INTRODUCTION
The City of Jackson proposes to improve the current wastewater treatment plant through implementation of the City’s National Pollutant Discharge Elimination System (NPDES) permit. The project is required to meet the environmental regulations set forth in the California Environmental Quality Act (CEQA), which is being fulfilled by the development of an Environmental Impact Report (EIR) by Pacific Mutual Consultants (PMC). PMC retained Archaeological Resource Service to inventory the project area for potentially significant cultural resources and make further recommendations. The following specific tasks were accomplished:

1. A check of the information on file with our office and the Regional Office of the California Historical Resources Information System (CHRIS), to determine the presence or absence of previously recorded historic or prehistoric cultural resources within or adjacent the project area;
2. A check of appropriate historic references to determine the potential for historic era archaeological deposits or features, such as standing structures greater than 45 years of age, to be located within the project area;
3. Contact with the Native American Heritage Commission (NAHC) to determine the presence of absence of listed Sacred Lands within the project area;
4. Contact with all Native American organizations or individuals designated by the NAHC as interested parties for the project area;
5. A surface reconnaissance of all accessible parts of the project area to locate any visible signs of potentially significant historic or prehistoric cultural deposits, features or isolated artifacts that would be adversely impacted by the proposed project.

PROJECT DESCRIPTION
The City is proposing to remove its effluent discharge from Jackson Creek and is seeking alternative ways to do so. One land disposal option (Option E) proposed a diversion of the City’s effluent to land discharge for pasture irrigation. This appears to be the preferred alternative, but other alternatives are also being evaluated including a No Project alternative and a suggested reservoir proposal.

The reservoir proposal includes purchasing water from the Amador Water Agency to supplement Jackson Creek flows by constructing a pipeline in Jackson Creek to transport the City’s effluent discharge directly to Lake Amador, and using a new reservoir to capture rainfall runoff that will get released back into Jackson Creek at dry times of the year to achieve the necessary dilution rate. A large irrigation field and several proposed reservoir sites are located in the project area. The project area also includes a construction corridor for a pipeline between Jackson Creek and the area of the proposed reservoirs and irrigation field. A 1.6 mile long access road is also proposed.
REGULATORY SETTING

STATE REGULATIONS

The state regulations include those established in the California Environmental Quality Act (CEQA) (14 CCR 15064.5 and PRC 21084.1). CEQA states that significant historical resources need to be addressed before environmental mitigation guidelines are developed and approved. A “significant historical resource” (including both a prehistoric and historic resource) is one that is found eligible for listing in the California Register of Historical Resources. As per Title 14, California Code of Regulations Section 15064.5, historical resources are those that are:

- Listed in, or eligible for listing in, the California Register of Historic Resources (Public Resources Code 5024.1, Title 14 CCR, Section 4850 et. seq.);
- Listed in, or eligible for listing in, the National Register of Historic Places (CRHR);
- Included in a local register of historical resources, as defined in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resource Code; or
- 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, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.

Additionally, historical resources and historic districts designated or listed as city or county landmarks or historic properties or districts pursuant to any city or county ordinance can also be listed in the California Register, if the criteria for listing under the ordinance have been determined by the Office of Historic Preservation to be consistent with California Register criteria adopted by the commission (pursuant to Section 5024.1(e) of the PRC).

A resource may be listed as an historical resource in the California Register if it has integrity and meets any of the following four criteria:

1) Associated with events that has made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2) Associated with the lives of persons important to local, California or national history;
3) Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

CEQA (PRC 21083.2) also distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of a historical resource as above, and “unique archaeological resources.” A “unique archaeological resource” has been defined in CEQA 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 any of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstratable public interest in that information,
2) Has a special and particular quality such as being the oldest of its type or the best available example of its type, or
3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Buildings, sites, structures, objects, and districts representative of California and United States history, architecture, archaeology, engineering, and culture convey significance when they also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A resource has integrity if it retains the characteristics that were present during the resource’s period of significance. Enough of these characteristics must remain to convey the reasons for its significance.
The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, or included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resources as defined in PRC sections 5020.1(j) or 5024.1.

**CULTURAL SETTING**

**Ethnographic Background**

The proposed project lies within an area that was previously occupied by a distinct linguistic and cultural subgroup of the Eastern Miwok known as the Northern Sierra Miwok (Levy 1978: 398). The Northern Sierra Miwok, along with four other distinct Eastern Miwok subgroups made up of the Bay Miwok, the Plains Miwok, the Central Sierra Miwok, and the Southern Sierra Miwok occupied large areas of land that stretched from the San Francisco Coast to the Sierras. The subgroups were separated from each other by language, culture, and the four distinct biotic areas that they inhabited. The Northern Sierra Miwok occupied an area within the foothills and mountains along the Sierra Nevada mountain range where villages and settlements were usually located below the 3,500-4,000 foot elevation. With the arrival of the Spanish explorers in the late 18th century and the establishment of the missions at San Francisco (1776), San Jose (1797), and San Rafael (1817) the missionization of the Eastern Miwok had begun with the first recorded converts listed as coming from the Bay Miwok in 1794 (Heizer 1978: 400). At the time of European contact, the Northern Sierra Miwok consisted of tribelet memberships of various lineage settlements. The Sierra Miwok subsistence staple was black oak acorn, supplemented by buckeye nuts, sugar and bull pine nuts and pith, as well as 20 types of seeds, “wild potatoes”, greens, Manzanita and berries, and certain types of mushrooms (Barrett and Gifford 1933: 142-165). Deer meat and other large game such as bear, elk, and pronghorn as well as fish were also staples for the Sierra Miwok. Village settlements would have had numerous milling areas utilized by the same families year after year (Barrett and Gifford 1933: 142-165). By the end of the eighteenth century the mass socio-cultural transformation of the Eastern Miwok was well underway and although the Spanish exploration was far-reaching, the inland distance to the Northern Sierra Miwok allowed for little direct contact with the Spanish and the Missions.

By the 1840s and with the dissolution of the Mission system, the inland non-native settlement of Northern Sierra Miwok territory began with the arrival of a substantial number of Europeans, Americans, and Chinese. Among the new arrivals were fur trappers, gold miners, and settlers that brought with them new diseases to the Northern Sierra Miwok, along with the complete disruption of traditional culture. The Sierra Miwok panned and traded gold for a while, but the relations between the miners and the Native people soon became violent. Records indicate that at least 200 Miwok were killed by miners from 1847-1860 (Cook 1943b). The miners made life extremely difficult for the Northern Sierra Miwoks who were rapidly displaced throughout much of their territory during the first years of the Gold Rush.

**Mining History**

The California Gold Rush of 1849 began after traces of placer or free gold were found in the deposits of the sand and dirt of Sutter’s saw mill near the Nisenan Village of Culloma in 1848. By the following year the rush of gold seekers from around the world began. John Augustus Sutter was originally granted 150,000 acres of land by the Mexican Government to be used as a safe haven and trading post for settlers. By 1848, Sutter had established ‘Fort Sutter’ as the frontier trading post, but the focus soon shifted with the discovery of gold. The initial discovery at Fort Sutter brought thousands of men and woman from all over the world to the Sierra Nevada in search of gold. The earliest gold mining took place along the gulches and streams of the Sierra foothills (Hoover et al., 2002). The early gold mines in the region focused on miners panning for loose gold found in sands and gravel beds, known as placer gold, but soon the miners began digging vertical shafts into the ground following veins of gold bearing ore in search of riches. In Amador County, miners introduced the use of single jack and double jack drilling into granite creating openings where black powder was inserted and detonated. This type of extraction was known as hard rock mining. It enabled the miners to access the parent rock where the gold had formed in the ‘hard rock’. The ore and the gold were removed and separated once they arrived at the mill. At the mill they were processed by crushing the ore under mechanically driven drivers, essentially large
mechanical hammers, known as stamps. Though some stamp mills were located in nearby towns, many stamp mills were erected along creeks. The creek stamp mills were powered by several water sources including the Amador canal, the Jackson ditch, and other local streams. By 1866, in Amador County alone there were approximately 296 stamps that crushed the produce of 15 mines. Although Amador County was one of the smallest of the mining counties, it was one of the most prosperous producing approximately $180 million.

The project area lies within the mining area that includes the Amador Mine, the Moore Mine, and the Kennedy Mine. The Amador Mine was founded in the 1880's and was named for its founder Jose Maria Amador, the owner of the Rancho San Ramon, a land grant that encompassed today's Danville, San Ramon and Dublin, who, with his sons and some Indian workers, along the 'nameless' creek in 1948 and 1949. The Amador Mine operated a 10 stamp mill that was likely Amador Counties first mine. Amador County was created in 1854, and named for the gold miner and native Californian Jose Maria Amador. The Moore Mine was originally a 10 stamp mine and mill founded in the 1880's. The mine was closed down and reopened in 1921 with a 20 stamp mill. The mine was successful and yielded approximately $564,624.00 in gold during its operation. The Kennedy Mine (California Registered Historical Landmark No. 786) was founded sometime around 1856 or 1857 by an Irishman named Andrew Kennedy. The mine began as a small mining claim; however within a few years with the consolidation of several other mines the mine was patented. By the 1890's the mine was generating huge profits for its shareholders, but there was growing concern over the discharge and debris that was being released into the watershed. The Kennedy Mine continued to flourish through the years until disaster struck in 1922 with the outbreak of a fire trapping 47 miners at the neighboring Argonaut Mine that was connected to the Kennedy Mine. One of the worst gold mining disasters in history the fire claimed all 47 lives.

RESULTS OF LITERATURE SEARCH
A literature search was conducted to assess the archaeological sensitivity of the project area. Information was obtained from the files of Archaeological Resource Service and the North Central Information Center (NCIC) of the California Historical Resources Inventory Systems (CHRIS) office located in Sacramento, CA (File No. Ama-11-09). Ethnographic documents, historic maps, survey reports, site records and base maps pertaining to this area of Amador County, and in particular, within a one-half mile radius of the project area were reviewed. The Office of Historic Preservation's (OHP) Historic Properties Directory was also consulted (OHP 2011). The Historic Property Directory includes the National Register of Historic Places, the California Register of Historical Resources, the list of California Historical Landmarks, and the list of California Points of Historical Interest. The Native American Heritage Commission was also consulted for information regarding Native American sacred sites and a list of the appropriate Native American organizations to contact regarding this project.

NATIVE AMERICAN CONSULTATION / SACRED LANDS INVENTORY
The Native American Heritage Commission (NAHC) reviews the Sacred Lands Inventory to determine if there are any Native American resources listed in the Sacred Lands file that are located within or near to the project area. The California NAHC works to identify, catalogue, and protect places of special religious or social significance, graves, and cemeteries of Native Americans per the authority given the Commission in Public Resources Code 5097.9.

A search of the Sacred Lands file was requested in May, 2011. No response has been forthcoming from the NAHC.

CULTURAL RESOURCE STUDIES AND SITES WITHIN ONE HALF MILE
The records on file at the NCIC were reviewed to determine if the project area had been previously evaluated and if there are any known sites located within the project area. The reports of previous cultural resource studies and the records of the archaeological sites within a one-half mile radius were reviewed. There have been nine cultural resource studies previously conducted within a one-half mile radius of the project area. One of those studies (Armstrong 1977) included a portion of the northern part of the project area. Two others studies included land north of the treatment plant (Johnston 1975; Soule 1976), a few were Caltrans projects and pertained to Highway 49 (Levy et al 1995; Keefe 2003), and the rest pertained

Dozens of archaeological sites have been recorded within a one-half mile radius of the project area. Most are old mining features, stone walls and foundations, but there are a few prehistoric sites in the area. One site, CA-Ama-516/H, is located at the south end of the project area, within the Busi Ranch along Jackass Creek. The site was reported to have been a winter camp for Native Americans and contains 48 mortars at seven locations, fire cracked rock and a possible house pit. The site also includes historic features including rock walls and canals used to divert water flow for mining (Tortorick and Davis 1982).

Below is a table of the studies that have been previously conducted within a one-half mile radius of the project area. The cultural resources that are located within that radius are also discussed to describe the types of archaeological resources that could be found within the project area.

<table>
<thead>
<tr>
<th>S #</th>
<th>Date</th>
<th>Title</th>
<th>Author(s)</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-12</td>
<td>1976</td>
<td>An Archaeological Survey of Proposed Modifications to the City of Jackson Sewerage System</td>
<td>Soule, William E.</td>
<td>None</td>
</tr>
<tr>
<td>S-165</td>
<td>1975</td>
<td>An Archaeological Reconnaissance of the Proposed Sewer Collection System for the Martell Area and Outfall Project into Henderson Reservoir in Amador County.</td>
<td>Johnston, Jay</td>
<td>CA-Ama-171, CA-Ama-172 (over one mile away)</td>
</tr>
<tr>
<td>S-236</td>
<td>1978</td>
<td>Cultural Resources Reconnaissance of the City of Jackson Municipal Parking Facility in Amador County, California.</td>
<td>Soule, William E.</td>
<td>None</td>
</tr>
<tr>
<td>S-521</td>
<td>1991</td>
<td>Archaeological Survey of Jackson Creek VMP RX 4-021-AEU.</td>
<td>Gilbert, Carly</td>
<td>P-03-393 and Historic mining remains: mine shafts, tailing piles, rock foundations for cabins, a rock chimney, rock dams, and pipes in drainages.</td>
</tr>
<tr>
<td>S-3310</td>
<td>1977</td>
<td>An Archaeological Survey for Jones ranch Subdivision, Amador Co, CA.</td>
<td>Armstrong, Paul</td>
<td>P-03-220</td>
</tr>
<tr>
<td>S-5881</td>
<td>2003</td>
<td>Supplemental Negative Archaeological Survey Report for Installation of Traffic Signals, ADA ramps and Sidewalks at the Intersection of State Route 49 and Clinton Road in the City of Jackson, Amador County, CA.</td>
<td>Keefe, Timothy</td>
<td>None</td>
</tr>
<tr>
<td>S-5885</td>
<td>2003</td>
<td>Cultural Resources Assessment of the Proposed CDBG Head State Facility, City of Jackson, Amador County, CA.</td>
<td>Peak and Associates, Inc.</td>
<td>None</td>
</tr>
</tbody>
</table>

A portion of the project area was evaluated for cultural resources in 1977 by Paul Armstrong who conducted a study for the Jones Ranch Subdivision. As part of that study he surveyed the access roads that are currently being proposed, as well as the northern swath that extends from the reservoir sites to the wastewater treatment plant. He reported finding both historic and a prehistoric resource. The prehistoric site was recorded as P-03-220/CA-Ama-185 and is a rock outcrop containing three bedrock mortars, located in an unnamed drainage. The historic features he observed included a water ditch, stone foundations, a small stone structure and a stone wall. Those were not recorded. None of these resources are located within the current project area.

In 1991 a cultural resource study was conducted for a prescribed burn to the west of the project area (Gilbert 1991). Several historic mining features were observed near Jackass Creek and Jackass Gulch, including mine shafts, tailing piles, rock foundations for cabins, a rock chimney, three concrete slab floors, rock dams, a leveled dirt platform, with scattered artifacts and lengths of rusted, riveted water pipe along the drainages (Gilbert 1991). The leveled dirt platform and artifact scatter were recorded as an historic Chinese mining camp and is known as P-3-393 / CA-Ama-358H.
In 1995 Caltrans conducted a cultural resource study for a project that proposed a left turn lane and the construction of a paved shoulder along Highway 49. Four sites were recorded as part of that study, three of which are located within one-half mile of the project area: CA-Ama-493H, CA-Ama-494H, CA-Ama-495H and CA-Ama-496H. CA-Ama-493H is the closest of these and includes structural remains of the Moore mine including cabins, warehouse, house, powder house, water tank, impoundment dam, concrete foundations (Levy and Wilcox 1995). Other remains of the Moore mine include CA-Ama-494H, a former air shaft, and CA-Ama-495H, a rock waste pile from circa 1922-1929 activities at the mine (Levy et al. 1995). CA-Ama-496H is a circa 1933 structure. When they were evaluated by Caltrans, they were determined ineligible for the National Register (Lortie 1995).

Twenty six cultural resources were identified on the 518 acre property located a quarter mile to the east during a study for the Jackson Hills Golf Course and Residential Community in 2003 (Davis-King and Baxter 2003). Resources include the remains of the Moore mine (CA-Ama-493H), the circa 1870 Bellouminini Ranch district (CA-Ama-735H), circa 1880 Clark Ranch (CA-Ama-737/H) and Clark Ranch Road (P-3-1067H), remains of the Giannini residence (CA-Ama-731H), part of the circa 1878 Moore Ditch (P-3-1057H), a small ditch with no association (P-3-1056H) and evidence of both placer mining (CA-Ama-736H) and hard-rock explorations (P-3-1058H, P-3-1595H, P-3-1060H, CA-Ama-732H, CA-Ama-733H, CA-Ama-734H, P-3-1065H). French Bar Road was also identified as a cultural resource because by 1850 it was providing access to the mining camp of French Bar; and some portions are considered to be an element of the Bellouminini Ranch District.

Additionally, the stone foundation of a powder house (CA-Ama-301H) was also identified along the west side of French Bar Road, about 400 feet south of where the proposed access road intersections with French Bar Road. It was determined ineligible for the California Register (Davis-King and Baxter 2003).

The majority of mining activity identified in that survey appeared to be associated with the use of sluice boxes, which left soil mounds and waste rock, and ground sluicing, which is recognized by a rippled hillside with a ditch on the upslope side. Placer mining areas were found within every drainage on the property, and are referred to as "mining gulches" on the GLO 1870 plat map. They were determined ineligible for the California Register due to lack of data potential. Hard rock mining was evident by the presence of prospect pits, shafts, rock waste piles. It was determined that the remaining evidence of hard rock mining was eligible for the California Register because they can yield important information about land use patterns and mining technology (Davis-King and Baxter 2003).

Four prehistoric resources were also identified in that study, including three milling stations (P-3-1069, P-3-1072 and CA-Ama-953) and a lithic scatter found in the Clark Ranch remains (CA-Ama-737/H). The milling stations were determined ineligible for the California Register after conducting a minor test excavation at each location and determining that no further information about prehistory could be obtained. Artifacts within the Clark Ranch included two chert flakes and a milling stone. Frank Busi Sr., who was interviewed at the time of the study, stated that burials with glass beads had been removed by a local family in 1975 (Frank Busi, Sr. personal communication with Scott Baxter on March 6, 2002 in Davis-King and Baxter 2003).

The Historic Properties Directory, National Register of Historic Places, California Register of Historical Resources and list of California Historical Landmarks were also reviewed. The Directory of Properties in the Historic Property Date File for Amador County lists numerous properties in Jackson. Many of these properties are contributors to the Kennedy Mine National Register District or the Jackson Downtown Historic District, both of which are listed on the National Register. Seven other sites in Jackson are also listed on the National Register, including the Amador County Hospital building, John A. Butterfield house, Chichizola Family Store Complex, the DePue and Grace Blair House and Indian Museum, Kennedy Tailing Wheels, William J. Paugh House and the Saint Sava Serbian Greek Orthodox Church (OHP 2011). None of the properties listed in the Directory of Properties are located on French Bar Road or near to the current project area.

**Historic Map Data**

Historic maps available at the NCIC were reviewed to ascertain more specific information about the project area.
Description
The project area is characterized by rolling hills and a classic blue oak forest that is intermixed with meadows and grassland. Much of the project area is currently being grazed by cattle, or has been grazed in the recent past.

The project area is about 530 acres in size, plus 1.6-miles of access road, 1 mile of which is an existing dirt road leading to a single-family residence with the address 5001 French Bar Road.

The Busi Ranch, with an address of 7351 French Bar Road, is located just off the southeast corner of the project area and served as the access point for a portion of the survey. There are no standing buildings located within project area and very few access roads.

The greatest elevation in the project area is 1,600 feet above sea level (asl), at the northeast corner of the proposed reservoir site(s) area. On the southwest side of the reservoir site(s) area the land reaches 1,511 feet asl then slopes southward declining to 1,000 feet asl at Jackass Creek.

Jackass Creek forms the southern boundary of the project area. There are two unnamed, intermittent drainages that flow south through the project area into Jackass Creek. Jackson Creek flows west along the northern border of the project area and there is an unnamed intermittent drainage that heads north for a short distance through the pipeline corridor before emptying into Jackson Creek.

The construction corridor mostly follows an existing PG&E right-of-way. This area has a greater slope and more trees and other vegetation than do the areas where the reservoirs and spray fields are being proposed.

The soil throughout the project area includes Auburn silt loam that is very rocky and moderately deep in many areas. There are mine tailings and riverwash along Jackson Creek and mixed alluvium along Jackass Creek. The soil across the project area is medium reddish brown colored loam, and contained more rocks in some areas than in others. There are numerous rock outcroppings throughout the project area, particularly in the upper elevations and many of them have been assayed.

Field Methodology
The field methodology differed in each proposed activity area. The potential reservoir site(s) were thoroughly inspected for cultural resources, paying particular attention to specific reservoir site locations shown on the map in Figure 1. The existing dirt road that leads from the Busi Ranch up through APN 044180013000 provided access for this area. The potential reservoir site(s) area encompasses about 177 acres and is located within the above named APN. Three surveyors started at the north end of that parcel and spread out approximately 100 meters apart, walking zigzag transects south through the potential reservoir site(s) area.

The potential pipeline construction corridor is about 34-acres in size and was inspected by two surveyors walking north from the potential reservoir site(s) area through the pipeline construction corridor to the existing wastewater treatment plant on Jackson Creek, a distance of about .65 miles. The surveys were separated by about 40 to 50 meters.

The access road was surveyed on foot by two teams of two surveyors. One mile of the existing access road follows an existing dirt road that leads to a residence. The remaining 0.6-mile segment that loops around to the north off the main 1-mile segment is an unmaintained dirt road that is overgrown with grass.
The potential irrigation area is about 323 acres in size and was inspected using a controlled-exclusive survey, where locations that are more likely to have resources were inspected at the expense of areas where sites are less likely to occur based on background research conducted prior to the field survey (White and King 2007). Rock outcroppings, drainages and hillsides were inspected. One previously recorded archaeological site, CA-Ama-516/H, located along Jackass Creek at the south end of the irrigation was also reinspected, but not all of the features of that site were inspected.

Where cattle grazing occur, the ground visibility was great; and this constituted a good portion of the project area. In other locations the grasses were about a foot high. Each surveyor used a hand trowel when necessary as a tool to push away vegetation or to inspect something further. Overall the surveyor’s ability to inspect the project area was good. Digital cameras were used to photograph the project area, as well as artifacts and features when they were observed. Surveyors also used a Garmin GPS to record survey tracts and locations of artifacts and features that were observed.

**Survey Findings**

Numerous historic resources were found throughout the project area, as well as some prehistoric resources and the previously recorded historic and prehistoric site CA-Ama-516/H. The majority of historic resources include evidence of past mining activities and previous settlement of the property. Many of the resources are potentially significant and require further research to determine association. The resources are discussed by areas in which they were found.

**Reservoir Site(s) Area**

Within the proposed reservoir area are evidence of past mining and ranching activities. At the top of the project area, where reservoir sites 1, 2 and 3 are proposed, are numerous rock piles and a semi-circular shaped ring of rocks with a shallow depression. In the drainage that traverses this portion from north to south there are two halves of a metal drum that appear to have been modified into a make-shift device used to pan gold; and a third was found at the west side of the reservoir area. In the location of reservoir site 4 there are several rock features that are remnants of former homestead and three additional rock piles.

**The semicircular shaped ring of rocks:** This feature is most likely non-cultural, as the depression may have been formed by a down tree. Furthermore, there are three large chunks of decomposing
logs that may have once been a stump where there is now a depression. If this is the case the semi-circular ring of rocks could have been formed when they came to rest on the uphill side of a tree trunk, which prevented the stones from moving further downhill over time.

**Rock Piles/ Tailings:** There are numerous rock piles of generally the same size and composition in the area of proposed reservoir sites 1, 2 and 3. These appear to be waste rock from mining activities. The northernmost pile is about 370 feet south from the center of the northern property line of APN 044180013000, and the southernmost pile is east of the existing dirt road, about 2,275 feet south of that property line. Most of them are small, less than 6’ across and 2’ high, but are few are up to 15’ long and these appear like platforms of flat angular rocks. The rocks are of amphibolite schist or diabase, a fine grained, dark gray to black igneous rock, the type commonly quarried for crushed stone. They are weathered and mostly covered with lichen.

**Metal drums:** In the drainage that traverses north-south through the proposed reservoir area are two rusted half metal drums that appear to have been modified into a make-shift device, possibly used to pan for gold. They are possibly two halves of the same metal drum, but a third one was observed at the far west side of the proposed reservoir area.

The two within the drainage are 137 feet apart. The northernmost metal drum has two rectangular-shaped cutouts at the top, several small circular openings around the side near the bottom, a larger circular opening in the base and a large square cutout on the uphill (north) side. The two rectangular-shaped cutouts appear to be handles, while the remaining cutouts may allow it to function as a make-shift gold panning device. The other half of the barrel, located 137 feet down (south) the drainage, has no cuts but is missing the bottom.

The third half metal drum was observed at the far west side of the reservoir area, 1,535 feet southwest of the southernmost one in the drainage. Unlike the other two, it was found on the southern slope of a hill and not within or near a waterway. This half drum has also been modified. There is one large square cut out along one side and several small circular shaped holes around the side near the bottom. Additionally, handles have been soldered to either side at the top.

**Homestead Site (ARS 11-015-01):** In the location of reservoir site 4 there are several rock features that appear to be remnants of a cabin site and include stone foundations, stone walls, a rock quarry area, a rock lined spring, a few historic domestic type artifacts and tailing piles.

Near one cluster of oak trees, at the north part of the site area, is a rock wall segment that extends from the tree line, where there is a natural outcropping of rocks, west downhill towards the above-mentioned drainage for a distance of 170’. It is an unmortared rock wall that is about 2.5’ tall and 2’ wide, and constructed from stones quarried in the immediate area, probably from the rock quarry area at the east end of the wall. The rock quarry covers an area of about 70 feet east-west by 80 feet north-south and is a natural outcropping of rocks that has been quarried for stones used to develop walls, foundations, cisterns, etc.

About 250’ to the south of the quarry area, under another cluster of oak trees is another large natural outcropping of rocks and several more
man-made rock features. There is a north-south oriented rock wall segment that heads north from the outcropping for 85 feet. It is 1’ thick and about 2’ high at its tallest point. It was constructed of quarried stones that are rectangular in shape and it appears to have been a well-constructed rock wall.

About 35’ to the east of the rock wall segment is a rectangular shaped alignment of rocks that appears to be a foundation of a former building, possibly a cabin. The foundation measures about 40’ north-south by 20’ east-west.

Under the cluster of trees immediately south of the foundation is a large outcropping of rocks, which seems to form the southern boundary of the site area. Within this outcropping is a natural spring that has been dug out and lined with rocks. Downhill of the rock lined spring is a cluster of seven rock tailing piles that have been incrementally dumped across a sloped area for 85 feet; and at bottom is what appears to be a rock lined well with a precast concrete pipe, an obvious later addition, and standing water just below the surface. About 60’ to the northwest of that is a concrete trough that also appears to be a later addition to the location.

A few assayed outcroppings are also present in the northeast portion of the site area.

Some historic domestic type artifacts were also seen near the rock lined spring/cistern, including two fragments of dark green wine bottle glass and one aqua colored fragment of pane glass.

**Irrigation Fields Area**

Several historic features from past mining activities and a prehistoric site are located in this portion of the project area. Most of the features are associated with the previously recorded historic/prehistoric site CA-Ama-516/H, but a rock wall was also identified.

**Rock Wall (ARS 11-015-02):** There are two segments of a rock wall that were identified along an existing property line between APNs 044180013000 and 0443100050000. The easternmost segment is 175 foot long and extends up hill and to the east of an unnamed drainage that separates it from the other segment. The wall is made of unmortared fieldstones about one course thick and 1.5 feet tall. Remnants of another 175 foot long segment was observed along the same property line 145 feet to the west, but that segment is not well formed and most of the rocks have been removed so that only one low row of rocks is present along the ground. Both segments follow an existing fence line made of post and barbwire construction.

**CA-Ama-516/H:** This is a historic and prehistoric site that was recorded in 1982 (Tortorick and Davis) and was relocated during the survey at the south end of the irrigation fields along Jackass Creek, but an associated ditch extends northwest through the property for one mile.

The historic components of the site consists of a heavily modified drainage and creek with large, well-formed stone walls that parallel them, numerous piles of waste rock (tailings), a fallen shack, a mile-long earthen ditch used to divert water and some rusted farm equipment.

There are several stone walls, some more substantial than others, and many are located off the project area and were not inventoried as part of this survey project.

There is a main rock wall that parallels the north bank of Jackass Creek. It extends west from the unnamed drainage located 865 feet west of the Busi Ranch for a distance of 1,200 feet and terminates where there is a grove of Buckeye and oak trees and a large rock outcropping. The rock wall is well constructed with local dry-laid fieldstones of all sizes. It is
about 2.5’ wide and 3.5’ tall for most its length, but extends as high as 5’ near where it intersects with another rock wall, and where there are breaks in that wall for two gates. One gate access a road leading west, off the project area and another accesses the pasture to the north that is part of the project area. At its east end, the wall tapers down to where there is a pre-cast concrete culvert in the center of the unnamed drainage where the flow of water drains into Jackass Creek. The wall continues for an additional 50 feet then intersects with another rock wall that parallels the east bank of the unnamed drainage. The main wall terminates 5 feet further east into a pile of rocks, which may have been left over from when the walls were constructed.

The rock walls that parallel the banks of the unnamed drainage extend north off the main rock wall that parallels Jackass Creek. The wall that heads up the west side extends 325 feet up the drainage until it tapers out. It is 2 feet wide and 3 feet high and is well constructed. The wall on the east side of the drainage is roughly of the same dimensions and extends 150 feet up the drainage, but is not as well-constructed.

The stones that have been used in the rock wall construction appear to have come from the immediate area. Some appear to have been broken and are possibly from assayed outcroppings throughout the area. Others look like fieldstones. Rocks of all sizes were used in construction, but the majority of them are large stones, about 1.5-2 feet across and some as large as 3 feet across. Many small stones were used to fill spaces between the larger stones, resulting in strong, well-constructed walls. The rocks are local and appeared to be diabase, a fine grained, dark gray to black igneous rock, and greenstone. The walls are weathered and mostly covered with lichen.

There is also an earthen ditch that appears to lead from Jackson Creek, northwest of the project area, directly to a concave-shaped opening in the rock wall that parallels the west bank of the unnamed drainage; and it roughly follows the 1,040 foot contour line the entire length. It is 2’ wide and 1’ deep and appears to be hand dug, with the excavated soil mounded into an earthen berm on the down-slope side of the ditch. Above Jackass Creek, segments of the ditch are shored with rocks on the down-hill side that act as a berm and help prevent erosion. The ditch is in good condition for most of its length, but a few segments, located closer to the unnamed drainage, have been affected by erosion. In one location two short segments of precast concrete pipes have been placed in the ditch, but those too are silted in.

About half way along the path of the ditch, it crosses a small unnamed drainage and there is a trellis that carries a PVC pipe over the drainage. This feature functions to carry the water flow across the drainage. The site consists of a collapsed miner’s cabin and artifact deposit surrounded by mining features. The
building is of simple wood frame construction with a gabled roof. The cladding is vertical board and the roof is constructed of sheets of corrugated galvanized metal that was used for its durability and the fact that it required little maintenance. The cabin consists of wire nails and shows signs of repair. The cabin is made up of one wood-framed window with no glass present in or around the window. Associated artifacts include a cast iron cook stove that lay near the cabin. The artifact is a pre-Wedgewood cook stove manufactured by Jas. Graham Mfg Co. in Newark (Alameda County), CA. with a Breuner cover plate on the side. Initial research indicates this stove may date to the 1880s or 1890s. The site likely dates to the early 20th century and demonstrates the renaissance of simple technologies requiring little investment.

On the two low hills immediately north of Jackass Creek are several piles of rock. On one hill, within a 1-acre area there are 13 large piles of rocks, some up to four feet tall and one is at least five feet tall. There are more piles in the swale to the west closer to the creek, including a group of three 450 feet to the west. On the hill to the east, 550 feet away, there is another group of 10 rock piles, but these are generally smaller in size and could be assayed outcroppings or just older in age. They are all less than 6 feet across and 1.5 feet high. The rocks are diabase and greenstone.

Near the point where the drainage empties into Jackass Creek there are a pile of corrugated metal sheets and barb wire, two pieces of farm equipment, two old steel wagon wheels and remnants of a possible cart or wagon, and modern stove appliance laying about the drainage.

The resource also has a prehistoric component that includes several features such as bedrock mortars (BRMs) and midden deposits. The site record reports the presence of 48 BRMs scattered amongst 7 different rock outcrops, all located along Jackass Creek in the same general location. Some, but not all of the BRMs were relocated. The site record also reports the presence of a midden deposit on the south side of the creek, but the survey did not include lands south of the creek. However, during the current survey a midden deposit was identified on the north side of the creek, in an area where a possible house pit was reported on the site record. The midden deposit forms an obvious mound on the landscape and the soil is markedly darker in color that the surrounding soil. The midden appeared dark grayish brown in color (Munsell 10YR 4/2) and very friable in texture. Basalt flakes, charcoal, deer bone and fire-cracked rock (FCR) were observed within the midden deposit. Two fragments of FCR, one pestle and a handstone were observed near a cluster of 4 BRMs located southeast of the midden deposit on two rocks adjacent to the rock wall. The archaeologists who recorded the site in 1982 also reported finding FCR and possible tools near that cluster of BRMs (Tortorick and Davis). Another prehistoric artifact was observed in the unnamed drainage west of the Busi Ranch.

**Construction Corridor**

At the north end of the construction corridor near Jackson Creek evidence of past mining activities was observed (ARS 11-015-03). This included a moss covered pile of rocks measuring 30’ southeast-northwest by 6’ northeast-southwest, and about 2’ high with a large depression located adjacent on the southeast side and a rock-lined ditch on the east side. The ditch extends between an intermittent creek and Jackson Creek, a distance of about 100’.

**Access Road**

Only a fragment of a white ceramic coffee or tea cup was observed in this section.
CONCLUSIONS

Several potentially significant historic resources were observed within the project area, as well as one potentially significant prehistoric resource. These resources are discussed in regards to their potential significance under CEQA and need for further treatment.

Overall, there is a strong need for further evaluation to determine the age, nature and association of the historic mining features and homestead within the project area. Once they are put into their proper contexts they can be recorded on Department of Parks and Recreation (DPR) 523 forms as individual sites, or as features that contribute to a larger site or district. Additionally, an appropriate treatment plan can then be recommended for those resources that are determined to be significant and that will be impacted by the proposed project.

CA-Ama-516/H (Historic) and Other Gold Exploration Features

There is evidence of placer mining and hard rock mining within the project area, as well as an old homestead site and a prehistoric habitation site. The age and affiliation of the historic resources have not been determined at this point, but it is likely that many of the distinct historic features represent a group of functionally related resources that all played a part in the extraction of gold within the project area. There is a high potential that many of these features will yield important information about mining activities and early settlers in the area.

Placer mining means collecting a loose form of gold from sand and gravel beds, known as placer gold and evidence of this activity was observed along both Jackass and Jackson Creek. Hard rock mining consists of breaking apart solid rock in search of quartz veins that might contain gold or other ore that could be extracted. This type of mining was also observed. Jackass Creek and one of its tributaries within the project area underwent extensive placer mining. Evidence of this historic activity was initially documented by archaeologists in 1982 and the many features that make up this resource were recorded as CA-Ama-516/H.

Placer mining of Jackass Creek is indicated by heavily modified stream channels with a well-developed system of rock walls that is part of what appears to have been a ditch-fed sluicing system. Ground-sluicing is also indicated by minor cut banks within the drainage area. The ditch that provided water for the sluicing system is a hand-dug ditch that delivered water from a point along Jackson Creek, about a mile and a half to the northwest, through the project area following the 1,040 foot contour line and into the drainage just above its confluence with Jackass Creek. Half way along the ditch in the project area is a fallen cabin which may also be associated with the mining of Jackass Creek, but not necessarily in the same time period.

Also associated with the site are several piles of waste rocks. Many of the waste rock piles are likely the result of placer mining activities along Jackass Creek and its main tributary in the project area, however there are also piles of waste rock near the old homestead site (ARS 11-015-01) and on the hill where Reservoirs # 1, 2 and 3 are proposed. It is not clear if these are part of the same mining activities.

There are also natural outcroppings of rock that have been assayed or crushed in place and this is probably the result of miners, or homesteaders working surface veins or crushing outcroppings apart to look for quartz veins that might contain gold or other ores. This type exploration is an example of hard rock mining and occurred early in the gold rush period. Shattered pieces of quartz were observed, particularly in the locations of assayed outcroppings, which indicate that there was quartz present within these outcroppings. They are present within the site area of CA-Ama-516/H and the old homestead site (ARS 11-015-01), but their age and association with CA-Ama-516/H has not yet been determined.

It is possible that some of the rock piles are the result of the use of a rocker pan, or indicate the presence of an *arrista*, but further research is necessary to adequately classify their age and association. A rocker pan consists of a wooden trough with a screened hopper on the top and a handle that allows the operator to rock the device. Gravel is dumped into the hopper followed by enough water to transport the fine sediments through the sieve, across an apron and through a series of riffles where fine gold settles. An *arrista* is a tunnel excavated horizontally into a hillside and typically there will be a pile of waste rock on the downhill side. *Arristas* often cave in and are not necessarily identifiable without further investigation.
walls, a well and foundations from a probable residence. Other evidence of improvements and/or agricultural related activities may also exist in the immediate area that was not identified in the current survey. Additionally, some of the rock piles located near the homestead site could be associated with mining or agricultural activities that occurred at the homestead. In discussing land use patterns typical of the local Italian community, Davis-King and Baxter stated the following:

“[They] did not simply run cattle or raise a certain crop. They typically raised cattle, sheep, and other livestock, grew grains, planted vineyards and orchards, and engaged in other forms of horticulture all on the same plot of land. Clearing of land also made available lumber or firewood for home use or cord wood sale, and plentiful stone for building structures. During the rainy season, when farming was not possible, they used water runoff to engage in placer mining, or simply explored promising quartz outcrops” (Davis-King and Baxter 2003:38).

The homestead site in the area of Proposed Reservoir #4 is a potentially significant historic resource because it has a high potential to yield information that can answer important research questions pertinent to farming, ranching and homesteading in the later half of the nineteenth century. It may also contribute information about the social, non-technical elements of mining if it is found to have association with mining activities that occurred within the project area.

The rock wall (ARS 11-015-02) that was identified between APNs 04418001300 and 044310005000 might be associated with homesteading on the property but it does not appear to be a potentially significant historic resource. While it retains integrity of location and setting, it does not retain integrity of feeling, design or workmanship and does not appear to have the ability to meet any of the California Register criteria. It was recorded on DPR 523 forms to document its presence, but no further recommendations are warranted.

RECOMMENDATIONS

GENERAL RECOMMENDATIONS

All of the archaeological features observed within the project area should be recorded on DPR 523 forms and submitted to the North Central Information Center. Presently only a primary form can be prepared on most of the resources. Further research is recommended below to acquire the information necessary to adequately complete the forms for submittal.

Further recommendations are warranted to mitigate potential impacts both project alternatives that include excavation. According to CEQA, historical resources determined to have significance need to be addressed before environmental mitigation guidelines can be developed and approved. Currently, there is a need for further research to determine how these historic features are associated and which have historic significance requiring further mitigation.

Reservoir Site Area

There are mining features located in the area of proposed Reservoir Sites 1, 2 and 3 and a homestead site in the area of proposed Reservoir 4. The homestead site (ARS 11-015-01) is a potentially significant historic resource and it should be evaluated further to determine if it qualifies as significant historical resource under the criteria of the National Register of Historic Places, or the California Register of Historic Sites. The potential significance of the nearby rock piles and depression is less clear. Establishing function and context is important in determining if they are the result of placer or hard-rock mining, or if they date to the gold rush, depression-era or another period. That information forms the basis for understanding the significance of the resources.

It is recommended that further research on the land use history of the properties is conducted, as well as further field investigations to help ascertain age, function, association and potential significance.

Further documentation of the homestead site on DPR 523 forms will need to be accomplished once further research is conducted.

Irrigation Field

The historic and prehistoric features associated with CA-Ama-516/H are located within the area proposed for irrigation. Specific recommendations are made below regarding these features.
In regards to the prehistoric site, recorded as CA-Ama-516/H, it is recommended that the site be avoided. Avoidance is the preferred method of treatment advocated by CEQA for the preservation of significant historical resources and seems to be very feasible for this project. The site is located at the south end of the proposed irrigation area and as long as there is no excavation in the area of the site for pipelines, access roads or other necessary infrastructure, there are no foreseen impacts.

There are also two segments of a rock wall (ARS 11-015-02) that were identified between APNs 04418001300 and 044310005000. One segment has almost entirely been removed and only the base row is present. The other segment is in poor condition and is not well constructed. This does not appear to be a potentially significant historic resource. It was recorded on DPR 523 forms to inventory it, but no further recommendations are warranted.

**Construction Corridor**

A few mining features were observed at the north end of the construction corridor, including a rock lined ditch and a pit with rock tailings (ARS 11-015-03). These appear to be features from past placer mining of Jackson Creek. These features currently appear to be potentially significant because such resources contain important information about land use patterns and mining technology.

**Access Road**

No potentially significant cultural resources were observed within the access road. No further recommendations are warranted for area of the project.

**SITE SPECIFIC RECOMMENDATIONS**

**Reservoir Site Areas**

**Sites 1, 2 and 3.** If one or more of these locations is chosen for construction, thorough documentation of the observed features must be completed, as well as a more intensive surface examination of the chosen reservoir site or sites. All direct impact areas within the reservoirs must be reexamined, as well as any locations with associated improvements such as pipelines, ditches, drains, or other earth disturbing operations. The reexamination must be accompanied by a complete search of local and regional archival resources to reconstruct the land use of the chosen locations. Once the land use history has been established, it will be possible to adequately address the potential significance of the observed features.

**Site 4.** It is recommended that this location be avoided. If avoidance is impractical, thorough documentation of the observed features must be completed, as well as a more intensive surface examination of the reservoir site. All direct impact areas within the reservoir must be reexamined, as well as any locations with associated improvements such as pipelines, ditches, drains, or other earth disturbing operations. The reexamination must be accompanied by a complete search of local and regional archival resources to reconstruct the land use of the chosen location. The apparent homestead was once a hub of agricultural operations in the area. It is not clear when this place was occupied, but it is likely after 1862 and the passage of the Homestead Act. Once the land use history has been established, it will be possible to adequately address the potential significance of the observed features.

**Irrigation Field**

The impact of the irrigation spray fields is variable depending on the types of archaeological sites present. The rock features associated with hard rock mining seem to have the least potential for negative impacts from the water spray, but could easily be damaged by placement of pipelines and spray heads, even if they are lain over the surface and not excavated into place. Prehistoric archaeological features and historic era domestic features have a much higher potential for negative impacts from the project. Modified stream channels have a potential for negative impact, but this appears relatively easy to address.

The cultural features located within the potential spray fields should each be mapped and recorded on DPR 523 forms and all direct impact areas within the reservoirs must be reexamined, as well as any locations with associated improvements such as pipelines, ditches, drains, or other earth disturbing operations. The reexamination must be accompanied by a complete search of local and regional archival...
resources to reconstruct the land use of the chosen locations. Once the land use history has been established, it will be possible to adequately address the potential significance of the observed features.

The archaeological site CA-Ama-516/h should be avoided and avoidance of negative impacts to this archaeological site is recommended. CA-Ama-516/h is a prehistoric and early historic era Native American settlement on Jackass Creek overlain by mining features and agricultural improvements dating to the Nineteenth and Twentieth Centuries. It constitutes a potentially significant archaeological site. The features have been previously evaluated (King and ?) and found to have a potential to contribute to our knowledge of local history and prehistory.

If negative impacts to this site will occur as part of the planned undertaking, any gaps in the existing research should be filled, and a testing plan developed to address the loss of significant information that would occur. The results of the archaeological testing procedure would inform the appropriate mitigation measures to propose.

Ditches associated with mining or agriculture, as well as stream channels that have been modified to accommodate mining, may be damaged through increased erosion within the spray field area, but mitigation of this impact can be achieved through a complete recordation of the features prior to implementing the spray plan.

REFERENCES CONSULTED

Armstrong, Paul

Barrett, Samuel A. and Edward Winslow Gifford

Cook, Sherburne F.

Davis-King, Shelly and Scott Baxter
2003 Historical Resources Survey Report for the Jackson Hills Golf Course and Residential Community Project, City of Jackson, Amador County, CA. Unpublished report on file at the NCIC under S-5882.

Gilbert, Carly


Levy, Richard

Levy, Richard and Susan E. Wilcox
1995 Archaeological site record form for CA-Ama-493H/P-03-669. On file at the NCIC under trinomial.

Levy, Richard and Susan E. Wilcox and George Waugh

Lorte, Frank (Caltrans, District 10)

Office of Historic Preservation

Peak and Associates, Inc.
2003 Cultural Resources Assessment of the Proposed CDBG Head State Facility, City of Jackson, Amador County, CA. Unpublished report on file at the NCIC as S-5885.

Sanchez, Katy (Native American Heritage Commission)
2011 Letter with results of Sacred Lands Inventory search and list of Native American organizations/individuals to contact. Letter on file at ARS under 11-002 and at the NAHC in Sacramento, CA.

Soule, William E.
1978  Cultural Resources Reconnaissance of the City of Jackson Municipal Parking Facility in Amador County, California. Unpublished report on file at the NCIC as S-236.
Tortorich, Frank and Keith Davis
1982  Archaeological site record for CA-Ama-516/H, or P-3-703. Record on file at the NCIC under trinomial.
White, Gregory G. and Thomas F. King
APPENDIX 1

NATIVE AMERICAN CORRESPONDENCE
May 16, 2011

Ms. Katy Sanchez
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Re: ARS project 11-015: Proposed Jackson wastewater treatment plant, Jackson, Amador County, CA

Dear Ms Sanchez:

Archaeological Resource Service has been retained to evaluate an approximately 250 acre piece of land and an associated access road located near Jackson, Amador County CA (map attached). At this time, we know of no significant Native American resources in the project area. The project area is shown on the USGS Jackson, California quadrangle map. Most of the project area lies in Township 6 North, Range 11 East. The access road is within Sections 28 and 29; the pipeline construction corridor is within Section 29; the reservoir site area is within Section 32; and the irrigation fields are within Sections 31 and 32. The southern portion of the irrigation fields extends into Sections 5 and 6 of Township 5 North, Range 11 east in Amador County, California.

Please refer to ARS 11-015 in your communication. Thank you in advance for your participation in this evaluation process.

Sincerely,

William Roop
Staff Archaeologist

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1 Figure 1 of this report was attached as the map in this correspondence.