

**Stockton East Water District  
Calaveras River Habitat Conservation Plan EA/IS**

**Appendix B**

**Cultural and Paleontological Resources Study**

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## INTRODUCTION

The Calaveras River provides an important source of water for agricultural and municipal uses in Calaveras and San Joaquin counties. The Stockton East Water District (SEWD) and the Calaveras County Water District (CCWD), together referred to as the “Districts,” manage the water resources of the Calaveras River. The Districts have developed a Calaveras River Habitat Conservation Plan (CHCP) in coordination with the National Marine Fisheries Service (NOAA Fisheries) in order to ensure that the ongoing management and operation of the New Hogan Project is coordinated with the needs of Calaveras River fish populations and to meet the issuance criteria for an Endangered Species Act incidental take permit (ITP) for California Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley spring-run Chinook salmon (*O. tshawytscha*) and Sacramento River winter-run Chinook salmon (*O. tshawytscha*). Under the HCP, the Districts will continue to function as the regional water suppliers and will retain the on-going operation and maintenance of existing structures and facilities in the lower Calaveras River corridor, in some instances modified to provide fish protections. The Districts are committed to working collaboratively with resource agencies to identify specific problem areas and develop and implement workable, cost-effective solutions to enhance Calaveras River fish conservation.

LSA has prepared this cultural and paleontological study in support of a permit application with NOAA Fisheries. Section 106 of the National Historic Preservation Act (NHPA) requires that every federal agency “take into account” the effect of its undertakings on historic properties. The proposed project is an undertaking, as defined at 36 CFR §800.16(y), which has the potential to cause effects on historic properties (36 CFR §800.3(a)), and it is necessary to identify cultural resources within the area of potential effects (APE) that may be eligible for listing in the National Register of Historic Places (National Register). This cultural and paleontological study was developed in accordance with the Secretary of Interior’s Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716) and the California Environmental Quality Act (§15126.4(b)(3)(c)).

This study was prepared to address the impacts to cultural and paleontological resources as a result of implementation of the CHCP. The purpose of this study is to (1) identify cultural resources that may meet the National Register of Historic Places definition of a historic property or the California Environmental Quality Act (CEQA) definition of a historical or archaeological resource and may be affected by the proposed project; and (2) identify paleontological resources (fossils) that may be significant and may be affected by the project.

This study was conducted at a programmatic level and is based on previous cultural resources and paleontological studies conducted within and adjacent to the Plan Area. These studies conclude the Plan Area is potentially sensitive for prehistoric, historic-period, and paleontological resources. Background research and a field survey of the Plan Area was not conducted in preparation for this cultural and paleontological study, therefore, if any project-related ground disturbance occurs, background research and a field survey will be necessary to document, analyze, and report on cultural and paleontological resources within and adjacent to the Plan Area. Ground disturbance may include, but is not limited to, excavation, auguring, grading, dredging, clearing, potholing, grubbing, stump removal, and bank repair, alteration, and rehabilitation.

## PLAN AREA

The Plan Area is located east of Stockton and west of the Sierra Nevada, within Calaveras and San Joaquin counties. The CHCP plan area encompasses those waterways that are potentially accessible to one or more Covered Species within the Districts' service areas, as follows:

- 1) Lower Calaveras River from New Hogan Dam (RM 42) to the confluence where it enters the San Joaquin Delta (RM 0) via both the Old Calaveras River channel and Mormon Slough/Stockton Diverting Canal (SDC) routes.
- 2) Potter Creek from the headwaters to its two branches (North and South) and its two confluences with Mormon Slough- North branch enters Mormon Slough at the old Southern Pacific Railroad Bridge and the South branch enters Mormon Slough just upstream of Panella Dam.
- 3) Mosher Slough/Creek from the headwaters at Mosher Creek Dam to its confluence with Pixley Slough/Bear Creek<sup>1</sup>.

Although the Districts' water delivery system includes facilities outside of these waterways, such as pipelines, treatment facilities, and businesses offices, those facilities and associated activities will not be affected by the proposed CHCP. In addition, the Districts' activities that occur outside of the CHCP plan area will not affect the environment within the HCP boundary. Therefore, in consultation with NOAA Fisheries, the Districts concluded that the CHCP plan area be limited to the river and adjacent riparian zone as identified above.

## LEGISLATIVE CONTEXT

### National Historic Preservation Act

National Register Bulletin *How to Apply the National Register Criteria for Evaluation* states:

Preserving historic properties as important reflections of our American heritage became a national policy through passage of the Antiquities Act of 1906, the Historic Sites Act of 1935, and the National Historic Preservation Act of 1966, as amended. . . The National Historic Preservation Act of 1966 authorized the Secretary to expand this recognition to properties of local and State significance in American history, architecture, archaeology, engineering, and culture, and are worthy of preservation. The National Register of Historic Places is the official list of the recognized properties, and is maintained and expanded by the National Park Service on behalf of the Secretary of the Interior [National Park Service 1997a:i].

**Section 106.** If a project is subject to federal jurisdiction and the project is an undertaking as defined at 36 CFR §800.16(y) with the potential to cause effects on historic properties (36CFR §800.3(a)), Section 106 of the National Historic Preservation Act of 1966, as amended, must be addressed to take into account the effect of the undertaking on any district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places.

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<sup>1</sup> During the non-irrigation season (begins on or about October 16 and ends on or about April 14 dependent on weather), the accessibility of Mosher Slough/Creek for adult salmonids is the result of San Joaquin County operations and any potential impacts to adults entering during this period are not considered within the scope of the CHCP. During the irrigation season (i.e., begins on or about April 15 and ends on or about October 15 dependent on weather), there is a low potential for juvenile salmonids to enter Mosher Slough/Creek from the Old Calaveras River; therefore, potential impacts during this period are considered within the CHCP.

## National Register of Historic Places

**Historic Property.** A historic property is any district, site, building, structure, or object listed in or eligible for listing in the National Register at the local, state, or national level (36 CFR §800.16(l)(1); National Park Service 1997b: Appendix VII:3). The criteria for determining a resource’s eligibility for National Register listing are defined at 36 CFR §60.4. The evaluation of a resource’s eligibility for listing in the National Register takes into account the property’s age, period of significance, historic context, significance, and integrity.

**Age.** Generally, cultural properties must be 50 years of age or more to be eligible for listing in the National Register. National Register Bulletin *How to Apply the National Register Criteria for Evaluation*, states that “properties that have achieved significance within the past 50 years shall not be considered eligible” unless such properties are “of exceptional importance” (National Park Service 1997a:2).

**Period of Significance.** The period of significance for a property is “the span of time when a property was associated with important events, activities, persons, cultural groups, and land uses or attained important physical qualities or characteristics” (National Park Service 1999:21). The period of significance begins with the earliest important land use or activity that is reflected by historic characteristics tangible today. The period closes with the date when events having historical importance ended (National Park Service 1999:21).

**Historic Context.** The Secretary of the Interior’s Standards and Guidelines for Preservation identify the historic context as the cornerstone of the planning process, i.e., the identification, evaluation, registration, and treatment of historic properties (National Park Service 2007). The premise of the historic context is that resources, properties, or happenings in history do not occur in a vacuum, but are part of larger trends or patterns (National Park Service 1997a:7). “Evaluation uses the historic context as the framework within which to apply the criteria for evaluation to specific properties or property types” (National Park Service 2000:15).

“Historic contexts are those patterns or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) within history or prehistory is made clear” (National Park Service 1997a:7). “A historic context is an organizational format that groups information about related historic properties, based on a theme, geographic limits and chronological period. A single historic context describes one or more aspects of the historic development of an area, considering history, architecture, archaeology, engineering and culture; and identifies the significant patterns that individual historic properties represent” (National Park Service 2007).

Evaluating cultural resources within their historic contexts requires the construction of a narrative statement which includes a description of the patterns of the area’s prehistory and history, discussion of individuals or events that have shaped the history of the area, and a general chronology of prehistoric and/or historic development (National Park Service 1986:15).

Subsequent to identifying the relevant historic context(s), four evaluation criteria are applied to the property in which the property’s significance for its association with important events or persons, importance in design or construction, or information potential is assessed (National Park Service 1997a:11).

**Significance Criteria.** The criteria for determining a resource’s significance for National Register listing are defined at 36 CFR §60.4 and are as follows:

. . .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

- a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- b) That are associated with the lives of persons significant in our past; or
- c) 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
- d) That have yielded, or may be likely to yield, information important in prehistory or history.

**Integrity.** In order to be eligible for the National Register, a cultural resource must retain historical integrity, which is the ability of a resource to convey its significance. The evaluation of integrity must be grounded in an understanding of a resource's physical features and its environment, and how these relate to its significance. "The retention of specific aspects of integrity is paramount for a property to convey its significance" (National Park Service 1997a:44).

National Register Bulletin *How to Apply the National Register Criteria for Evaluation* (National Park Service 1997a:2) states that the quality of significance is present in districts, sites, buildings, structures, and objects that possess integrity. There are seven aspects of integrity to consider when evaluating a cultural resource: location, design, setting, materials, workmanship, feeling, and association:

- **Location** is the place where the historic property was constructed or the place where the historic event occurred. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons.
- **Design** is the combination of elements that create the form, plan, space, structure, and style of a property. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials.
- **Setting** is the physical environment of a historic property. Setting refers to the character of the place in which the property played its historical role. Physical features that constitute the setting of a historic property can be either natural or manmade, including topographic features, vegetation, paths or fences, or relationships between buildings and other features or open space.
- **Materials** are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- **Workmanship** is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of the artisan's labor and skill in constructing or altering a building, structure, object, or site.
- **Feeling** is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.

- **Association** is the direct link between an important historic event or person and a historic property.

"To retain historic integrity a property will always possess several, and usually most, of the aspects" (National Park Service 1997a:44).

**Eligibility.** National Register Bulletin *How to Apply the National Register Criteria for Evaluation* (National Park Service 1997a:3) states that in order for a property to qualify for listing in the National Register, it must meet at least one of the National Register criteria for evaluation by

- being associated with an important historic context *and*
- retaining historic integrity of those features necessary to convey its significance.

Resources that meet the age guidelines, are significant, and possess integrity will generally be considered eligible for listing in the National Register.

### **California Environmental Quality Act (CEQA)**

CEQA applies to all discretionary projects undertaken or subject to approval by the state's public agencies (California Code of Regulations [CCR] Title 14(3) §15002(i)). CEQA states that it is the policy of the State of California to "take all action necessary to provide the people of this state with... historic environmental qualities...and preserve for future generations examples of the major periods of California history" (Public Resources Code [PRC] §21001(b), (c)). Under the provisions of CEQA, "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (CCR Title 14(3) §15064.5(b)).

CEQA defines a "historical resource" as a resource which meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register;
- Listed in a local register of historical resources (as defined at PRC §5020.1(k));
- Identified as significant in a historical resource survey meeting the requirements of §5024.1(g) of the Public Resources Code; or
- Determined to be a historical resource by a project's lead agency (CCR Title 14(3) §15064.5(a)).

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California...Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (CCR Title 14(3) §15064.5(a)(3)).

CEQA requires that historical resources and unique archaeological resources be taken into consideration during the CEQA planning process (CCR Title 14(3) §15064.5; PRC §21083.2). If feasible, adverse effects to the significance of historical resources must be avoided, or the effects mitigated (CCR Title 14(3) §15064.5(b)(4)). The significance of an historical resource is impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its

historical significance and that justify its eligibility for the California Register of Historical Resources. If there is a substantial adverse change in the significance of a historical resource, the preparation of an environmental impact report may be required (CCR Title 14(3) §15065(a)).

If the cultural resource in question is an archaeological site, CEQA (CCR Title 14(3) §15064.5(c)(1)) requires that the lead agency first determine if the site is a historical resource as defined in CCR Title 14(3) §15064.5(a). If the site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (California Office of Historic Preservation 2001a:8). If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological site, then the archaeological site is treated in accordance with PRC §21083.2 (CCR Title 14(3) §15069.5(c)(3)). In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource (Bass, Herson, and Bogdan 1999:105). CEQA defines a “unique archaeological resource” as 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 one or more of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC §21083.2(g)).

If an impact to a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource. Generally, the use of drawings, photographs, and/or displays does not mitigate the physical impact on the environment caused by demolition or destruction of a historical resource. However, CEQA requires that all feasible mitigation be undertaken even if it does not mitigate impacts to a less than significant level (California Office of Historic Preservation 2001a:9; see also CCR Title 14(3) §15126.4(a)(1)).

### **California Register of Historical Resources**

The California Register of Historical Resources (California Register) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The California Register helps government agencies identify and evaluate California’s historical resources (California Office of Historic Preservation 2001b:1), and indicates which properties are to be protected, to the extent prudent and feasible, from substantial adverse change (PRC §5024.1(a)). Any resource listed in, or eligible for listing in, the California Register is to be considered during the CEQA process (California Office of Historic Preservation 2001a:7).

A cultural resource is evaluated under four California Register criteria to determine its historical significance. A resource must be significant in accordance with one or more of the following criteria:

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

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

**Age.** In addition to meeting one or more of the above criteria, the California Register requires that sufficient time must have passed to allow a “scholarly perspective on the events or individuals associated with the resource.” Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource (California Office of Historic Preservation 2006:3; CCR Title 14(11.5) §4852 (d)(2)). The State of California Office of Historic Preservation recommends documenting, and taking into consideration in the planning process, any cultural resource that is 45 years or older (California Office of Historic Preservation 1995:2).

**Period of Significance.** The period of significance for a property is “the span of time when a property was associated with important events, activities, persons, cultural groups, and land uses or attained important physical qualities or characteristics” (National Park Service 1999:21). The period of significance begins with the date of the earliest important land use or activity that is reflected by historic characteristics tangible today. The period closes with the date when events having historical importance ended (National Park Service 1999:21). The period of significance for an archeological property is “the time range (which is usually estimated) during which the property was occupied or used and for which the property is likely to yield important information” (National Park Service 2000:34). Archaeological properties may have more than one period of significance.

**Integrity.** The California Register also requires a resource to possess integrity, which is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association” (California Office of Historic Preservation 2006:2).

**Eligibility.** Resources that are significant, meet the age guidelines, and possess integrity will generally be considered eligible for listing in the California Register.

### **Public Resources Code §5097.5**

California Public Resources Code §5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

### **Human Remains**

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

## **Paleontological Resources**

Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources (Conformable Impact Mitigation Guidelines Committee 1995).

CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). California Public Resources Code §5097.5 also applies to paleontological resources (see above).

## **CULTURAL SETTING<sup>2</sup>**

### **Prehistory**

Archaeological investigations were conducted at various sites in the Sacramento Delta beginning in the 1930s. More recent investigations (Johnson 1967; Moratto 1975, 1983; Orlins, Hall and McCarthy 1985; Ritter, Hattoff, and Payen 1976; Treganza 1952) nearer to the Plan Area include those at Farmington Reservoir, Comanche Reservoir, New Melones Lake, and New Hogan Lake. Settlement pattern data from these studies indicate that the favored locations for village sites were at low elevations on the flat valley floor and terraces near the rivers and main tributaries.

### **Ethnography**

The boundary between two Native American groups, the Northern Valley Yokuts and the Plains Miwok, lies within the Plan Area. The Northern Valley Yokuts occupied the northern San Joaquin Valley, while the Plains Miwok occupied the Sacramento Delta region and the central Sierra Nevada. The northern limit of the Northern Valley Yokuts land, the dividing line between them and the Plains Miwok, is a subject of controversy. The boundary is believed to lie between the Mokelumne and Calaveras rivers with various groups including the Chulamni, Yatchicumne, and Tawalimni being identified as Northern Valley Yokuts or as Plains Miwok (Bennyhoff 1977:127-137; Merriam 1907:350-351).

### **History**

The Plan Area lies within portions of Calaveras and San Joaquin counties, beginning at the New Hogan Dam and following the Calaveras River and Mormon Slough southwest to the Stockton Diverting Canal. Mining, farming, and ranching were historically the main activities within and adjacent to the Plan Area, with many of the early gold seekers turning to farming and stock raising after leaving the gold fields. Portions of the old Stockton and Mokelumne Hill Road, the main route between Stockton and the gold camps, lie within the Plan Area. In 1850, there were 17 public houses within 24 miles of Stockton along this road (Thompson and West 1968:109).

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<sup>2</sup> This section compiled from:

Gilbert, Carlys J. 1990. *Calaveras River, California: Cultural Resources Overview*. Prepared for Department of the Army, Sacramento District, Corps of Engineers.

US Army Corp of Engineers. 1990. *Environmental Assessment Calaveras River Reconnaissance Study for Flood Control*. Corps of Engineers, Sacramento.

**Settlements.** Two historic-period towns, Bellota and Jenny Lind, are adjacent to the Plan Area, as well as the two communities of Brushville and Taylor's Bar, which are no longer extant.

**Bellota.** Bellota was named after the Spanish word for acorn (Gudde 1969:25). The town has always been associated with ranching and farming. Hog raising was undertaken because of the abundance of acorns used as feed, and the largest cherry orchard in the world was situated here, run by the Podesta family.

The town, originally called Fisher's Bridge, grew after a toll bridge was built by William B. Fisher across an arroyo that ran between Mormon Slough and the Calaveras River (Hoover et al. 1966:375-376). A concrete bridge at the junction of Linden and Escalon-Bellota roads now occupies the location of the original toll bridge. Remains of Fisher's Hotel, constructed in 1861, can be found in the town (Hillman and Covello 1985:194-195).

The San Joaquin Female Seminary was built just west of town in 1854 and operated until 1858, the only private school in this part of the state. Between 1861 and 1919, businesses included boarding houses, a hotel and dance hall, blacksmith and wheelwright shops, general merchandise stores, a cheese factory, and a slaughterhouse. There was one school one-half mile southwest of town. Post offices operated in Bellota between 1860 and 1863, 1870 and 1871, and 1874 to 1918. In 1912, Bellota became the western terminus of the Stockton Terminal and Eastern Railroad (Hillman and Covello 1985:194-195, 233).

**Jenny Lind.** Jenny Lind in Calaveras County was a placer mining town established in 1850 (Gudde 1969:157). The original townsite was located three miles northwest of the present town at the original Pleasant Valley site. Jenny Lind was a popular stopping place for freighters, mule teams, and stage lines on the main road from Stockton to the gold camps. It once had four general stores, two billiard halls, two hotels, a ten-pin alley, a blacksmith shop, saloons, a church, and many houses (Hunt 1956). A school was established in 1872 (Calaveras County Historical Society 1986:49).

Jenny Lind was first known as Dry Diggins and also as Lower Diggins. By 1864, the population of Jenny Lind was said to be 400, half of which were Chinese immigrants. According to Hunt (1963), the Chinese American community in Jenny Lind began at the IOOF Hall and extended south toward the river, with houses, stores, gambling houses, and a butcher shop. The Chinese cemetery stood east of "Chinatown" on the hillside (Hunt 1963:1-2).

The area surrounding the town produced large crops of hay and wheat annually in the late nineteenth century. Eventually the soil was depleted by the yearly burning of crop stubble and erosion (Shank n.d.:32). Beginning about 1900, the first of several gold dredges started mining operations at Jenny Lind. The last one ceased operations in the 1930s. Today, Jenny Lind is a designated California Historical Landmark #266 (Department of Parks and Recreation 1982). One of its commercial buildings may have since been designated as eligible for listing in the National Register of Historic Places as part of a district (Gilbert 1990).

**Brushville.** Not much is known about this community in Calaveras County or the mining district of the same name. According to the Calaveras County Historical Society, it was located several miles east of Jenny Lind on the south side of the Calaveras River (1986:15). There were several ranches nearby. In the 1860s there were several mines here which had two mills with a total of 30 stamps (Browne

1869:69; Gudde 1975:49). The schoolhouse sat on the hill between Whiskey Hill and Rich Gulch and served a large district beginning in 1860. In 1892, it was partitioned into several smaller districts (Calaveras County Historical Society 1986:15).

**Taylor's Bar.** Taylor's Bar was one of the early productive stream placers on the Calaveras River, but the area was small, and the ore was soon depleted. Early maps show it on the north side of the river on a flat near the confluence with Cosgrove Creek, just below the present New Hogan Dam. A store was located there in 1854 and 1857, and a school district by that name between 1885 and 1890. The land nearby was eventually occupied by homesteaders and ranchers (Cunningham, Davis-King, and Russell 1989:4-5).

**Mining Activities.** The Jenny Lind mining district lies between the towns of Jenny Lind and Milton in western Calaveras County. It extends west into eastern San Joaquin and northeastern Stanislaus counties. It was first worked during the gold rush, later reworked using hydraulic mining and dredging methods, from the turn of the century to the late 1930s. It yielded more than 100,000 ounces of gold (Clark 1970:80).

Several bucket-line dredging operations were located at Jenny Lind. The Calaveras Gold Dredging Company built "Calaveras No. 1" there in 1903 and began digging in 1904. The Isabel Dredging Company operated several dredges between 1908 and 1928, as did the Butte Dredging Company between 1910 and 1917, and the California Gold Dredging Company beginning in 1938 (Fuller 1985:31-33). The Folsom Dredge, a small connected bucket dredge, operated between 1936 and 1937 about 2-1/2 miles southwest of Jenny Lind (Clark and Lydon 1962:197; Julihn and Horton 1938:81). The Milton Gold Dredging Enterprise and the Lilly Dredge both operated draglines (also known as "doodlebugs") in South Gulch north of Milton in the 1930s (Clark and Lydon 1962:201; Julihn and Horton 1938:82-88). Today, Teichert Aggregates mines the tailings at Jenny Lind and South Gulch for concrete aggregate, as well as sand and gravel products.

The Plymouth Rock Mine, about one mile east of Jenny Lind, was the most significant open pit quartz mine in the area (Fuller, personal communication with Gilbert 1989). It was active in the 1860s and intermittently between 1888 and 1971 (Clark and Lydon 1962:174). For several years the ore was treated in the Plymouth Rock Mill, a ten-stamp mill adjacent to the mine (Irean 1888:147).

Hydraulic mines in the area included the North Hill, South Hill, and Whiskey Hill mines, just east of Jenny Lind (Crawford 1896:99; Hamilton 1915:120). North Hill mine was active in the 1890s, idle between 1896 and 1902, then active again until 1904, while South Hill was active prior to 1900 and idle by 1915 (Clark and Lydon 1962:203, 207).

**Railroads.** Portions of the old Stockton and Copperopolis Railroad route fall within the Plan Area, shown as "Old Railroad Grade/Jeep Trail" on the 1962 USGS *Valley Springs, Calif. and Jenny Lind, Calif. 7.5-minute topographic maps*. It was built to connect Stockton with Copperopolis, the principal copper-producing community in the United States in the early 1860s. Construction began in Stockton in 1870 with 500 to 600 Chinese employed as laborers. By 1871, the line reached Milton, about five miles south of Jenny Lind. By then, the copper boom was on the decline so the railroad was never extended to Copperopolis. In 1888, it was consolidated with the Southern Pacific Railroad. Service was discontinued in 1940 (Demarest 1954; Smith 1954; Limbaugh and Fuller 1980).

**Homesteads.** Numerous homesteads existed in the Plan Area (Gilbert 1990). Information and illustrations of some of them can be found in Elliott's (1885) *Calaveras County Illustrated and Described*, Elliott and

Moore's (1881) *History of Stanislaus County*, and Thompson and West's (1968) *History of San Joaquin County*.

**Cemeteries.** The Chinese cemetery at Jenny Lind was mentioned previously. The Jenny Lind cemetery lies about one mile south of town.

## PALEONTOLOGICAL SETTING

The CHCP boundary generally encompasses the lower Calaveras River and its adjacent riparian zone between New Hogan Dam and the confluence with the San Joaquin River including both the Mormon Slough and Old Calaveras River routes Mosher Creek and Potter Creek. The Plan Area spans a range of geologic units including Jurassic, Cretaceous, and Tertiary of the Sierra Foothills, to the Quaternary alluvial deposits of the Sacramento Valley. Six fossil localities lie within approximately 10 miles of the Plan Area. Fossil specimens from these localities include mammoths and elephants (Order Proboscidea), horse (Family Equidae), rodents (Order Rodentia), birds (Class Aves), rabbits (Order Lagomorpha), and amphibians (Class Amphibia). These fossils only represent a few examples of the vertebrate fossil taxa commonly found in similarly aged sediments.

## BACKGROUND RESEARCH

### Cultural Resources<sup>3</sup>

Previous research by Gilbert (1990) included a record search conducted by the Central California Information Center at California State University, Stanislaus. This study included copies of site records and a bibliography of report titles pertinent to the Plan Area. Site locations and survey areas were plotted on USGS 7.5-minute topographic maps. Historical research was conducted by Gilbert (1990) at the San Joaquin County Historical Museum in Lodi, the Haggin Museum and Petzinger Library at Stockton, the Calaveras County Historical Society and the Calaveras County Museum and Archives in San Andreas. Historical maps were reviewed, as well as the California Historic Landmarks and National Register of Historic Places inventories. The California State Library and the Department of Parks and Recreation, Resource Protection Division library, both in Sacramento, were additional sources of information.

The record search indicated only a very small portion of the Plan Area has been systematically surveyed for cultural resources. The survey report titles are included in the References Consulted section. According to Werner (1990),

Most prehistoric archaeological sites located above Mormon Slough will likely be found on the modern surface. Older archaeological sites will be rare, limited to those selected areas that have not been subjected to post-Pleistocene erosion. These sites will be deeply buried and difficult to locate... Until the construction of the levees, the surface below the Mormon Slough has been subjected to repeated post-Pleistocene flooding. As a result, the surface of the ground was constantly changed by the addition of new alluvium. Archaeological sites, even those dating

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<sup>3</sup> This section compiled from:

Gilbert, Carlys J. 1990. *Calaveras River, California: Cultural Resources Overview*. Prepared for Department of the Army, Sacramento District, Corps of Engineers.

US Army Corp of Engineers. 1990. *Environmental Assessment Calaveras River Reconnaissance Study for Flood Control*. Corps of Engineers, Sacramento.

back a few thousand years, will likely be buried. Only the most recent sites will be located on the modern surface.

Gilbert (1990) lists 21 prehistoric archaeological sites and one built environment site previously recorded in the Plan Area: there are seven sites characterized as food processing locations (CA-CAL-4, CA-CAL-21, CA-CAL-50, CA-CAL-778, CA-CAL-779, CA-CAL-859, and CA-CAL-1076); two lithic scatters (CA-CAL-862 and CA-CAL-1086); two quarry sites (CA-CAL-1077 and CA-CAL-1085); one rock shelter (CA-CAL-52); seven sites contain midden (CA-CAL-21, CA-CAL-51, CA-CAL-884, CA-CAL-1180, CA-SJO-17, CA-SJO-75, and CA-SJO-98); two prehistoric sites that aren't clearly defined (CA-SJO-7 and CA-SJO-16); and a historic building site (CA-CAL-799H).

Settlement pattern data from studies conducted at Camanche and New Melones reservoirs, indicate that the favored locations for prehistoric village sites were at low elevations on the flat valley floor and terraces near the rivers and main tributaries. In contrast to Calaveras sites with locations on flats or terraces adjacent to the Calaveras River, the San Joaquin County sites have been previously identified on the valley floor along Mormon Slough.

Archival research conducted by Gilbert (1990) indicates the following historic-period cultural resources are present within or adjacent to the Plan Area: the settlements of Bellota, Jenny Lind, Brushville, and Taylor's Bar; two transportation-related resources (the old Stockton and Mokelumne Hill Road and Fisher's Bridge); 11 mining-related areas (Plymouth Rock quartz mine, North Hill, South Hill, and Whiskey Hill hydraulic mines; Butte, Calaveras Gold, California Gold, Folsom, Isabel, Lilly, and Milton placer dredge operating mines); two cemeteries (Jenny Lind and the Chinese cemeteries); and many homesteads. Additional mining sites, roadhouse locations, river crossings, cemeteries, agricultural settlements, and Chinese sites may be located in the Plan Area.

### **Paleontological Resources**

Background research, which consisted of a fossil locality search and literature review, was conducted to identify geologic units, paleontological studies, fossil localities (i.e., a location at which paleontological resources have been documented), and the types of fossils that may be within or adjacent to the Plan Area.

**Fossil Locality Search.** An online fossil locality search was done in January 2007, using the Berkeley Natural History Museums (BNHM) online database, specifically data from the University of California Museum of Paleontology (UCMP), Berkeley.

A total of six fossil localities were identified: five localities lie within approximately 10 miles of the Plan Area, with only one vertebrate fossil locality identified within the Plan Area. This locality, identified within the Mormon Slough area of San Joaquin County, represents Late Pleistocene Rancholabrean land mammal fossils. These fossils include horse (Equidae *Equus*) and mammoth (*Mammuthus columbi*) and are found in Pleistocene sandstone. All six fossil localities are located in geologic units that are represented in the Plan Area and are considered paleontologically sensitive.

**Literature Review.** LSA reviewed paleontological and geological literature and maps relevant to the Plan Area and its vicinity. This review identified the Plan Area as being underlain by Jurassic, Cretaceous, and Tertiary geologic units in the Sierra Foothills, and Quaternary alluvial deposits in the Sacramento Valley. See the References Consulted section for the literature and maps reviewed.

## **RECOMMENDATIONS**

### **Introduction**

The cultural and paleontological study for the Calaveras River HCP was conducted at the program level. When project-specific ground-disturbing activities are identified, additional studies should be conducted to determine if cultural resources, as defined by CEQA Section 15604.5, are within the Plan Area and will be impacted.

### **Sensitivity Statement**

The Plan Area is sensitive for both prehistoric and historic-period archaeological sites. Settlement pattern data from previous cultural resources studies of the area indicate that the favored locations for prehistoric village sites were at low elevations on the flat valley floor and terraces near rivers and main tributaries. Despite only a very small portion of the Plan Area having been systematically surveyed, Gilbert (1990) lists 21 prehistoric archaeological sites and one built environment site previously recorded in the Plan Area. Historic-period archaeological resources in the Plan Area can include, but are not limited to, settlements/homesteads, transportation-related resources, mining-related resources, cemeteries, and river crossings. In addition, any equipment, infrastructure, or facilities related to water resource management, such as fish ladders, dams, or gauging stations, over 50 years of age are considered historic-period resources and need to be addressed at the project-level when encountered.

### **Cultural Resources**

If the project plans include ground disturbance, then a project-level study should be implemented. Such studies should be documented in a cultural resources report addressing research and field methods, findings, and provide recommendations. The report should be submitted to the Districts and the Central California Information Center.

If cultural resources are identified, it is recommended that such deposits be avoided by project activities. If such deposits cannot be avoided, they should be evaluated for their National and California register eligibility. If the deposits are not eligible, avoidance is not necessary. If the resources are eligible, they will need to be avoided by adverse effects or such effects must be mitigated. Upon completion of the evaluation, a report should be prepared documenting the methods and results, as well as recommendations. The report should be submitted to the Districts and the Central California Information Center.

### **Paleontological Resources**

If the project plans include ground disturbance, a fossil locality search and background research should be conducted along with field studies, if appropriate. These studies should be documented in a paleontological study report addressing research and field methods, findings, and provide recommendations. The report should be submitted to the Districts and the Central California Information Center.

If paleontological resources are identified, it is recommended that such deposits be avoided by project activities. If such deposits cannot be avoided, they should be evaluated for their National and California register eligibility. If the deposits are not eligible, avoidance is not necessary. If the resources are eligible, they will need to be avoided by adverse effects or such effects must be mitigated. Upon completion of the evaluation, a report should be prepared documenting the methods and results, as well as recommendations. The report should be submitted to the Districts and the Central California Information Center.

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