sites; cultural landscapes, traditional cultural properties; and resources of interest to Native American groups. Paleontological resources are discussed separately in Chapter 10.

## Affected Environment

### Regulatory Framework

#### Federal Regulations

##### Antiquities Act

The federal Antiquities Act of 1906 was enacted with the primary goal of protecting cultural resources in the United States. It explicitly prohibits appropriation, excavation, injury, and destruction of “any historic or prehistoric ruin or monument, or any object of antiquity” located on lands owned or controlled by the federal government, without permission of the secretary of the federal department with jurisdiction. It also establishes criminal penalties, including fines and/or imprisonment, for these acts. As such, the Antiquities Act represents the foundation of modern regulatory protection for cultural resources.

##### National Environmental Policy Act

NEPA requires that federal agencies assess whether federal actions would result in significant effects on the human environment. The Council on Environmental Quality's (CEQ's) NEPA regulations further stipulate that identification of significant effects should incorporate “the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register for Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources” (40 CFR 1508.27[b][8]).

## Government-to-Government Relationship With Native American Tribes

Several federal policies require USFWS to interact with Native American tribes on a government-to-government basis. These include Secretarial Order 3206, dated June 5, 1997 (*American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act*); Executive Order 13175; and the U.S. Department of the Interior's 512 DM 2. The intent of these regulations is to streamline the ESA consultation process, and to ensure full Tribal representation.

## State Regulations

### CEQA Protection for Historical (Cultural) Resources

CEQA requires that public or private projects financed or approved by state or local public agencies be assessed to determine their potential to affect historical resources. CEQA uses the term *historical resources* to include buildings, sites, structures, objects, or districts, each of which may have historical, pre-historical, architectural, archaeological, cultural, or scientific importance.

CEQA states that if implementation of a project would result in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (14 CCR 15064.5, 15126.4). Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined.

The state's CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review.

1. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
2. The resource is included in a local register of historical resources, as defined in Section 5020.1[k] of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1[g] of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (California Code of Regulations, Title 14, Division 6, Chapter 3, section 15064.5[a]).

Each of these ways of qualifying as an historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1[k], 5024.1, 5024.1[g]). A historical resource may be eligible for inclusion in the CRHR if it meets any of the following conditions.

1. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. The resource is associated with the lives of persons important in our past.
3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC 5024.1[d][1]).

According to CEQA, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment (14 CCR 15064.5[b]). Under CEQA, a *substantial adverse change* in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would *materially impair* the significance of a historic resource are any actions that would demolish or adversely alter the physical characteristics that convey the property's historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC 5020.1[k] and 5024.1[g].

## **California Health and Safety Code—Treatment of Human Remains**

Under Section 8100 of the California Health and Safety Code, six or more human burials at one location constitute a cemetery. Disturbance of Native American cemeteries is a felony (Health and Safety Code Sec. 7052).

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the County Coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the Coroner must then contact the Native American Heritage Commission (NAHC), which has jurisdiction pursuant to Section 5097 of the California Public Resources Code.

When human remains are discovered or recognized in any location other than a dedicated cemetery, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains may take place until the County Coroner has been informed and has determined that no investigation of the cause of death is required; and, if the remains are of Native American origin, either

- the descendants of the deceased Native American(s) have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or
- the NAHC was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

## Cultural Setting

### Prehistory

South of the Stockton District, the San Joaquin Valley is one of the least known archaeological areas in California. In addition, the southern San Joaquin Valley covers a large area, and significant variation is apparent in archaeological materials (Moratto 1984).

Although few archaeological sites demonstrate evidence of human occupation of the San Joaquin Valley during the late Pleistocene and early Holocene (14,000 to 8,000 B.P. [before present; *present* is understood to refer to A.D. 1950]), this is likely a product of the archaeological record itself rather than lack of use of this area. Most Pleistocene- and Holocene-epoch sites are deeply buried in accumulated gravels and silts or have eroded away. The earliest sites in the San Joaquin Valley are believed to be the Farmington Complex sites in San Joaquin and Stanislaus Counties (Riddell 1949, Treganza 1952), the Tranquillity Site in Fresno County (Riddell 1949, Treganza 1952), and the Witt Site in Kings County (Riddell and Olsen 1969, Wallace 1991). Archaeologists have also identified fluted projectile points on the margin of Tulare Lake. The points, which are morphologically similar to Clovis points, may date as early as 11,000–12,000 B.P. (Wallace 1991). Fluted projectile points have also been discovered near the City of Newman (Dillon 2002).

As summarized in Moratto (1984), a chronological sequence was devised for the southern San Joaquin Valley in 1969 by Olsen and Payen based on western valley excavations. It is composed of four temporally distinct complexes: Positas, Pacheco, Gonzaga, and Panoche.

The **Positas Complex** ranges from 5300 to 4600 B.P. and is characterized by small shaped mortars, short cylindrical pestles, millingstones, perforated flat

cobbles, and spire-lopped *Olivella* beads. This complex is represented by cultural materials excavated from CA-Mer-S94.

The **Pacheco Complex**, beginning in approximately 4600 B.P. and ending roughly 1700 B.P., has been divided into two phases. The Pacheco, Phase B (4600–3600 B.P.) is characterized by foliated bifaces; rectangular *Haliotis* ornaments; and thick, rectangular *Olivella* beads. The Pacheco, Phase A (3600–1700 B.P.) is represented by more varied types of shell beads; *Olivella* beads of spire-ground, modified saddle, saucer, and split-drilled types are present, as well as *Haliotis* disc beads and ornaments. Other artifacts characteristic of this phase are perforated canine teeth; bone awls, whistles, and grass saws; large-stemmed and side-notched points; and an abundance of millingstones, mortars, and pestles. The shell and bone industries of the Pacheco Complex are most comparable to those of the Delta Middle Horizon Period. Other traits indicate relations with areas to the west and south.

The **Gonzaga Complex** (1700–1000 B.P.) is represented by an assemblage similar to that of the Delta Late Horizon, Phase 1. This complex is characterized by extended and flexed burials; bowl mortars and shaped pestles; squared and tapered stem projectile points; few bone awls and grass saws; and a shell industry composed of distinctive *Haliotis* ornaments and rectangular, split-punched, and oval *Olivella* beads.

The **Panoche Complex** (500 B.P. to European contact) is most comparable to the Delta Late Horizon, Phase 2. This complex is characterized by the presence of few millingstones and varied mortars and pestles; small side-notched arrow points; clamshell disc beads; *Haliotis* epidermis disc beads; *Olivella* lipped, side-ground, and rough disc beads; and bone awls, whistles, saws, and tubes. Flexed burials and primary and secondary cremations are found.

## Ethnography

At the time of European contact, the San Joaquin Valley south of Stockton was inhabited by two groups—the Northern Valley Yokuts and the Southern Valley Yokuts.

### Northern Valley Yokuts

Ethnographic work with the Northern Valley Yokuts is lacking. Because of the early decimation of the aboriginal populations in the lower San Joaquin Valley, most information regarding this group is gleaned from accounts of Spanish military men and missionaries that have been translated. A summary of these sources has been compiled by W. J. Wallace (1978), and it is upon this work that this brief ethnographic overview is based.

Northern Valley Yokuts territory is defined roughly by the crest of the Diablo Range on the west and the foothills of the Sierra Nevada on the east. The

southern boundary is approximately where the San Joaquin River bends northward, and the northern boundary is roughly half way between the Calaveras and Mokelumne Rivers. The Yokuts may have been fairly recent arrivals in the San Joaquin Valley, perhaps being pushed out of the foothills about 500 years ago.

Population estimates for the Northern Valley Yokuts vary from 11,000 to more than 31,000 individuals. Populations were concentrated along waterways and on the more hospitable east side of the San Joaquin River. Villages, or clusters of villages, made up “miniature tribes” (tribelets) lead by headmen. The number of tribelets is estimated at 30 to 40; each tribe spoke its own dialect of the Yokuts language. Combined with the Southern Valley Yokuts and the Foothill Yokuts dialects, these tongues formed the Yokutsan linguistic family of the Penutian Stock (Shipley 1978).

Principal settlements were located on the tops of low mounds, on or near the banks of the larger watercourses. Settlements were composed of single-family dwellings, sweathouses, and ceremonial assembly chambers. Dwellings were small and lightly constructed, semi-subterranean, and oval. The public structures were large and earth covered. Sedentism was fostered by the abundance of riverine resources in the area.

Subsistence among the Northern Valley Yokuts revolved around the waterways and marshes of the lower San Joaquin Valley. Fishing with dragnets, harpoons, and hook and line yielded salmon, white sturgeon, river perch, and other species of edible fish. Waterfowl and small game attracted to the water also provided a source of protein. The contribution of big game to the diet was probably minimal. Vegetal staples included acorns, tule roots, and seeds.

Goods not available locally were obtained through trade. Paiute and Shoshone groups on the eastern side of the Sierra were suppliers of obsidian. Shell beads and mussels were obtained from Salinan and Costanoan groups. Trading relations with Miwok groups yielded baskets and bows and arrows. Overland transport was facilitated by a network of trails, and tule rafts were used for water transport.

Most Northern Valley Yokuts groups had their first contact with Europeans in the early 1800s when the Spanish began exploring the Sacramento–San Joaquin River Delta. The gradual erosion of Yokuts culture began during the mission period. Escaped neophytes brought foreign (European and Native American) habits and tastes, as well as Spanish expeditions to recover escapees. Epidemics of European diseases played a large role in the decimation of the native population. With the secularization of the mission and the release of neophytes, tribal and territorial adjustments were set in motion. People left the missions to return to other Native American groups, and a number of polyglot “tribes” were formed. The final blow to the aboriginal population came with the Gold Rush and its aftermath. In the rush to the southern mines, native populations were pushed out of the way, out of their territories. Ex-miners settling in the fertile valley applied further pressure to the native groups and altered the landforms and waterways of the valley. Many Yokuts resorted to wage labor on farms and



ranches. Others were resettled on land set aside for them on the Fresno and Tule River Reserves.

## Southern Valley Yokuts

Historical accounts of the Southern Valley Yokuts were given by Pedro Fages, Francisco Garces, and Lieutenant Jose Maria Estudillo. Ethnographic descriptions are provided by Powers (1877), Curtis (1907–1930), Kroeber (1925), and Latta (1949). Wallace (1978) summarizes these works and, unless otherwise noted, it is from this summary that the brief ethnography provided here is drawn.

Southern Valley Yokuts territory encompassed the upper (southern) end of the San Joaquin Valley, from the lower Kings River south to the Tehachapi Mountains. Included in this area were Tulare, Buena Vista, and Kern Lakes and their connecting sloughs and the lower portions of the Kings, Kaweah, Tule, and Kern Rivers. Adjacent to these lakes, rivers, and sloughs was an extensive swamp that expanded and contracted seasonally. The valley floor was essentially a large wetland, treeless with the exception of cottonwoods, sycamores, and willows lining the banks of rivers and sloughs.

At the time of European contact, at least 15 Yokuts groups inhabited the southern San Joaquin Valley (Kroeber 1925). Population estimates for this period range from 5,250 to 15,700. This group was composed of a number of small tribes, each of which spoke a distinct dialect of the Yokuts language (Shipley 1978).

The Yokuts depended on a mixed subsistence economy, emphasizing fishing; hunting game and waterfowl; and collecting shellfish, roots, and seeds. A variety of fish species were obtained through the use of dragnets, hand nets, spears, poison, bows and arrows, and weirs. Waterfowl were hunted with snares, bows and arrows, decoys, and long-handled nets. Turtles, mussels, and the eggs of waterfowl were gathered. Relatively few insect food sources were exploited. Small game was taken with snares or traps, bows and arrows, and nets.

Vegetal resources consisted of roots and seeds of wetland plants, brush, and bunch grasses. Acorns, the staple of so many native California groups, were not readily available in the area because oaks did not extend very far onto the valley floor. However, the Southern Valley Yokuts obtained acorns from their eastern neighbors in exchange for fish. Another important trade item in the area was asphaltum, used to waterproof baskets (Latta 1949).

Structures built by Southern Valley Yokuts were usually tule covered and, because of the generally high water table, were not dug into the ground. Small single-family dwellings were constructed of a wood frame and covered with tule mats. Long, steep-roofed dwellings of similar construction, with a shaded outdoor porch, slept 10 or more families. Each family had its own portion of the structure, with its own fireplace and door. Most cooking and household chores were performed outside, on the shaded porch, which ran the length of the building. Other structures included granaries, used to store food above ground,

and sweathouses, which were usually dirt covered. No structures were associated with dances or rituals.

Wood- and stoneworking technology remained relatively undeveloped among the Southern Valley Yokuts because these resources were generally scarce in or absent from the area. These materials usually were obtained through trade. Very abundant resources were tule reeds and other material used in basketry. Baskets included cooking containers, conical burden baskets, flat winnowing trays, seed beaters, and necked water bottles. Tules were also used to construct canoe-shaped rafts used for travel on water.

The nuclear family formed the basic domestic and economic unit. The Southern Valley Yokuts were organized in patrilineal totemic lineages that in some groups (including the Tachi) were associated with one of two patrilineal moieties. The totemic lineages were essentially mechanisms for transmitting offices and performing particular ceremonial functions. The patrilineal moieties had very little effect on the day-to-day lives of their members but were important for mourning rituals and games. Moiety exogamy was customary but not obligatory.

There was no overarching political unity among the Southern Valley Yokuts. The population was split into various self-governing tribelets, averaging roughly 350 individuals, each with its own name, dialect, and territory. Some of these political units were composed of a single village, but more often they consisted of several settlements, one of which, usually the largest, was recognized as dominant. Official positions in each village were associated with totemic lineages. Relations between local groups were generally friendly although occasional conflicts did occur.

The earliest contact the Southern Valley Yokuts had with Europeans probably occurred in the late 18<sup>th</sup> century, when Spanish explorers ventured into the southern San Joaquin Valley. No missions were established in the Southern Valley Yokuts territory; therefore, compared to their neighbors to the west, few Southern Valley Yokuts came under control of the Franciscan missionaries. Although some were settled at Soledad, San Luis Obispo, San Antonio, San Juan Bautista, and other missions, the infiltration of runaway neophytes from various Native American groups had a more significant impact on the Southern Valley Yokuts population in general. The runaway mission Indians introduced practices from their cultures and practices they learned in the missions. Horse riding was among the introduced practices, which led to raids on mission and rancho herds. In the 1820s, rancheros began to organize punitive expeditions to recover stolen livestock, punish horse thieves, and capture slaves. This practice, in addition to introduced diseases, had a comparatively small effect on the native population of the area. The decimation of the native population and rapid changes to its native culture began with the annexation of California by the United States. The native populations were not warlike and were an easy target for genocide and relocation. Southern Valley Yokuts populations were relocated to the Tejon, Fresno, and Tule River reservations. Today, the Tule River and Santa Rosa reservations host a number of Southern Valley Yokuts tribal members.

## Historic Context

The action area is centrally located in California and primarily encompasses the region known as the San Joaquin Valley. Specifically, this area is comprised of the following nine counties: San Joaquin, Stanislaus, Merced, Mariposa, Madera, Fresno, Kings, Tulare, and Kern. The northern region of the project area is comprised of San Joaquin, Stanislaus, and Merced Counties. Mariposa, Madera, and Fresno counties represent the central region. Kings, Tulare, and Kern counties comprise the Southern region of the project area.

## Settlement

Generations of Native Americans inhabited the San Joaquin Valley long before Spanish explorers and missionaries started traveling through the region in the late 1700s. Compared to the California coastal regions, which supported the earliest Spanish settlement, the San Joaquin Valley remained largely unsettled during the Spanish and Mexican Periods. Mexican land grants common to many coastal counties were sparsely scattered along the San Joaquin Valley. In fact, much of the region consisted of public lands. Following California's Gold Rush, settlement of the San Joaquin Valley gradually increased as former gold seekers realized the potential for crop production and cattle raising in the region. Many small towns were founded in the San Joaquin Valley because of railroads developed throughout the area, providing access, goods, and employment; these small towns further influenced settlement patterns in the area. The region has historically been used for agricultural and ranching practices, and these practices continue into the present (Jones & Stokes 2002).

## Political and Economic History of the Area

San Joaquin County is located at the tip of the northern region of the project area. The county was established as one of the original 27 counties after California became a state in 1850. The city of Stockton, which is centrally located within San Joaquin County, remains the seat of government. Below San Joaquin County lies Stanislaus County, which was created in 1854 from a portion of Tuolumne County. At the time the county was created the town of Adamsville was designated the county seat. The Stanislaus County seat of justice moved four times before Modesto was given the designation in 1871. The county of Merced located south of Stanislaus County was organized in 1855 from part of Mariposa County. After relocating the county seat twice, the town of Merced was given the designation of Merced County's seat of government in 1872 (Hoover 1995).

Mariposa, Madera, and Fresno counties represent the central region of the project area. Mariposa County is located to the west of Merced County, and was one of the original 27 counties. Its present configuration dates from 1880. Agua Fria was the county seat between 1850 and 1851 until Mariposa became the seat of government for Merced County. Below Mariposa County lies Madera County,

which was organized from part of Fresno County in 1893. The principal town of Madera that continues to act as the county seat was given the designation at the time of the county's formation. In 1856, Fresno County was created from Mariposa, Merced, and Tulare counties. Between the year that Fresno County was established and 1909, the boundaries were altered several times. Millerton was the first county seat until Fresno was given the designation in 1874. Fresno County comprises a significant portion of land south of Madera County (Hoover 1995).

Kings, Tulare, and Kern counties comprise the southern region of the project area. Established in 1893, Kings County is comprised of a portion of Tulare County. Kings County is located south of the western portion of Fresno County. In 1909, two small additions from Fresno County altered the boundaries of Kings County. The county seat has always been Hanford. The County of Tulare lies to the east of Kings County. In 1852, the division of the southern portion of Mariposa County resulted in the creation of Tulare County. In 1852, the seat of justice in Tulare County was located to Visalia where it remains. Kern County comprises a large section of land and is located directly south of Kings and Tulare Counties. Kern County was organized from parts of Los Angeles and Tulare counties in 1866. The central location of Bakersfield replaced the first county seat of Havilah in 1874 (Hoover 1995).

## **Agriculture and Irrigation**

The railroad played a significant role in the development of the San Joaquin Valley region by influencing a change in the direction of land use from ranching to farming. The Central Pacific Railroad (CPRR) pushed through the San Joaquin Valley in the 1870s and resulted in the formal establishment of several railroad towns, which in turn attracted more settlers to the region. During the Gold Rush, the price of cattle in the state rose drastically, and ranching and raising livestock became central to the San Joaquin Valley economy. Migrants who initially came to California in search of gold found they had better luck making a living in cattle ranching. The newly established CPRR provided an efficient and reliable method of shipping freight and farm products throughout the state. Technological advances in agricultural machinery such as the combine and threshers allowed farmers to produce large harvests with less effort. By 1874, the United State Geological Survey commenced the partitioning of the nation into 640-acre sections, and subsequently opening the public domain for private ownership. A fence law was adopted that same year and forced ranchers to enclose their lands and keep livestock from roaming free. More ranchers and farmers existed on neighboring lands after the invention of the machine that produced barbed wire made fencing relatively inexpensive. As a result of these developments, open-range cattle ranches began to decline and the cultivation of wheat and other agricultural crops increased (County of Merced 2001).

Stimulated largely by the more arid conditions they faced, settlers in the San Joaquin Valley were among the first American-era farmers in California to put in works specifically for irrigation. During the late 1850s and 1860s, their ditches were typically earthen, short, and roughly made, and they diverted water by

means of temporary brush dams constructed across the lower courses of the streams running west out of the Sierra. Further north in the valley, grain could be dry-farmed so irrigation development was slower. The great floods of 1862 and 1868 destroyed most early ditch systems, but San Joaquin Valley farmers continued to experiment with irrigation. Farmers had also begun to irrigate bottomlands on the streams in the southern San Joaquin Valley. Like other Californians, most early San Joaquin settlers in the period from 1850 through the 1870s were not particularly interested in investing time and money in irrigation, focusing instead on cattle raising and dry-farm cultivation of small grains to meet the economic opportunities created by the Gold Rush (JRP Historical Consulting Services 1995).

By the early 1900s, irrigated agriculture far surpassed “dry farming” as the most profitable method of agriculture. This allowed smaller farms to produce a variety of high-yielding cash crops including cotton, figs, sweet potatoes, tomatoes, and onions. After World War II, the irrigation systems of the region improved structurally when irrigators began the replacement of the old wooden irrigation features with stronger concrete.

Over time, immigrants to the region emerged as leaders in the agricultural and dairy industries. For example, Italian immigrants excelled at the production of tomatoes during the 1950s. Processing of agricultural products (e.g., packing, freezing) greatly contributed to the economy of Merced County. The dairy industry, led by Portuguese immigrants, emerged in the early 1990s as a major contributor to the county’s economy (County of Merced 2001).

## **PG&E’s Existing Facilities**

As described in Chapter 1, PG&E facilities are present in all portions of the action area, which was defined in part on the basis of PG&E’s infrastructure network. Many of the facilities were constructed prior to 1970, so no NEPA or CEQA analysis of construction effects on cultural resources at these sites was required. Consequently, the extent and significance of any cultural resources that may have existed prior to construction on the sites are unknown, and effects on cultural resources at these sites as a result of construction-related ground disturbance are also difficult or impossible to assess. The integrity of some cultural resources may have been reduced to such an extent as to render them ineligible for assessment under the environmental analysis for the current proposed action. However, the integrity of other cultural resources may remain intact notwithstanding the construction of the existing facilities.

# Environmental Consequences and Mitigation Strategies

## Methodology for Impact Analysis

### Contact with Tribal Authorities

As required by Secretarial Order 3206, USFWS contacted the tribes that own lands within the action area to solicit input on the proposed action during preparation of this EIS/EIR. Seven tribal authorities were contacted: Big Sandy Rancheria, Cold Springs Rancheria, North Fork Rancheria, Picayune Rancheria, Santa Rosa Rancheria, Table Mountain Rancheria, and Tule River Reservation. An initial letter was sent on August 3, 2005, describing the proposed action and summarizing the nature of the activities it would enable and their potential effects on cultural resources. USFWS made follow-up telephone calls in the weeks after the letter was delivered.

To date, the following tribes have requested to be included on the mailing list for distribution of the draft HCP and EIS/EIR: Big Sandy Rancheria, Cold Springs Rancheria, and North Fork Rancheria. The Picayune Rancheria requested additional information on the location of PG&E's existing facilities, and was referred to PG&E.

### Analysis Methods

The proposed HCP addresses a large number and a wide variety of activities over a very large geographic area. Given the nature of cultural resources sites, it is not possible to predict their locations with respect to potential work sites with any real accuracy. In general, prehistoric habitation sites are more likely to be located near streams or other water sources, and in sheltered, flat areas. However, prehistoric campsites or special use sites may be located at nearly any point on the landscape. Historic habitation sites can be predicted to some extent based on historic maps, but some habitations and many special use sites (mines, refuse deposits, etc.) were never mapped.

Although most of the activities enabled under the proposed action would occur within or immediately adjacent to existing PG&E ROWs, specific work sites within PG&E's infrastructure network are not reasonably foreseeable at this time, so it is infeasible to survey individual work sites for this analysis. Consequently, analysis focused on (1) assessing and minimizing the potential for damage to significant cultural resources as a result of various types of activities enabled under the proposed action, should any such resources be present on work sites; and (2) developing strategies to ensure appropriate avoidance or mitigation of potential impacts. Analysis assumed that PG&E would continue to implement the company's existing program of cultural resources BMPs, discussed under *Environmental Commitments* in Chapter 2.

## Significance Criteria

For the purposes of this analysis, an impact was considered to be significant and to require mitigation if it would result in any of the following.

- A substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- A substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Disturbance of any human remains, including those interred outside of formal cemeteries.
- An adverse effect on any district, site, highway, structure, or object listed in or eligible for listing in the NRHP.
- Loss of significant cultural or historical resources.

## Impacts and Mitigation Measures

### Proposed Action

**Impact CR1—Potential disturbance or destruction of cultural resources as a result of O&M activities.** A number of the O&M activities enabled by the proposed action would result in ground disturbance, with the potential to disturb or damage buried cultural resources if any are present on or in the subsurface at work sites. As discussed in Chapter 2, O&M activities would take place within existing ROWs and immediately adjacent areas. Most ROWs have already experienced some degree of ground disturbance, and the likelihood that they support significant buried cultural resources is considered low. In many areas, the corridor immediately adjacent to existing ROWs has also experienced some disturbance. Thus, O&M activities are considered unlikely to result in disturbance or damage sufficient to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, or a historical resource as defined in Section 15064.5; an adverse effect on any district, site, highway, structure, or object listed in or eligible for listing in the NRHP; or loss of significant cultural or historical resources. Disturbance of Native American remains is also considered unlikely during O&M activities. However, the possibility of impacts cannot be entirely ruled out, and significant impacts are possible.

Accordingly, as described in Chapter 2 (see *Cultural Resources Program* under *PG&E's Existing Environmental Programs and Practices*), PG&E implements a companywide cultural resources program to avoid and minimize impacts, consistent with the requirements of federal and state regulations governing treatment of cultural resources. This program would continue to be implemented as part of the HCP program. Preactivity searches of the California Historical Resources Information System (CHRIS) database and/or PG&E's in-house

cultural resources database are conducted by the company's cultural resource specialists for larger O&M activities in generally undisturbed areas, and also for some smaller activities where visible features at a project site, or information obtained from PG&E's records or knowledgeable local sources, suggests that cultural resources may be present. PG&E maintains a confidential database of cultural resources sites that is made available on a limited basis to qualified cultural resources experts to assess potential cultural resource impacts from PG&E activities. Limited relevant information from the database is provided to PG&E crews so that harm to known cultural resources can be avoided or minimized.

As discussed in more detail in Chapter 2 (see *Cultural Resources Program* under *PG&E's Existing Environmental Programs and Practices*), BMPs that are routinely implemented include

- minimizing ground disturbance,
- keeping vehicles on existing roads,
- leaving artifacts where they are found,
- reporting potential cultural resources and any accidental damage to resources to PG&E cultural resources specialists, and
- removing only materials brought onsite.

Crews are required to stop work within 100 feet if cultural material is discovered, to avoid damage until a qualified archaeologist can assess the significance of the find. If necessary, treatment measures are then developed in consultation with appropriate agencies and tribal representatives. Such measures could include requiring that the site be avoided, conducting recovery excavations, and/or capping the site to avoid further disturbance of artifacts.

Similarly, if human remains of Native American origin are discovered, PG&E complies with all federal and state laws relating to the disposition of Native American burials. Excavation of the site and all nearby areas reasonably suspected to overlie adjacent human remains is halted until the County Coroner has been contacted to determine that no investigation of the cause of death is required, and, if the Coroner determines that the remains are Native American,

- the Coroner has contacted the Native American Heritage Commission;
- the Native American Heritage Commission has identified the person or persons it believes to be the most likely descended from the deceased Native American; and
- the most likely descendent has made recommendations to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, unless the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.



In light of the cultural resources program PG&E currently implements and will carry forward under the proposed action, **impacts on cultural resources as a result of routine O&M activities are expected to be less than significant.**

As discussed in Chapter 2 (see *Cultural Resources Program* under *PG&E's Existing Environmental Programs and Practices*), when emergency repairs are needed, PG&E is required to conduct them as rapidly as possible to ensure continuity of service and protect public safety. As a result, it is typically infeasible to incorporate cultural resources studies and treatment into the emergency repairs process. However, by their nature, emergency repairs affect existing infrastructure and thus would take place in ROWs and immediately adjacent areas that have already undergone some level of disturbance associated with installation and maintenance of existing utilities infrastructure. In addition, emergency repairs occur infrequently and represent a very small fraction of the activities enabled under the proposed action. Moreover, in the event that PG&E emergency O&M work affects cultural resources, the company's practice is to follow up with appropriate treatment measures to minimize damage and avoid additional disturbance in the future. Measures may include

- conducting recovery excavations,
- capping the site to avoid further disturbance of artifacts, or other procedures.

If any find is determined to be significant, PG&E representatives and the qualified archaeologist meet to determine the appropriate course of action. All significant cultural resource materials recovered are subject to scientific analysis, professional museum curation, and documentation in a report prepared by the qualified archaeologist according to current professional standards.

In light of these measures, which will continue in force under the proposed action, **impacts on cultural resources as a result of emergency repairs are also expected to be less than significant.**

**Mitigation Measure**—No mitigation is required.

**Impact CR2—Potential disturbance or destruction of cultural resources as a result of minor construction activities.** The proposed action would enable a range of minor construction activities, including limited expansion of electrical substations and extension of natural gas pipelines and electric transmission and distribution lines. All of these activities would entail ground disturbance, with the potential to disturb or destroy cultural resources present on or in the subsurface portion of the site. At least some minor construction activities would likely disturb previously undisturbed ground, with greater potential to result in disturbance or damage sufficient to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, or a historical resource as defined in Section 15064.5; an adverse effect on any district, site, highway, structure, or object listed in or eligible for listing in the NRHP; loss of significant cultural or historical resources; and/or disturbance of Native American remains. Any of these outcomes would represent a significant impact.

However, as discussed above and in Chapter 2 (see *Cultural Resources Program* under *PG&E's Existing Environmental Programs and Practices*), PG&E would implement its existing cultural resources program, reflecting the requirements of federal and state regulations governing the treatment of cultural resources, under the proposed action. This would include new minor construction. PG&E maintains a confidential in-house database of cultural resources sites that is made available on a limited basis to qualified cultural resources experts to assess potential cultural resource impacts from PG&E activities. PG&E performs database searches for areas where new construction has been proposed, and limited relevant information from the database is provided to PG&E crews so that harm to known cultural resources can be avoided or minimized. PG&E also routinely implements a variety of BMPs to protect cultural resources (see discussion in Impact CR1 above, and in Chapter 2), and requires a “stop work” if cultural material is discovered, until a qualified archaeologist can assess the significance of the find. If necessary, treatment measures are then developed in consultation with appropriate agencies and tribal representatives. Such measures could include

- requiring that the site be avoided,
- conducting recovery excavations, and/or
- capping the site to avoid further disturbance of artifacts.

If human remains of Native American origin are discovered, PG&E complies with state and federal laws relating to the disposition of Native American burials, consistent with the procedures outlined in Impact CR1 above.

In light of PG&E's existing cultural resources program, which will continue to be implemented under the proposed action, **impacts on cultural resources as a result of minor construction activities are expected to be less than significant.**

**Mitigation Measure**—No mitigation is required.

**Impact CR3—Potential impacts on cultural resources as a result of habitat enhancement, restoration, or creation.** As described in Chapter 2, the proposed HCP prioritizes acquisition/preservation of high-quality habitat as compensation for habitat disturbance during O&M and minor construction activities. Enhancement, restoration, or creation of habitat would likely also be required on at least some compensation lands.

Habitat enhancement, restoration, and creation can involve ground disturbing activities, and would be likely to disturb previously undisturbed ground, so there is some potential for significant impacts on cultural resources, although it is speculative to foresee the exact nature or level of impact without specific information on the location and nature of compensation lands, which is not available at this time because of the proposed action's extended planning horizon. However, PG&E's existing cultural resources program, which reflects the requirements of federal and state regulations governing treatment of cultural resources, would be implemented under the proposed action, including the

enhancement, restoration, and creation of habitat. As discussed above and in Chapter 2, the program includes database searches for new construction, particularly in generally undisturbed areas, along with a program of BMPs to avoid and minimize damage. In light of these measures, which will continue in force under the proposed action, **impacts on cultural resources as a result of habitat enhancement, restoration, and creation are expected to be less than significant.**

**Mitigation Measure**—No mitigation is required.

## **Alternative 1—HCP with Reduced Take**

Alternative 1 would enable the same program of O&M and minor construction activities as that described for the proposed action, with minor differences specific to commitments for the protection of biological resources. PG&E's current cultural resources program would continue in force under Alternative 1. Consequently, impacts on cultural resources would be essentially the same under Alternative 1 as those described for the proposed action.

## **Alternative 2—HCP with Enhanced Compensation**

Alternative 2 would enable the same program of O&M and minor construction activities as that described for the proposed action, and PG&E's current cultural resources program would continue in force under Alternative 2. Differences between Alternative 2 and the proposed action would center on compensation ratios for habitat disturbed or lost (increased under Alternative 2 by comparison with the proposed action). As with Alternative 1, impacts on cultural resources would be similar under Alternative 2 to those described for the proposed action, but could be somewhat greater because of the enhanced compensation requirements. However, because PG&E's existing cultural resources program would continue in force under Alternative 2—including pre-activity database searches for larger activities, and BMPs consistent with relevant federal and state regulations for all activities—impacts are nonetheless expected to be less than significant.

## **Alternative 3—HCP with Reduced Number of Covered Species**

Alternative 3 would enable the same program of O&M and minor construction activities as that described for the proposed action, and PG&E's current cultural resources program would also continue in force under Alternative 3. The key difference between Alternative 3 and the proposed action would relate to the number of species covered under the Alternative 3 (reduced by comparison with the proposed HCP, as described in Chapter 2). Impacts on cultural resources would be similar under Alternative 3 to those described for the proposed action, although they could be somewhat reduced because the reduced number of

covered species could reduce compensation acreage somewhat. Because the same protective measures would apply—including pre-activity database searches for larger activities, and BMPs consistent with relevant federal and state regulations for all activities—impacts are expected to be less than significant.

## Alternative 4—No Action

Under the No Action Alternative, PG&E would continue its existing program of O&M and minor construction activities unchanged, but no HCP would be implemented, and any habitat compensation would occur on a case-by-case, piecemeal basis. The company's existing cultural resources program—including pre-activity database searches for larger activities, and BMPs consistent with relevant federal and state regulations for all activities—would continue in force, although compliance would be performed on a case-by-case basis as projects arise. Consequently, O&M and minor construction impacts on cultural resources under the No Action Alternative would be very similar to those described for the proposed action. Impacts related to ground disturbance for habitat enhancement, restoration, or creation are speculative to predict because the nature and location of compensation parcels remains speculative at this time.

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