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August 23, 2006

File No. 01030A

SUBJECT: Middle Fork American River Hydroelectric Project Relicensing
Final 2005 Cultural Resources Inventory Study Report

Dear Tribal Representative –

On February 24, 2006, I forwarded to you the draft 2005 Cultural Resources Inventory Study Report for your review and comment. Staff has finalized the Cultural Resources Inventory Study Report based on comments received. The Final Report is attached in paper and electronic format.

Please note that to comply with the Federal Energy Regulatory Commission's (FERC) regulations 18 CFR Section 388.112; Figures 1, 2 and 3 have been labeled "Non-Internet Public Information" in the upper left corner. The electronic files containing this information are indicated with an "NIP". Per FERC's regulations, Non-Internet Public Information is available to the public but is not to be posted or accessible online through the Internet. Therefore, PCWA requests that you do not post on the Internet any of the electronic files labeled "NIP".

PCWA is in the process of collaborating with the Native Americans, local historical societies, historians, and the US Forest Service to begin to locate and document cultural resources that occur within the Project boundaries. PCWA has applied to the Eldorado and Tahoe National Forests for a permit to conduct field studies to locate and document cultural resources on Forest Service lands in the Project Study Area. We anticipate the processing of the permit will take a number of weeks.

If you have any questions on the attached report or would like to discuss the Relicensing project, please don't hesitate to call me at (530) 823-4889.

Sincerely,

Mal Toy

Director of Resource Development

MT:bb

Attachments:

2005 Final Cultural Resources Inventory Study Report
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2005 Final Cultural Resources Inventory Report
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**Placer County Water Agency
Middle Fork American River Hydroelectric Project
(FERC No. 2079)**

FINAL

**2005 CULTURAL RESOURCES INVENTORY
STUDY REPORT**



Placer County Water Agency
P.O. Box 6570
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August 23, 2006

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1.0 INTRODUCTION

This report documents the results of the first year (Phase 1) of the Placer County Water Agency's (PCWA's) cultural resources inventory study. Phase 1 of the cultural resources inventory was carried out in 2005 as outlined in the PCWA's 2005-2006 Cultural Resources Inventory Study Plan dated May 27, 2005 (PCWA 2005). Phase 1 focused on retrieving, compiling and reviewing existing information. Phase 2 will be conducted in 2006 and will build upon the information developed through the Phase 1 investigation, focusing on verifying the location and conditions of known cultural resources and identifying previously unidentified and/or unreported sites.

2.0 STUDY AREA

The Cultural Resources Inventory Study involves conducting an inventory of the cultural resources in the areas immediately adjacent to or near the primary facilities associated with the Middle Fork American River Project (MFP or Project). For the purposes of this study, the Study Area and Expanded Study Area are defined as follows:

Study Area – All of the area that lies within the Federal Energy Regulatory Commission (FERC or Commission) Project boundary and a 200-foot area surrounding any Project related facility or feature that may lie outside the FERC Project boundary. These include, for example, recreation facilities, radio towers, spoil piles, adit entrances, sediment storage areas, and the sediment transport study pile between Ralston Reservoir and Oxbow Powerhouse. The Study Area *does not* include roads or trails or the land areas that overlie subsurface features such as tunnels.

Expanded Study Area – The Study Area as defined above plus the area within one mile of the FERC Project boundary.

The Study Area and Expanded Study Area are illustrated on Figure 1, with respect to the primary Project facilities.

Note that this report sometimes refers to the Project area or MFP area, particularly when discussing regional facts or events. These terms are not meant to define a specific area. They are used to facilitate the discussion of facts or events involving the land surrounding the MFP facilities and/or the streams and rivers upstream and downstream of the MFP facilities.

3.0 STUDY PURPOSES

The information developed as part of the 2005 and 2006 Cultural Resources Inventory Study will serve the following purposes:

- form a basis for future technical studies conducted as part of the formal relicensing process;

- support discussions with the resource agencies and the tribes regarding the Area of Potential Effects (APE)¹;
- support permit applications required from the United States Department of Agriculture Forest Service (USDA-FS);
- help ensure timely completion of other regulatory processes, for example Section 106 of the National Historic Preservation Act (NHPA);
- help facilitate early consultation efforts with the Tribes.

4.0 STUDY OBJECTIVES

The primary objective of the Cultural Resources Inventory Study is to compile a comprehensive inventory of cultural resources that are more than 50 years old within the Study Area. These data are essential to making determinations that will allow the FERC to meet its responsibilities under Section 106 of the NHPA and to design future studies necessary for the relicensing process. This study, conducted as part of Phase 1 efforts, will assist in the design of the Phase 2 field studies. Overall study objectives are:

- Obtain information regarding known cultural resources in the Study Area and the Expanded Study Area (Phase 1).
- Determine the extent and adequacy of previous archaeological field survey in the Study Area (Phase 2).
- Verify the presence/absence and nature of cultural resources previously known to exist in the Study Area, and immediate vicinity (Phase 2).
- Identify any previously unknown cultural resources within the Study Area (Phase 2).
- Identify prospective stakeholders in the relicensing process, including Tribes, non-governmental organizations, and resource agencies (Phases 1 and 2).
- Determine if there are any known cultural resource management issues within the Study Area (Phases 1 and 2).

¹ The geographic area or areas within which an undertaking may cause changes in APE the character or use of historic properties, if any such properties exist

5.0 APPROACH

As described in the Study Plan, the Cultural Resources Inventory Study will be performed in two phases, the first focusing on data acquisition and review, the second focusing on field surveys. Phase 1 data acquisition activities were carried out in 2005 and are the subject of this report. Phase 2 activities will be implemented in 2006 and will involve (1) verification of the location and nature of previous known and reported cultural resources within the Study Area; and (2) completion of an intensive field survey to locate previously unknown and therefore unreported cultural resources within the Study Area. The information contained in the Phase 1 Report will be used to refine the Phase 2 study components. Specifically, the data will be used to characterize the cultural resources in the Expanded Study Area and to predict what types of resources could be expected to occur within the Study Area in anticipation of conducting comprehensive inventory fieldwork. Field inventory will only take place on lands within the Study Area. Fieldwork on lands administered by the USDA-FS will require that PCWA obtain a permit from the USDA-FS per the Archaeological Resources Protection Act (ARPA).

6.0 CONSULTATION

PCWA consulted with the USDA-FS to develop the Cultural Resources Study Plan and to obtain the appropriate permits needed to carry out the Study Plan, including an Organic Act Permit (Temporary Special Use Permit ID: GTN104, dated 1/28/05).

Phase 2 fieldwork will require a USDA-FS Special Use Permit issued pursuant to ARPA. This report identifies previous cultural resources studies in the Expanded Study Area and Study Area. This information helps define the level of effort that will be appropriate for Phase 2 field studies to be permitted by the USDA-FS per ARPA.

Phase 1 and Phase 2 studies will contribute to defining the APE for the Project in consultation with FERC, USDA-FS, PCWA, other stakeholders and the State Historic Preservation Officer (SHPO). The results of the Phase 2 efforts and consultation with stakeholders could result in a decision that appropriate boundaries of the APE exceed the presently defined boundaries of the Study Area and that additional field or other studies are appropriate to inventory historic properties in the APE.

6.1 NATIVE AMERICAN NOTIFICATION AND CONSULTATION

As part of Phase 1 efforts, PCWA sponsored meetings and a MFP area field trip for Native Americans and USDA-FS personnel. Meetings were held with representatives of the United Auburn Indian Community (UAIC) (August 26, 2005), Washoe Tribe of California and Nevada (August 29, 2005), and Shingle Springs Rancheria (August 31, 2005). At (or shortly after) the meetings PCWA presented a description of the MFP and the re-licensing process, a general schedule for the relicensing effort, and a copy of PCWA's Cultural Resources Inventory Study Plan. Points of Contact were identified for each tribe and the tribe's interest in the MFP was ascertained. A USDA-FS representative attended each meeting.

UAIC expressed interest in being informed throughout the licensing process. Points of contact for the Tribe are Analytical Environmental Services and the Tribal Chairperson. Shingle Springs Rancheria indicated that they probably would not be directly involved in licensing meetings and other activities on a regular basis but wished to remain informed of the licensing effort. Points of Contact are the Tribal Chairperson and Administrative Officer. The Washoe Tribe wish to be very involved in the licensing proceedings, be kept regularly informed, and anticipate participating as active stakeholders. Principal Point of Contact will be Lynda Shoshone as the Chairman's designated representative.

On October 4th and 5th, 2005, PCWA sponsored a tour of MFP facilities for Native Americans and USDA-FS personnel. The tour began with lunch and introductions at PCWA main offices in Auburn. Attendees included representatives from Colfax-Todd Valley Consolidated Tribe, Miwok Tribe, UAIC, Washoe Tribe, Eldorado (ENF) and Tahoe (TNF) National Forests, PCWA and its consultants. Tour attendees were provided the same information as those who attended the meetings in August.

The group traveled to Oxbow Powerhouse, then to the Middle Fork American River near the confluence with the Rubicon River. Here some attendees participated in an archeological survey of a proposed gage site, while others observed riverine and riparian resources. The group then stopped briefly at Ralston Powerhouse, after which some participants chose to return to the Auburn area. Those spending the night proceeded to Big Meadows Campground (see Figure 1) to view archeological resources. After a view stop at Hell Hole Vista, the group proceeded to the Hell Hole Dormitory for dinner, conversation and lodging. Field day two began with continued exploration of Big Meadow Campground. Some attendees then returned to the Auburn area, while others proceeded to Chipmunk Ridge to investigate welded tuff. The group proceeded to the Big Tree Grove, and then to Big Oak Flat in search of acorns and to view archeological resources. The field tour ended with an archeological survey of proposed gage and cable way sites at Circle Bridge.

In the course of the tour various Native Americans expressed interest in plants of cultural value that were observed. At Big Meadows Campground Native Americans reflected that such archaeological sites are of cultural significance to them and that proper management of such sites is a concern.

7.0 PHASE 1 STUDY METHODS

Phase 1 of the Study involved assembling existing information regarding the cultural resources within the Expanded Study Area. Cultural resources include those pertaining to prehistoric Native Americans, historic Native Americans, and historic Euroamericans. Data collection focused on cultural resources that are more than 50 years old.

Existing information regarding the cultural resources in the Expanded Study Area was collected, compiled and reviewed. Information available from the following agencies, tribes and organizations was collected and reviewed:

- USDA-FS, ENF
- USDA-FS, TNF
- California Historical Resources Information System (CHRIS)
- UAIC
- Shingle Springs Rancheria
- Washoe Tribe of California and Nevada
- Todd Valley Miwok-Maidu Cultural Foundation
- Colfax-Todd Valley Consolidated Tribe
- Placer County Historical Society
- California State Library
- The Bancroft Library, University of California at Berkeley
- Miwok Tribe of the Eldorado Rancheria

Specific data sources that were reviewed included, for example: historic General Land Office, United States Geological Survey (USGS), USDA-FS, and county assessors maps; land records; archaeological site records; published and unpublished local histories; unpublished and published academic theses, dissertations, and journal articles; historic aerial photographs; and oral histories. Information from tribes and other Native American sources is preliminary and will be augmented through further tribal participation in the MFP relicensing.

8.0 RESULTS

The following sections summarize the findings of the existing information review as it pertains to the Expanded Study Area, organized as follows: archaeology, ethnography, and history.

8.1 ARCHAEOLOGY

Overviews of the archaeology of the Foresthill Divide and Georgetown Divide areas of the American River drainage are presented in numerous archaeological reports but three significant studies are the basis for this synopsis, Baker et al. (1999), Jackson and Ballard (1999), and Jackson et al. (1994). While there is general consensus regarding the broad cultural patterns expressed in the archaeological record, there is less agreement among researchers regarding the interpretation of the record.

A chronological sequence of prehistoric cultural periods in the Forest Hill Divide (after Baker et al. 1999) and for Georgetown Divide (after Jackson and Ballard 1999) is very briefly summarized in Table 1. The Forest Hill Divide sequence is above the

Georgetown sequence in the Culture Period and Age columns of the table. A “Late Pleistocene” period (>8000 B.C.) discussed by Jackson and Ballard (1999) is not included because there is no evidence of human use of the region in this period. Differences in assigned age of the cultural periods derives, in part, from a greater reliance by Jackson and Ballard on obsidian hydration dating.

Previous archaeological sites inventory in the Expanded Study Area is limited. Among the earliest studies in the Expanded Study Area were those conducted for the Middle Fork American River Project (Rackerby 1965) and for the Auburn Dam project (e.g., True et al. 1978; True ca. 1980). Many site record forms for these studies have been lost, and site locations on reference maps may not be shown accurately. It is clear from reading the reports that investigators recorded conspicuous resources, but not all sites and features. In some cases sites have probably been recorded by more than one investigation, and there is probably confusion regarding some assigned site numbers. Nevertheless, the inventory in-hand is useful to predict the types of archaeological resources in the Study Area.

Sites recorded for the MFP (Rackerby 1965; True et al. 1978) and which may occur in the expanded study area are sites designated H1 (miners water ditch), H20 (Horseshoe Bend tunnel), H21 (tunnel 150 yards south of Horseshoe Bend), H22 (drift mine), H23 (stone foundation of building), H24 (site of 20 stamp mill), H25 (“the only well preserved mining town site discovered along the river” (Rackerby cited in True et al. 1978:2), and H26 (site of 6 miners’ cabins).

Table 2 lists previously recorded archaeological resources in the Expanded Study Area and for which there are contemporary archaeological records. These comprise historic era mining-related sites, features and artifacts; and Native American sites, features and artifacts. Some sites have remains of mining activities as well as Native American habitation or use. The vast majority of archaeological resources known in the Expanded Study Area have been discovered during USDA-FS surveys and are documented in 30 TNF and 23 ENF unpublished reports and other archival records maintained by the Forests.

8.2 ETHNOGRAPHY

The Middle Fork American River and Rubicon River canyons are situated in a vastly varied topographical area where resources were sought and procured by two major Native American groups, the Foothill Nisenan and the Washoe. Claimed tribal territories overlap (Figure 2). In particular, both groups used the river corridors and divides for travel to procure botanical and zoological resources and trade; occasionally the Washoe would reside over a winter in a Nisenan village or within Nisenan territory.

The Nisenan inhabited the drainages of the Yuba, Bear, and American rivers, and also the lower reaches of the Feather River, extending from the east banks of the Sacramento River on the west to the mid to high elevations of the western flank of the Sierra Nevada (Wilson and Towne 1978). Washoe historically inhabited the region east

of the crest of the Sierra Nevada into Carson Valley, extending from the Walker River in the south to Honey Lake in the north, with peripheral territory extending to the mid-elevations of the west Sierra slope (d'Azevedo 1986). Both ethnographic groups fully exploited their territories following a semi-sedentary lifeway; residing at one or two established locations during most of the year, but occupying temporary encampments during part of the year to acquire different resources across a range of altitudes and environments.

8.2.1 Synonymy

Both Nisenan and Washoe have been known by other names and alternate spellings. The Nisenan are sometimes referred to as Southern Maidu, Nishinam, Nisinin and other variant spellings. Some writers refer to them by the name of their village which is the way they referred to themselves. The village names also have great variation in spelling. "Digger," a derogatory term for Central California Indians has also been a term of reference (Wilson and Towne 1978:397; cf. Hodge 1907(2):920 Nissenon, from Nisenone 'our relations'). The *Handbook of North American Indians* (Vol 8) uses the more traditional spelling—Nisenan—the spelling used here.

The variant spellings for Washoe are Washo, Washoes, Washoo, Washsoo, Washaws, Wásiu, wási-šiw ('people from here'). The tribe uses the "Washoe" spelling, although much of the literature uses "Washo" in reference to this group. The *Handbook of North American Indians* (Vol. 11) uses Washoe which is the spelling used in this report (d'Azevedo 1986:497–498; Hodge 1907 (2):920).

8.2.2 History of Research

Early historical accounts of California and Great Basin Indians began with explorers, trappers, and travelers through the area, such as Work's expedition through the Sacramento Valley for the Hudson's Bay Company in 1832–1833 (Work 1945) and Frémont's 1843 and 1844 expeditions into Nevada and Northern California (Frémont 1846). Bancroft (1874–1876) compiled historical accounts up to 1874 in 5 volumes covering various topics such as Native American culture, linguistics, and archaeology in the West, including California and the Great Basin. Early anthropological research in the West began in the late 1800's.

Three early scholars included the Nisenan and/or Washoe in their compendia on California Indians. Powers, a journalist, observed most tribes in the northern part of California during 1871 and 1872. His observations and speculations resulted in *Tribes of California* (published in 1877), and is important because it provided organized descriptions and showed geographical boundaries of linguistic stocks. The "Ní-shi-nam" are included (Powers 1877). Kroeber, using the field data from Powers, his many students and others, compiled the monumental *Handbook of the Indians of California* (1925) which included both groups. This book has been a major source for most subsequent research on California Indians. The data are enhanced by contributions on individual tribes published by the University California series, *Publications in American Archaeology and Ethnology* (UCPAAE) (1903–1964), and the *Anthropological Records*

series (UCAR) (1937–1975) several of which have been consulted for their inclusions on Nisenan and Washoe. The descriptive works of Curtis' *The North American Indian* (1907–1930) also include these groups, although this work mostly summarizes the works of others (Curtis 1924: Volume 14, 1926: Vol 15, 1970). Merriam visited the Nisenan (1902, 1904, 1907, 1908, 1936) and the Washoe (1898, 1900, 1904, 1919), took extensive photographs, collected basketry data and baskets (now housed at UC Davis), wrote observations in a journal (now at the Library of Congress), wrote a collection of notes (now at The Bancroft Library, UC Berkeley), and his notes were later compiled into publications such as *Indian Names for Plants and Animals* (Merriam 1979).

Two encyclopedia sources from the Government Printing Office include both Nisenan and Washoe. Hodge's early *Handbook of American Indians* for the Smithsonian Institution (1907–1910, 2 Volumes) lists both groups, their localities and the several names by which each was known at the time. In more recent years, Smithsonian has made effort to bring all North American tribal data current in a 20-volume *Handbook of North American Indians* with articles by experts on each tribe. The California volume provides a general cultural overview of the Nisenan by Wilson and Towne who had worked for many years with the various Nisenan groups (Volume 8, 1978:387–397). The Great Basin volume includes a summary of d'Azevedo's extensive work Washoe (Volume 11, 1986:466–498). A more recent volume, *Native America in the Twentieth Century, an Encyclopedia* includes short essays on all known North American tribes with emphasis on the current status of the various cultures (Davis 1994). Cook contributes data on post contact life (1976a) and provides population estimates (1976a, 1976b epidemic of 1830–1833). Data accumulated in the latter portion of the 20th century have largely been a rehashing of earlier data and interviews for Cultural Resource reports, tribal recognition research, and student work (e.g. thesis on botany).

In addition to the important general works, several scholars have contributed more specifically to knowledge on the Nisenan. Kroeber published a description of the *Valley Nisenan* in 1929 (UCPAAE 1929, 24(4):253–290) and included them peripherally in his *Patwin and Their Neighbors* (UCPAAE 1932, 29(4):253–423). Faye wrote a short essay on the Southern Maidu in 1923 (UCPAAE 1923, 20(3):35–53). Beals studied the Nisenan and published his *Ethnology of the Nisenan* in 1934 (UCPAAE 1933 31(6):335–414). Littlejohn's 1928 manuscript and field notes are invaluable for any geographic consideration on the Nisenan (manuscript on file at The Bancroft Library, UC Berkeley). Gifford's article on *Southern Maidu Religious Ceremonies* is considered the major contribution to religion (1927, 29(3):214–257). Uldall's linguistic work has been produced into *Nisenan Texts and Dictionary* by Shipley (Uldall and Shipley 1966). This work is important for cultural data as well as linguistic information. Ritter and Schulz (1972) provide data on environment and subsistence.

Kroeber's 1907 article covering linguistics is followed by the first published ethnographic monograph specific to the Washoe, Barrett's, *The Washo Indians* (1917). Danberg's linguistic studies in the 1920's led to several publications on myths, language, and texts (Danberg 1922, 1927, 1968). Her notes are housed at the University of Nevada, Reno

(UNR) library in Special Collections. Other important contributions include those by Lowie (1939; 1963), Siskin (1938), Stewart (1941; 1944), and Freed (1960; 1963).

Major ethnographic sources specific to the Washoe include early unpublished field notes by Weir (1901), Hudson (1902), Kroeber (1903–1907), Barrett (1906, 1908), and Dyk (1931–1932). A large collection of unpublished materials, including notes on the Washoe Claims Case, are housed at Special Collections in the UNR library. Additional collections are housed at the Nevada Historical Society in Reno, the Inter-Tribal Council of Nevada in Reno, and at the Washoe Tribal Council in Gardnerville, Nevada.

Downs' research in the 1960's resulted in two major publications, *Washo Religion* (1961) and *Two Worlds of the Washo* (1966), which provides a good general background for Washo ethnohistory. Nevers (1976) and the Inter-Tribal Council of Nevada produced a succinct tribal history of the Washoe. Price (1962; 1963a; 1963b; 1963c; 1980) contributed five major publications on the Washoe; including an annotated bibliography with d'Azevedo (d'Azevedo and Price 1963). d'Azevedo has worked with the Washoe since the early 1950's and is considered to be an outstanding scholar on the group (1963, 1966, 1986). The extensive field notes of d'Azevedo (1952–1984) are housed at the University of Nevada, Reno (UNR) Library. In addition, d'Azevedo taught a field training project among the Washoe through the Department of Anthropology, UNR. The students unpublished field notes (housed at UNR) and published articles provide insight into various aspects of Washoe culture.

8.2.3 Ethnographic Summaries

The following are brief cultural descriptions for the two primary Native American ethnic groups occupying the Project area. Each group is addressed separately in a cultural overview presented within a general framework addressing settlement and subsistence, social organization, and technology followed by a discussion of their interactions throughout the Project area.

8.2.3.1 Nisenan

The Nisenan are classified as the southern linguistic group of the Maidu tribe, and together with Maidu and Konkow form a subgroup of the California Penutian linguistic family (Wilson and Towne 1978). The Nisenan linguistic group is further subdivided based on dialect into Northern Hill Nisenan, inhabiting the Yuba River drainage; Southern Hill Nisenan, living along the American River; and Valley Nisenan, occupying Sacramento River Valley (Beals 1933; Kroeber 1925; Kroeber 1929).

Subsistence Patterns

The basic subsistence strategy of the Nisenan was seasonally mobile hunting and gathering. Acorns from California black oak, the primary vegetal staple, were gathered in fall and stored in granaries for use during the rest of the year. Other plant resources include seeds, buckeye, wild onion, wild sweet potato, Indian potato, wild garlic, wild carrot, many varieties of berries and fruits, grasses, herbs, and rushes (Hill 1972).

During warmer months people moved east along the major river canyons to higher elevations to hunt and collect food resources.

Communal hunting drives were undertaken to obtain deer, quail, rabbits, and grasshoppers. Game was prepared by roasting, baking, or drying. Mountain lions and bobcats were hunted for their skins, as well as their meat, and bears were hunted ceremonially in the winter when their hides were at their best condition (Wilson and Towne 1978). Runs of salmon in the spring and fall provided a regular supply of fish, while other fish such as suckers, pike minnow, squaw fish and trout were caught with hooks, harpoons, nets, weirs, snares, fish traps, or with various fish poisons such as soaproot. Birds were trapped with nooses or large nets, and shot with bow and arrow (Wilson and Towne 1978).

Many wild plants may also have been “managed,” by pruning and by prescribed burning which removed underbrush and encouraged growth of edible grasses, seed producing plants, and other useful plant resources, such as basketry materials (Blackburn and Anderson 1993). The use of fire for environmental modification and as an aid in hunting is frequently mentioned in ethnographic literature relating to the Nisenan. Littlejohn (1928) notes that the lower foothills in the valley oak zone were thickly covered with vegetation that was annually burned by the Nisenan to remove and limit its growth while encouraging the growth of oaks, and the harvest of acorns. The annual fires destroyed seedlings, but did not harm established oak trees. Beals (1933) also notes that the Nisenan regularly burned the land, primarily for the purpose of driving game.

Social Organization and Settlement Patterns

The basic social and economic group for the Nisenan was the family or household unit. The nuclear and/or extended family formed a corporate unit. For the Nisenan these basic units were combined into distinct, named village or hamlet groups. Each village largely comprised consanguine relatives (Beals 1933:358; Littlejohn 1928:21). Villages in the foothills and mountains were usually located on high ground between rivers. Permanent settlements above 3,500 feet elevation are unlikely for the Nisenan. Semi-permanent settlements above this elevation may have been re-visited seasonally for many years.

Lineage groups were important political and economic units that combined to form tribelets, the basic autonomous, self-governing groups. Tribelets were the largest socio-political unit identified for Nisenan (Wilson and Towne 1978). Each tribelet had a chief or headman who exercised political control over all villages within it. Among the Nisenan, the role of chief seems to be an advisory role with little direct authority (Beals 1933:359).

Three tribelet centers are identified for Southern Hill Nisenan in the Sierra Nevada foothills: between the Cosumnes River and the South Fork American River near present-day Placerville; between the Bear River south to the Middle Fork American River near present-day Auburn; and the upper drainages of the Bear and Yuba rivers including present-day Nevada City and Grass Valley (Wilson and Towne 1978).

Particularly relevant to this study is the tribelet center near Auburn; however the three tribelets interacted in economic, social, and political activities. There are three villages known to have been in the vicinity of present-day Auburn that are within closest proximity to the Middle Fork American and Rubicon rivers: *Hembem*, *Hempamyán*, and *Watas* (Wilson and Towne 1978:388, Figure 1, villages 90, 87, and 86 respectively) (see Figure 1).

Tribelet populations of the foothill and mountain Nisenan ranged between 100 and 300 persons (Littlejohn 1928:21). Each tribelet controlled a bounded tract of land and its natural resources (Littlejohn 1928:33–34). Beals (1933:359) estimates that Nisenan tribelet territory averaged approximately 10 miles along each boundary, or 100 square miles, with foothill territories tending to encompass more area than mountain territories. Littlejohn (1928:23) notes that these boundaries were in many instances indicated by piles of stones. Nisenan peoples tended to stay within their village areas except during the summer season when groups of people would move east into the mountains to hunt and gather (Littlejohn 1928:24).

Technology and Material Culture

The following paragraphs summarize the technology of the Nisenan highlights elements that may be representative of adaptive strategies that are useful as ethnographic analogies in attempting to understand regional prehistory. It is not a comprehensive discourse.

Semi-permanent houses were generally conical, measuring 10–15 ft in diameter, and covered with tule mats, grasses, or earth. Smaller temporary shelters made of upright poles and cloaked in brush were used in warm seasons while hunting and gathering (Curtis 1924; Kroeber 1925). Other structures commonly associated with village sites include semi-subterranean dance houses, acorn granaries, and sweathouses (Wilson and Towne 1978).

Stone-working technology included flaked stone knives, projectile points, and other tools made from obsidian, basalt and silicate rocks. Groundstone tools included club heads, pipes, charms, mortars and pestles (Beals 1933; Wilson and Towne 1978). Shells and beads manufactured from bone, shell, and minerals such as magnesite were used for ornaments. Wood and bone were used for a variety of tools and weapons, bows, arrow shafts and points, fish hooks, looped stirring sticks, flat-bladed mush paddles, pipes, and hide preparation tools. Cordage was made from plant material, and was used to construct fishing nets and braided and twined tumplines.

Baskets were used for a variety of tasks, including storage, cooking, serving and processing foods, carrying burdens, traps, cradles, hats, cages, seed beaters, and winnowing trays. Basket manufacturing techniques included both twining and coiling, and baskets were decorated with a variety of designs. Other woven artifacts include tule matting and netting made of milkweed, sage fibers, or wild hemp (Hill 1972).

Ethnohistory

Initial contact with Euroamericans in the 18th century had little effect on the Nisenan. The earliest contacts were Spanish exploratory expeditions in the Central Valley led by José Canizares (1776) and Gabriel Moraga (1808), followed in the 1820's by American and Hudson's Bay Company trappers. Introduced diseases, against which they had no natural immunities, were the single greatest cause of death among California Indians after Euroamerican contact. The great epidemic of 1833 (probably malaria) devastated the Valley Nisenan population by as much as 75%, in some instances wiping out entire villages (Cook 1976a).

Captain John Sutter settled in Nisenan territory in 1839, having little problem making alliances and living on peaceful terms with the valley Indians. Word of James Marshall's 1848 discovery of gold near the Nisenan settlement of *Culloma* soon triggered an influx of thousands of fortune seekers in Hill Nisenan territory (Wilson and Towne 1978). From the 1870's until the 1890's Nisenan native culture experienced a resurgence with the Ghost Dance revival. The Auburn Rancheria in Nisenan territory, comprised of both Nisenan and Miwok, was established by the federal government in 1917, terminated in 1958, and reinstated in 1994. Today, the majority of the estimated 2,500 Maidu people (persons descended from Nisenan, Konkow, and Maidu groups) live within the traditional territory inhabited at historic contact by their ancestors.

8.2.3.2 Washoe

The Washoe are unique in that they span both the California and Great Basin culture areas. They possess general cultural traits attributable to groups occupying both regions. The Washoe are members of the wide-spread Hokan linguistic stock and are the only Great Basin group to speak a non-Numic language. Kroeber (1925:569) and Downs (1966:70) postulate an early relationship prior to 4,500 years ago between the Washoe and other Hokan groups in California. The cultural origins of the Washoe are unclear, but linguistic evidence suggests relations to other groups in California.

Subsistence Patterns

Two primary Washoe subsistence resources were pine nuts and fish (primarily trout and suckers). In years of normal productivity, pine nuts were the main staple, particularly in late fall and winter when other plant resources were scarce. Fish availability peaked during spring runs at Lake Tahoe and its tributaries like the Truckee River (d'Azevedo 1986).

Pinyon pine nut (*Pinus monophylla*) was attained through treks to the pinon-juniper woodland of the Pine Nut Mountains near Woodsfords–Markleeville (d'Azevedo 1986: 472). The nuts were cracked and eaten, but were usually converted into a meal from which a mush was made. One preparation method involved cracking the seeds with a handstone on a milling slab or by using a pestle within a mortar. The meal was then cooked in a basket by means of hot stones, similar to the preparation of acorn mush typical with California tribes.

Other plant resources procured by the Washoe include sego lily, sand seeds, cat tails, tule roots, currants, elderberries, sweet elderberry roots, gooseberries, chokecherries, buckberries, rose tea, Indian tea, and wild varieties of mustard, spinach, potatoes, sweet potatoes, celery, turnips, onions, and strawberries. The environment in the Sierra, particularly around Lake Tahoe, provided a different variety of resources. Among them were wild strawberries, raspberries, tiger lily seeds, sunflower seeds, and wild rhubarb.

Acorns were obtained by the Washoe themselves on the western slopes of the Sierra Nevada or through trade. The *wélmelti?* group from the Washo Valley area would travel along the Forest Hill Divide from Squaw Valley to Sacramento Valley and gather acorns near Auburn and Colfax. The *p`a . wa?lu?* group from Carson Valley and *háñalelti?* group from Woodfords–Markleeville area traveled to the black oak groves near the American, Calaveras, Cosumnes, and Tuolumne rivers. D’Azevedo (1986:468, Figure 1) shows a Washoe route to the west Sierra slope along the Rubicon and Middle Fork American rivers in the PCWA study area. Acorns were gathered by Washoe into large burden baskets, relayed east over the Sierra, with camps established along the trails (Nevers 1976:12).

The bow and arrow was the primary hunting tool. Communal drives led by “bosses” were common for hunting small game such as rabbits, prairie dogs, ground hogs, woodchucks, sagehens, quail, and waterfowl and antelope. Deer and mountain goats were hunted at higher elevations in the winter, added by the use of snowshoes. The *wélmelti?* traveled to the Sierra to hunt in areas south of Truckee and in Squaw Valley. Hope Valley provided abundant resources for the *háñalelti?*.

Fishing was an important subsistence activity year-round. The rivers and lakes in Washoe territory had abundant fish, including the mountain whitefish in Lake Tahoe tributaries, cutthroat trout along the Truckee River, and suckers, chubs, and minnows which could be scooped from streams with baskets. In the winter, ice-fishing provided food when resources were low.

The Washoe year was divided into three parts based on available resources: fishing, hunting, gathering (Downs 1966:12). Social organization is tightly integrated with subsistence activities; either bringing large groups together for communal activities, or dispersing into smaller groups for resource procurement.

Social Organization and Settlement Patterns

The basic social and economic group for the Washoe was the family or household unit. The family or household unit moved together in search of food as a composite cultural group at times coming together with others for hunting trips and cooperative endeavors. Downs (1966) reports the relationships of family members to be varied with no set rules on membership. Membership could vary from five or less to a dozen. The family was identified by and with its winter dwelling location, the *galesdangl*. The basic unit was usually a man, his wife and children, but a widower might also be head of the unit. It could also include siblings and their spouses or “friends.” Relatives or polygynous

families might live in close proximity forming a separate *galesdangl*. This household group moved in search of food in their seasonal round. Specific pine nut gathering plots, fishing traps and platforms, eagle hunting locations were owned by a *galesdangl* (Downs 1966:38–41).

Washoe households were somewhat loosely combined to form villages, referred to as *bunches* by Downs. The size and composition of bunches varied considerably, depending on environmental and interpersonal conditions. Downs states that the winter camp or village of several households seemed to be the basis for the bunch, but several villages located in close proximity to one another might also be considered a bunch. Each bunch was identified by its headman or chief, which seems to have been a hereditary position passed on through either parent. The Washoe did not have a single headman over all bunches during pre-contact times. Men of a bunch might form hunting parties, or move as a unit to the west side of the Sierra for acorn procurement. They might also ally with other bunches to form a war party. The last bunch was known only into the 1920's (Downs 1966:41, 45–46).

Most Washoe scholars have divided the tribe into three subdivisions: the *wélmelti?* (*welmelti*) or northerners; *p`a . wa?lu?* (*pauwalu/east*) or valley dwellers; the *háŋalelti?* (*hanelelti*) or southerners. The Middle Fork American and Rubicon River canyons lie within lands traditionally used by the southern group from Woodfords, who traveled through river canyons on the western slopes of the Sierra on a seasonal basis, probably from late spring through fall (e.g., d'Azevedo 1986:468–469; Steidl 1995:3). Downs cites a fourth group, (Downs 1966:38–39) *tangelelti* or westerners (d'Azevedo 1986:468; Downs 1966:49; Nevers 1976:3; cf., Lowie 1939:301; Curtis 1907–1930 (15):90; Freed 1960:350; Price 1962:1). d'Azevedo notes that these geographic or tribal designations were not applied by the Washo to themselves. Rather, they referred to the area one was raised in and designations were relative to a person's location, thus making these comparative terms. The term *háŋalelti?šému* (real southerners) was applied to the Washoe of Antelope Valley, although the people of Woodfords were also called *tangelelti*, a term that also applied to the Miwok, Maidu, or Washoe people living among the Woodfords people (d'Azevedo 1986:469). According to Downs, the *tangelelti* lived in the mountains and were subject to heavy snows; therefore few people wintered there (Downs 1966:49). People usually stayed in the area in which they were born and would remain with the directional designation throughout their lives. Persons marrying into a region different from their own changed his or her designation according to that of a spouse (Downs 1966:49). These divisions are mostly likely a result of the contact period when outsiders needed jurisdictional spokespersons with authority, thus temporary headmen of some prominence fulfilled this role (d'Azevedo 1986:469).

Each bunch had a recognized headman; however, a separate leader would be selected to organize fishing, hunting, and ceremonial functions. Leaders gained status through actions of wisdom, expertise and benevolent qualities. They regularly expounded on goodness and proper behavior to their community. Headmen from the different bunches met with other headmen to exchange information on Washoe life and appoint "bosses" with special knowledge to research locations that might have abundant hunting

or gathering possibilities in a given year (Barrett 1917:9; Downs 1966:45, 51, 61; Freed 1960:353, 1963:17; Lowie 1939:303; Kroeber 1925:573).

Technology and Material Culture

The technology and material culture of the Nisenan, and Washoe are very similar, with differences often resulting from the preference for locally available raw materials. This correspondence is not unexpected given the interaction of the groups, including intermarriage (Beals 1933:366; Downs 1966:51), and the general similarity of their economic pursuits.

The Washoe built two basic structures: the winter house (similar to typical residential structures of the Nisenan), which consisted of a conical framework of poles covered by overlapping slabs of cedar and/or other conifer bark, with a short covered doorway or vestibule; and the summer brush house which varied from a simple low enclosure resembling a windbreak to a completely covered, dome-shaped house (Barrett 1917:10–11). Washoe constructed covered fishing platforms over streams that were often described as floating houses by observers (d'Azevedo 1986:473). Washoe also built sweat lodges and large earth-covered dance houses but there is disagreement regarding whether or not these structure were regularly constructed prior to the historic period (d'Azevedo 1986:481).

Fishing formed a very large component of overall Washoe subsistence activity. Consequently, Washoe employed an extensive assemblage of fishing-related implements and facilities including spears, cordage lines with bone fishhooks, harpoons with detachable points, dams for stream diversion, nets of cordage and basketry, weirs, and an array of fishtraps (d'Azevedo 1986:473).

Flaked and ground stone tools were common among the Washoe and included: knives; arrow and spear points; club heads; arrow straighteners; scrapers; rough cobble and shaped pestles; mortars; grinding stones; pipes; and charms (Barrett 1917). Mortars and pestles were commonly used to grind acorns, pine nuts, seeds and other plant foods, and meat. Manos and metates were also used in nut flour preparation. Fist-sized, heated stones were used to cook and/or warm “liquid-based” foods such as acorn gruel and pine nut meal. Whole acorns were stored in granaries and pine nuts were stored in large brush and pine bough covered caches.

Animal and plant resources provided materials used to manufacture tools necessary for everyday life. Hides were used for clothing and blankets. The most common Washoe blanket or robe was made of rabbit fur strips woven together with deer sinew. Assortments of bone tools were also made. Wood was used for an array of tools and weapons, including both simple and sinew-backed bows, arrow shafts and points, digging sticks of mountain mahogany, hooked poles for pine nut gathering, and looped-stick mush stirrers. Cordage and thread used for bow strings, fish lines, fish nets, carrying nets, and hair nets was made from hemp, sage, and other plant fibers (Carlson 1986:130; Curtis 1926:92; Downs 1966:27).

Coiled and twined baskets were made for ceremonial and utilitarian purposes including cooking, storage, fish traps, weirs, and transport. The primary material used was willow with redbud, water birch bark, and bracken fern roots for decoration. In the late 1800's and early 1900's, the art of basketry saw a florescence (Carlson 1986:129; Cohodas 1979:11) as white traders and patrons collected baskets. Dat So La Lee, a Washoe basket maker, was renowned for her refined coiled baskets and elaborate designs.

Ethnohistory

Euroamerican effects on indigenous Washoe culture began during the mid-1800's. Two primary aspects of Washoe cultural contact concern their relative initial isolation and the "sudden and heavy populating of their territory by Whites during the mid-1800's" (Price 1980:16). The Washoe were relatively unaffected by White contact until after 1859 when the Nevada silver miners, and later ranchers and farmers, settled in Washoe territory. Euroamerican influences and communities continued to inflict the Washoe during the early 20th century. In the 1960's and 1970's, Washoe communities were established in Reno, Carson City, Gardnerville, and Woodfords, and their organization resulted in a formally constituted Washoe Tribe. Today, the Washoe still live within their territory along both sides of the California–Nevada border. Current population estimates coincide with the aboriginal estimate of 1,500 persons and indicate a rapid recovery from the serious population decline of the early historic period during the 19th century (Cook 1976b).

8.2.3.3 Inter-Tribal Relationships

Nisenan and Washoe followed a seasonal semi-sedentary lifeway, moving from one area or elevation to another to harvest plants, fish, and hunt game across contrasting lifezones that are in relatively close proximity to each other. Foothill and mountain groups of Nisenan and Washoe ranged across a rather extensive area that included jointly shared territory whose entry was subject to traditional understandings of priority of ownership and current relations between the groups (d'Azevedo 1986:467).

Nisenan and Washoe peoples frequently interacted as trading partners, at ceremonial gatherings, and in armed conflict primarily due to perceived territorial encroachment. In fact, the ethnographic literature, particularly in reference to the Nisenan, reports rather regular hostilities between Hill and Valley Nisenan, Nisenan and Washoe, and Nisenan and Sierra Miwok (cf., Beals 1933:367; Littlejohn 1928:13, 18, 24, 48). Most interactions between the Washoe and Nisenan, however, appear to have been civil and friendly in nature. For example, Beals (1933:366) states that the two groups along the South Fork of the American River frequently interacted and often met for "Big Times" near Kyburz and Myers Station.

Trade and exchange networks were established with neighboring groups for food and other items, both practical and ornamental, that were not available within Nisenan territory. Clamshell disk beads, used as a mode of currency, were acquired from Patwin and other outside sources. Obsidian was highly valued and imported. Nisenan consultants stated that obsidian only came from a place to the north, outside of Nisenan

territory (Littlejohn 1928:32). Nisenan commodities to neighboring groups included, salmon, deer, and acorns (Davis 1961).

8.2.3.4 Contemporary Nisenan and Washoe

Today the Nisenan reside in local communities throughout the area such as Auburn, Colfax, Clipper Gap, and Foresthill (originally “Forest Hill”). They continue to have an interest in their cultural history both as local groups and as individuals. The United Auburn Indian Community represents a federally recognized group, while others remain unrecognized (Clipper Gap), and yet others seek federal recognition (Forest Hill, Colfax). The Colfax–Todd Valley Consolidated Tribe in Auburn, and the Todd Valley Miwok–Maidu Cultural Foundation in Foresthill have expressed interest in the relicensing of the MFP. Work with these individuals/groups will determine the extent of interest in the relicensing of the MFP and hopefully yield additional information regarding cultural resources in the Study Area.

The Washoe community has three main centers, the Dresslerville Colony, Carson Colony, and Woodfords Colony, with the Stewart Community “off-reservation” (Davis 1994:690). They have a cultural resource program and maintain an interest in the western Sierra as a matter of their history. The Washoe and Nisenan have had some intermarriage (for example, one family in the Auburn/Clipper Gap area which is Nisenan on the paternal grandparent side and Washo on the maternal grandparent side). Most of the family resides in Nisenan territory while one individual lives in Nevada, claims Washoe tribal status and works for the Washoe tribe. The Washoe Tribe of Nevada and California has expressed an interest in the Study Area.

The Shingle Springs Band of Miwok Indians (Shingle Springs Rancheria), and Miwok Tribe of the El Dorado Rancheria are culturally peripheral to the Study area. These groups have, however, expressed interest in the MFP and related management of cultural resources of concern to Native Americans.

8.3 HISTORY

The history of the Middle Fork of the American River area was shaped by a combination of its physical geography and natural resources, the economic and social aspirations of the people inhabiting it, and the political realities of the times. This overview focuses on the history of non-Native Americans along the Middle Fork, primarily in the second half of the 19th century. It is based largely on documentary research, especially 19th century histories and maps of Placer County. The goal of this review is to 1) place the history of the American River area in context of California history, 2) capture some of the “color” and human drama of the area’s history by quoting from primary sources as much as possible, and 3) create a framework from which specific historic era resources in the vicinity of the Project can be identified and their historical significance evaluated. Figure 3 shows historic places discussed in this report mostly based on information from 19th and early 20th century maps.

8.3.1 Pre-1848: Fur Traders and Early Emigrants

“Placer County has no history prior to 1848”, asserts the 1882 *History of Placer County* edited by Thompson and West (1882:66). Since they based their history on diaries, contemporary writings and recollections of early settlers, obviously these sources indicate that the first non-Native Americans saw the Project vicinity in 1848 or 1849, at the beginning of the Gold Rush. However, it is certainly possible that fur trappers and other maverick pioneers, who neither left written accounts of their travels nor stayed around to be interviewed for early histories, may have traveled the Middle Fork and its various branches perhaps as early as the 1830’s and more likely in the early 1840’s. Spanish exploration in the early 19th century came up the American River some short distance to the margin of the Sierra Nevada.

Spanish Commander Gabriel Moraga and his party were the first Europeans to see the American River during their 1808 exploration of the Sacramento Valley. He named the river “Rio de las Llagas” (River of Sorrows). The name was changed to “Rio de los Americanos” (American River) by Mexican Governor Alvarado in 1837 because the river was so popular with American fur traders.

The first argument for pre-1848 Caucasian visits to the Project vicinity is that Indians served as guides for the fur traders and pioneer emigrants of the 1830’s and 1840’s, and the major trading route over the Sierra between the Nisenan of Placer County and the Washoe of Tahoe/Carson Valley area traversed the Middle Fork (Myer 2002:15–16), approximately following the path along Mosquito Ridge. Washoe came to Big Meadow (near the Hell Hole portion of the MFP Study area) in the spring and fall each year to hunt deer and other game attracted to natural salt licks in the region (Thompson and West 1882:383). Since the Middle Fork was a well-known trans-Sierra route to the Native Americans, Indian guides may have led some white men through the area in search of beaver and other fur-bearing animals in the 1830’s and early 1840’s. Jedediah Smith was the first of these fur traders along the American and also the first white man credited with crossing the Sierra, sometime in the 1820’s. In 1825 he probably camped in what is now the Folsom area (Lonergan 1975:101).

Based on the reports of these fur traders and Mexican settlers, Americans and other Europeans by the mid 1840’s became interested in settling in California. Charged with finding a way through the Sierra for these would-be immigrants, John C. Frémont in 1844 was the first white man known to see Lake Tahoe and assess the relative merits of the various Indian trails over the Sierra. After exploring various passes, he decided on the one along the South Fork of the American River, the approximate route of Highway 50. The Stephens–Townsend–Murphy party became the first group of covered wagons to cross the Sierra in 1844. Following the advice of a friendly Paiute Indian chief, the party crossed the Sierra through Truckee and Donner Pass. That same year, the Kelsey party of 36 arrived from Oregon. In 1845 250 emigrants arrived. That number doubled to 500 in 1846 (Lonergan 1975:15). The Truckee–Donner Pass route gained fame when early October snows in 1846 trapped the Donner party. In 1846 pioneers also began using another route, known as the “Roller Pass” south of

Donner Lake, passing through what is now Norden and Soda Springs (Myer 2002:21) not far from the French Meadows Reservoir.

There is some evidence to suggest that some members of these early emigrant parties followed the old Indian path along the Middle Fork. James Marshall, the discoverer of gold at Sutter's Mill in what is now Coloma, told an interviewer in the 1880's that Duncan Canyon (area of PCWA's Duncan Creek Diversion) was named for Thomas Duncan who came overland in 1848 from Missouri in the train of Captain Winter (Thompson and West 1882:381). While it is possible to speculate that fur traders and perhaps early emigrants passed through the area prior to 1848, this will never be proven unless, by chance there are some wagon wheel marks on stones as is the case eight miles west of Soda Springs (Myer 2002:21). More likely, the real significance of these early path finders' routes is that they did not traverse the area. As will be discussed more fully below, the fact that no major routes cross the Sierra along the Middle Fork explains why today the area remains so remote.

The hub of non-Native American settlement in 1840's was Sutter's Fort on the Sacramento River. Somewhat closer to the Study area was a cluster of ranches on the Bear River, just north of today's Wheatland. This was originally part of the 22,000 acre Mexican land grant given to Don Pablo Gutierrez. Following Gutierrez's death in the rebellion that toppled the Mexican governor, William Johnson of Boston won the ranch in an auction on April 28, 1845 (Myer 2002:23). Theodore Sigard (or Sicard) of France built a home on other side of Bear River. This ranch became rendezvous of French fur trappers (Myer 2002:24). Again, it is tempting to speculate that the French trappers based here might be the same Frenchmen for whom French Meadows is named. Certainly, as will be discussed below, the historical record is unclear as to the identity of any actually "Frenchmen" (Thompson and West 1882:406).

8.3.2 Placer Gold Mining

John Marshall's discovery of gold at Sutter's Mill in January, 1848 had repercussions which shook the world and of course dramatically transformed the Project area. Claude Chana, one of the Frenchmen living at Sigard's ranch on the Bear River, discovered gold on Auburn Ravine (between today's Ophir and old town Auburn) on May 16, 1848 while being lead by Indian guides on a short-cut to Sutter's Mill (Coloma). The North Fork Dry Diggings Company was soon formed and reports of \$1,000–\$1,500 daily yields spawned a rush of miners north from Coloma (Myer 2002:26).

According to the "Historical Sketch" in the *Placer County Directory* of 1861:

In the summer of 1848, the principal tributaries of the American River were explored by a company of Oregonians, and rich prospects obtained upon almost every bar, as far up the Middle and North Forks as they proceeded. At this time, the bars were generally explored as high up the Middle Fork as Rector Bar (Oxbow/Ralston Powerhouse area), which, proving as rich as any diggings the explorers expected to find, and it being difficult to travel further up the river with horses, they ceased traveling, and worked the mines until the winter season set

in, or their provisions gave out, when they returned to the settlements in the valley or to their homes in Oregon (Steele 1861:25–26).

In addition to Rector's Bar, the 1861 sketch specifically names Stony Bar (just upstream from Oxbow) as operating on the Middle Fork in 1848 (Steele 1861:26). This source estimated about 30 people at Stony and Rector's bars, plus, "six young men, one of whom was named Lewis, near the head of Mad Canyon." The total Anglo population of what is now known as the Forest Hill Divide in 1848 was estimated at 50 (Steele 1861:26).

Early settlers interviewed for the Thompson and West history in 1882 tell a slightly different version of the first miners to the area. According to this history, a party of sailors was the first to mine at Rector's Bar during the summer and fall of 1848; "They were joined later that season by a party from Sutter's Fort lead by J.D. Hoppe" (Thompson and West 1882:392). Whatever the origin, it is fairly certain that the Oxbow/Ralston Powerhouse area, called Horseshoe Bend or Bar in most 19th century records, was mined as early as the summer of 1848.

Horseshoe Bend, formed by erosion on one shore coupled with deposit of sediment on other, proved to be one of the most productive placer mining regions in California (Wilderness Conservancy 1989:87). According to Margaret Sanborn's somewhat romanticized history of the American River, the Middle Fork was the most productive of all the branches. By the fall of 1849, \$10 million in gold had already been mined in the area (Sanborn 1974:5). "Mad Canyon and American Bar [Oxbow/Ralston Powerhouse area] are credited with \$3 million apiece, and Horseshoe Bend...with runs ranging down to \$1 million..." (Sanborn 1974:141). Gold is still being mined in the area today.

More miners came to the Horseshoe Bend area in 1849. One '49er named Robert Wilson recalled washing gold in the area while his partner stood on the flat and watched for Indians. Although they were too afraid to want to stay, Wilson returned in 1880 to again try his luck, certain that the old diggings would yield a fortune (Thompson and West 1882:392). The author of the historical sketch in the 1861 *Placer County Directory* spent the winter of 1849 in the Horseshoe Bend area and claimed he could not, "...after a lapse of more than ten years, repress a shudder, where revolving in his mind the many incidents attending his residence during that winter, upon the Middle Fork" (Steele 1861:26). His tale, reproduced here from Steele (1861:26–27) at some length, provides a good sense of life in the area in the vicinity of the MFP during the placer mining era.

The rains, which had set in towards the last of December, continued to fall almost constantly until the second week in February, covering the mountains on either side of the stream to the depth of four feet with snow, blocking up the trails, and so completely destroying every trace of them, that none, except in the last extremity, could be prevailed upon to venture to break a trail to Georgetown or Coloma, the nearest points at which supplies could be obtained. To add to the hardships of the little settlement of pioneer river miners, they not only had not comfortable houses in which to live, but ere the winter was half gone, their supplies of flour, pork, coffee, sugar, salt, beans, etc., were totally exhausted and

they were reduced to the necessity of living upon fresh venison, without salt or bread. But starvation was not the foe most to be dreaded by the unprotected settlement. The temporary shanties or huts of the men were scattered along the river for a distance of two miles, in each of which lived from two to five persons. No guard was kept at night, and in case of an attack by the Indians, the men, scattered and poorly armed, as they were, could have offered but a feeble resistance. The heavy snows, higher up in the mountains, had forced a band of Indians to venture down the canons (sic) to the vicinity of the camp of the whites, in search of horses, mules, cattle, or any thing else which could serve as food for their starving squaws and children. They were discovered by the whites, and a meeting was called of all white men known to be upon the river, in reach, for the purpose of ascertaining the number and condition of the guns, and the amount of ammunition in the hands of the miners. The number of guns on hand amounted to one to every three men, and among the whole number there were not more than three pounds of powder. An organization was immediately effected, and men were started out with directions to proceed down the Middle Fork of the American River, until they reached a point where supplies could be purchased, and to procure all the arms and ammunition they could obtain, and bring into the camp. The relief party, after scrambling over rocks for two days reached the Big Bar, in El Dorado County, where they purchased some powder, lead, caps, salt, and tea, and one rifle gun, and returned to their companions.

With these additions to the stock of arms and ammunition on hand, after making a show of strength by sending small parties out in search of the Indians, one of which came up with a party of the red skins, and attacked and killed some of their number, the whites felt quite secure from an attack, and remained quiet the balance of the winter.

Steele (1861:202). also describes the placer mining techniques used in the Horseshoe Bend area as follows:

Below Bird's Valley about three miles are Stony Bar and Rester's (sic) Bar, on the North Fork of the Middle Fork, both of which were esteemed rich by the miners of '49 and '50. The diggings were shallow, and the greatest difficulty to contend with was the large stones that had to be removed by the miner in order to sink a hole to the bed-rock. To obtain a few pans of earth off of the bed rock a company of half dozen miners would often work a whole day to remove one of these stones, and yet the dirt was so rich under them that when removed the miners got well paid for the labor incurred.

There have been several attempts to estimate the size of the early Gold Rush in the Placer County area. One recent history of Placer County claims that there were 4,000 miners in the Placer County area by end of 1848 and over \$10,000,000 of placer gold extracted by 1849 (Myer 2002:29). Another historical synthesis claims that 10,000 worked along the Middle Fork in summer and autumn of 1849 (Hoover et al. 1966:79). The majority of these miners prospected sites in areas currently covered by Folsom Lake.

The Middle Fork “stampede” of 1850 brought thousands of miners to the MFP area, not only in the Horseshoe Bend area but up-river as well. This story is one of the most colorful in history of Placer County. At the start of the rainy season in the winter of 1849, two brothers left for El Dorado County with a stash of gold which they had panned that summer somewhere along the Middle Fork. Over the course of the winter, the story grew of the wondrous mines on the Middle Fork. At the end of February, 1850, with the first warm weather, the brothers, with some compatriots from their home town of Syracuse, New York, tried to sneak out of Pilot Hill in the dark of night. Their attempt at secrecy failed, “...as rolling snow gathers volume as it courses down an inclination, so did the crowd of pursuers increase as it proceeded, until the rush became enormous” (Thompson and West 1882:303). This stampede of 500 to 600 men got as far up the Middle Fork as Volcano Bar (on the El Dorado County side of the Middle Fork, south of Oxbow Powerhouse), where high water prevented them moving farther up river. Somehow they managed to cross the raging waters and climbed the hill to Bird’s store, on the bluff above Horseshoe Bend. The narrator estimates 2,000 to 3,000 miners congregated at Bird’s store waiting for the snow to melt before flooding up the canyons of the Middle Fork (Thompson and West 1882:303). Margaret Sanborn quotes one miner, working at a “paying diggings” near Coloma, when he heard of the riches along the Middle Fork as follows: “The news was too blooming for me to withstand. I threw down my pickaxe and leaving a half-wrought crevice for some other digger to work out, I packed up...” (Sanborn 1974:151). She further claims that one man operating a ferry across the Middle Fork cleared \$60,000 his first season (Sanborn 1974:150). Certainly, the Middle Fork had been “discovered”, and its history irrevocably changed.

While not much placer gold was found in the higher mountain areas prospectors in the early 1850’s searched diligently. Thomas Duncan, for whom Duncan Canyon is named, hired himself out to show newly arrived miners the gold diggings he’d seen crossing the Sierras in 1848. When Duncan could not find promised gold, those paying him to be their pilot threatened to kill him. Duncan stole a mule and slipped away one night, never to be seen again (Thompson and West 1882:382).

James Marshall, who discovered gold at Sutter’s Mill in January of 1848, led prospectors through the upper areas of the MFP during those first few years. By the summer of 1848, Marshall was squabbling with John Sutter and having trouble with men who refused to respect his claims. Fed up, he set off in search of new diggings in June 1848. He only got as far as the junction of Middle Fork and North Fork on this first trip. However, his wanderings were only beginning. In 1850 he must have traveled near French Meadows because, at Antoine Canyon he found the bodies of four murdered “Spanish Americans” who had been prospecting with a considerable hoard of gold dust in their bags (Thompson and West 1882:74). Thought to have supernatural divining powers—he was probably schizophrenic as he was famed for hearing voices—a big group shadowed him wherever he went (Sanborn 1974:224–229).

Despite the excitement that occasioned the 1850 stampede, the center of placer mining activity in the early 1850’s remained the Horseshoe Bend area. On the primitively drawn 1850 map of California gold fields, the map maker simply put dots for mines the whole length of the Middle Fork and all its branches. Only Rector’s Bar is specifically

labeled. The 1882 *History of Placer County* provides the following list of bars along the Middle Fork, in the Expanded Study Area: "...Horseshoe Bar (no. 2), Boston, Pleasant, American, Junction, Alabama, Stony, Rector's, and a score of others, all noted once for their production of gold and as having been the locality of interesting scenes, comic and tragic, in the early history of the country" (Thompson and West 1882:401–402). Gudde (1975:18, 43, 142, 160, 180, 189, 202, 270, 282, 372) provides historical descriptions of American Bar, Boston Bar, Gray Eagle Bar, Horseshoe Bar, Junction Bar, Ladies [Ladys] Canyon, Mad Canyon Diggings, Pleasant Bar, Ralston Divide, and Willow Bar. All are located near the current Oxbow/Ralston Powerhouse portion of the Study Area and many are still shown on the current topographical map.

8.3.3 First Settlements

For the first few seasons, most of mining was done along the river bottoms in the summer. In the winter, miners moved to the bluffs where they tried to support themselves at "dry diggings" or simply lived off their summer earnings. As is explained in the Thompson and West (1882:190) history:

River and bar mining could be carried on successfully only in the summer or dry season and the ravines, gullies and high banks were sought for the winter's work. These localities were therefore, called "dry diggings"... With the abundant rains of 1849 every ravine contained a rivulet and in every ravine was gold. Here the miners gathered and with pan and rocker prospered. The depressions of the higher mountains were called canons and gulches and there too the miners found dry diggings.

To escape the seasonal "mountain torrent's wrath" (Thompson and West 1882:71) when the cabins assumingly built on high ground were swept away by rapidly rising rivers, tradesmen built their roads, stores and saloons high up on canyon ridges. To again quote the 1882 history (pg. 400):

The ridges adjoining the rivers were where the roads ran, over which freight was hauled to the bars, and the wayside taverns were there for the accommodation of teamster and travelers en route for the mines; but the mines were all on the river, at the bars consequently the little stations along the roads owed their existence to the fact that there were bars upon the streams where all the gold was dug.

Yankee Jims and Todds Valley (founded by a relative of Mary Todd Lincoln) were founded in 1849 to service the lucrative placer mines of Shirttail Canyon, north of western part of the PCWA Study Area. Birds Valley grew into a temporary town as a result of the 1850 stampede. Also as a result of this huge influx of humanity in 1850, Foresthill, Michigan City, and Bath were founded to serve miners along the Middle Fork. By 1852 there were enough miners farther upriver to stimulate two new towns, Last Chance and Deadwood. The Forest Hill Divide area was one of the most prosperous and densely inhabited in California in the 1850's, so much so that the Democratic Convention was held at Yankee Jims in 1857 (Myer 2002:35).

The story of the founding of Bath, two miles north of Horseshoe Bar, at Mad Canyon is probably representative of the relationship between the miners in the river valley and the merchants on the bluff. As the 1882 history reports:

John Bradford, a merchant, was its pioneer settler, having been attracted there in the summer of 1850. He was, at that time, doing business in Stony Bar, and his attention was first drawn to the locality of the excellent pasturage, and the beauty of the location for a stock ranch. A cabin was erected in which to reside and store his goods on their arrival from Sacramento in wagons, to be packed to the store at Stony Bar as they were required. A brush fence was also built around the place which he claimed as a ranch. Some time during the fall of 1850, some miners from the Middle Fork of the American River were attracted there, who purchased the place of Bradford for a small sum. They located there for the winter, intending to hunt deer, and mine in the dry gulches. After prospecting for some time, gold was discovered by this party, and, as the news spread to the existence of mineral in paying quantities, miners from all directions flocked to the place and formed a settlement, which was given the name of Volcano (Thompson and West 1882:375).

As the “hill diggings” flourished, the town grew. Since there was another town named Volcano on the other side of the river, the name of this growing settlement was first changed to Sarahsville after, “...the first lady settler of the place, the gallant pioneers considered the place honored by bearing her name” (Thompson and West 1882:375). When the post office was established in 1858, the name was changed to Bath. As Foresthill was less than two miles to the southwest and better located on the crossing of two major roads, Bath’s importance as a commercial center was superseded. In 1882, the village had about 200 inhabitant and few commercial businesses (Thompson and West 1882:375).

While the majority of stores and other establishments provisioning the miners were in the towns on the high bluffs about the Middle Fork, there was a “long-established and well know trading post of E. Barrett” in 1870 at Horseshoe Bend. According to the 1882 history, the store was located, “...on the north bank of the Middle Fork of the American River, at the foot of the steep hill where the trail comes down from Bird’s Valley, near Horseshoe Bar...about 100 feet above the bed of the stream.” From the description of the location, the store sat on the peninsula formed by the bend in the river, with, “...the river banks immediately contiguous to the store above and below...” As the following narrative shows, Barrett’s store was an active trading post:

Thousands of tons of the various commodities used by a mining population have been distributed from this post throughout the numerous camps and bars up and down the river, and mule-loads of gold-dust have been passed over the counters. Here it was that men came at the close of their week of toil to order fresh supplies, sell gold-dust, receive letters and papers, chat with their fellow-miners from the different diggings, and often to indulge convivial longings (Thompson and West 1882:374).

8.3.4 Hydraulic and Drift Mining

As the “easy pickings” from placer mining were exhausted, miners had to develop more technologically sophisticated methods of extracting gold. As early as 1848, miners worked “dry diggings”, especially in the winter. Early on, some miners actually carried rock from these diggings to the river to wash. Of course, that was very inefficient, so ditches and flumes were developed to bring the river to the dry diggings. To extract the gold locked in the rock, miners had to devise ways to concentrate the water’s force to blast the ground apart. The engineering feats of these early miners are impressive. A 1924 history explains the early techniques as follows: “A large sump was sunk, an elevator pipe was erected, the nozzle was placed so there would be a strong suction upward and a sluice was erected leading to the sump where the pipes were located...” (Lardner 1924:184).

These engineering innovations ushered in the era of hydraulic mining. Canyon walls hundreds of feet above existing river channels were blasted with water, sending gold-bearing gravel down sluice boxes. Even if an area was not mined with hydraulic hoses directly, it most likely was the site, or near the site, of some mining related feature. The entire Middle Fork drainage area was laced with dams, ditches, flumes, tunnels and canals to channel water for hydraulic mining.

The history of Michigan Bluff, located on the canyon wall some 2000 feet above Horseshoe Bend, provides an illustration of the effects of the transition in mining techniques on the Middle Fork in the 1850. During the 1850 “stampede” which brought thousands to the Bird Valley area, some entrepreneurs set out to make their fortune building shelters to house the “homeless” in the area. In the process, they discovered that the quartz gravel of the area contained gold. Michigan City, about one mile east Bird’s store, grew up around this new discovery. Most miners in 1850, “...wanted no diggings so far away from water...”, so it was several years before the gold of Michigan City was effectively mined. In 1852 several ditch companies were organized in Michigan City to bring water to the quartz claims. The first one was 1.25 miles long with a capacity of 100 inches and pressure of 75 feet which was put through a $\frac{3}{4}$ ” nozzle and sluiced one foot wide (Thompson and West 1882:394), but this was too small to function effectively. The first successful hydraulic project in the Michigan Bluff area was designed in 1853. Water was taken from Volcano Canyon, five miles away, with a carrying capacity of 50 inches (Thompson and West 1882:393). A competitor ditch brought water from El Dorado Canyon 12 miles away, but was too flat to be successful. This “ditch company” later reorganized and brought in water 6–8 miles further upstream. The going rate was \$1 per miner’s inch for water delivered to a mining site (Thompson and West 1882:393). A miner’s inch, at that time was about 100 cubic feet of water per hour or 1000 cubic feet per ten hour day (Starns 2004:162).

Fire, the constant nemesis of Gold Rush cities, leveled Michigan City in 1857. Since these were boom times for gold production—the most profitable years in Michigan Bluff were the mid-1850’s when it shipped \$100,000 gold per month (Hoover et al. et al. 1966:275; Sanborn, 1974:6)—the town was quickly rebuilt of stone and brick. But another more unique problem destroyed the newly rebuilt town. The land under

Michigan City was so undermined by hydraulic mining and tunneling that it began slipping down hill and had to be relocated higher up the bluff in 1858 and 1859. The 1861 directory of Placer County (Steele 1861:11) gives a delightful account of this relocation told in terms of the politics of secession in this Civil War era:

(The old city)...Cottonocracy-like (is) in a state of active secession, intent on dissolving the Union... The night previous to the present day...was a sleepless one with many of our inhabitants. The whole secession district moved about two feet during the night, and what made it worse was, that some portions of it, South Carolina-like, moved faster than the rest. Timbers cracked over people's heads like South Carolina rifles, causing many fears, but hurting nobody. Sectional cracks run under many houses, causing one part to secede to the south, while the other remains with the north, thus seriously endangering the union... Many of the inhabitants of the secession district are, like Southern Yankees, moving northward where things are more stable.

The relocated town was named Michigan Bluff to distinguish it from the “southern” Michigan City.

The rapid expansion of the town during its boom years is shown by the growth of its student population: in 1856 Michigan Bluff had 27 students; in 1857 it had 71 (Thompson and West 1882:258). The 1861 directory shows 2 clothing stores, 5 groceries, 3 hotels, 2 restaurants, 2 express, 4 barbers, 2 lawyers, 3 doctors, 14 saloons, 2 bakers, 6 blacksmiths, 2 tailors, 1 watchmaker, 5 gaming houses, 2 livery stables, 2 tinsmiths, 2 druggists, 2 justices, 1 sheriff, and 2 constables (Myer 2002:36). Some local historians claim that Leland Stanford, future governor of California, railroad magnate and founder of Stanford University, was in Michigan Bluff from 1853 to 1855. In fact, several photos of different structures exist all purporting to be his store. Although Stanford's whereabouts and dwellings at this time are subject to debate, records show that his cousins, Elijah and Lyman lived in the relocated Michigan Bluff from 1857 to 1861 (Hoover et al. 1966:276).

While the heyday of the mining boom in Michigan City was in the late 50's, as late as 1868 the North American Mine was still yielding up to \$300,000 per year (Hoover et al. 1966:275). In addition to its own mining operations, Michigan Bluff was a supply station for miners, “...both whites and Chinamen...”, farther up the Middle Fork (Lardner 1924:190). Michigan Bluff was still a good size town of 468 in 1882 (Thompson and West 1882:392). However, by 1922, there were only 22 registered voters (Lardner 1924:191), which is probably about what it has today.

The other towns along the canyon of the Middle Fork had similar histories in the mid-19th century. Foresthill began in 1850 as a trading post and hotel at the junction of the road from Auburn over the Sierra via the Middle Fork and the road from Yankee Jims to Coloma. The structure was christened “Forest House” because of the beautiful dense forest surrounding it. During the heavy rains of 1852, a part of the hill above the town washed away, revealing gold. The resulting Jenny Lind mine caused the town to grow and prosper for the next three decades. Gold was discovered in Deadwood in 1852 by

a group of hitherto unsuccessful prospectors who were excited that they, "...now assuredly had the deadwood upon securing a fortune...", that is, their success was now assured (Hoover et al. 1966:276). The town rapidly grew to 500 but its glory days were over by about 1855. Today only a cemetery and well mark the site. Gold was discovered in Last Chance during the 1850 stampede. It received its name because the deposits were perched on the brink or jumping-off place (Hoover et al. 1966:277).

This series of towns along the bank of the Middle Fork, besides being the commercial backbone for the mines of the bluffs, also serviced the many mines in the various canyons of the areas, stretching from Horseshoe Bend to French Meadows. Because these hill-top settlements were so interconnected with the valley mining operations, their history has been included here even though none of them were located within the MFP Study Area.

The only direct description of life along the rivers during the hydraulic mining era again comes from the 1861 *Directory to Placer County* and again specifically references the mining district of the Oxbow/Ralston Powerhouse portion of the MFP (Steele 1861:201–202):

At the present time there are a large number of permanent settlers upon the different bars upon this part of the river, from the mouth of Mad Canon to Stony Bar, and the miners are making good wages the whole year round. The diggings are extensive and rich, but require considerable capital to work them properly. There are several stores along here for the sale of miners' supplies and quite a number of excellent gardens, orchards and vineyards.

In 1882 hydraulic mining was outlawed and, even though the law was ignored from time to time (Myer 2002:33), the boom days of hydraulic mining in the Sierra were over. The controversy over hydraulic mining pitted mountain miner against valley farmer. The fate of Johnson Ranch, the Mexican land grant along Bear River mentioned above, serves as an example. As Thompson and West (1882:384) reported:

In the year 1862 the floods nearly destroyed the place, and then came the debris from the hydraulic mines higher up on the river, and now there is not a vestige of this lively little town left visible. The deer and bear run wild over the site of the town. The real cause of the desertion of the place was the debris from up the river.

The accumulation of silt and repeated flooding spawned a huge legal controversy between miners and farmers, eventually resulting in the Federal Anti-Debris Act of 1882 and the Sawyer Decision in January 1884 (Myer 2002:33).

Obviously, hydraulic mining, unlike placer mining, created massive changes to environment. Not only did mountain towns like Michigan Bluff slide down hills and valley towns like Johnson Ranch get buried, but the entire course of rivers was changed. So much lumber was cut to build flumes and other mining structures that entire hillsides were denuded.

In addition to hydraulic mining, many drift mines (underground tunnels following the “drifts” of the gold deposit) appeared along the Middle Fork, and these remained active into the early 20th century. According to one source, there were 149 tunnels blasted on the Forest Hill Divide. Last Chance alone had 10 tunnels, one over 100 feet long costing \$20,000 to build (Lardner 1924:180). Of particular interest to this study are the mines in the portion of the Expanded Study Area along the South and North forks of Long Canyon. The map of 1848–1853 mining camps compiled by the Placer County Department of Museums shows the “Blacksmith Flat Mine” along the upper Middle Fork, perhaps at the junction of the North and South forks on Long Canyon. No other information was found on placer mining in the vicinity of the Project.

Thompson and West note that in 1864 a mining district was organized in the area, and, “...(miners) staked many claims with high-sounding titles, for mining purposes.” A 1901 mining map, written in French, shows Goggin’s Mine and Granite Mine plus many more in Long Canyon. Lambert Ditch is also shown on this map as well as on an 1887 map of the area. A map made in 1900 shows a 21-acre reservoir in the Duncan Creek Diversion portion of the MFP. Many of the sites of these mines and mining features are still noted on modern topographical maps.

An interesting feature in the Expanded Study Area dating from this era is the chute and tunnel created in the late 1880’s by the Horseshoe Bar Mining Company. Their goal was to dry-out one mile of river bed at Horseshoe Bend by having the water go directly through the bluff that creates the bend. Over the course of four years a 211-foot long tunnel was blasted through the rock. Then a chute, with an 18 foot drop, was built to divert the river to the tunnel. Today, rafters occasionally challenge the Class 5 rapids. Above “Tunnel Chute” is another tunnel built in 1860 with same intent. This tunnel was chipped out with pickaxes, rather than dynamite. A dam was built to raise the river’s water to the height of the tunnel. The dam failed to hold so the tunnel was abandoned. Today rafters not wishing to challenge the chute use this 1860 tunnel as a walking bypass (Wilderness Conservancy 1989:86).

Each successive wave of mining technology required larger capital investments and bigger corporate interests controlled production. Bankers, like William Ralston for whom Ralston Ridge is named, entered the mining business in the 1960 and 1870. In the last decades of the 19th century, Ralston’s sons obtained foreign financing and there was a resurgence of activity at the old Goggin mining site in the Long Canyon section of the Project Study Area. But investors were disappointed. The mines sold to other investment companies, but were never really successful (Starns 2004:322, 145-148). The depression, which increased both the price of gold and the available labor force resulted in a resurgence in both individual and corporate mining activities. World War II ended this era. Relatively small scale gold mining continues today in the area.

8.3.5 Roads

Because the major emigrant road over the Sierra from 1849-1853 was the Mormon-Carson Trail ending in Placerville, El Dorado had the largest population of any county in California, after San Francisco, in 1850 (Byrd 1992:7; Thompson and West 1882:283).

From the earliest times, the merchants provisioning miners along the Middle Fork were envious of the financial success of their El Dorado counterparts and lobbied for a road through their towns across the Sierra. Since the old Nisenan trail up the Middle Fork (for the route of the Nisenan trail per the Placer County Department of Museums, see Myer 2002:16) over the Sierra transverses in part a volcanic ridge with a 1000 to 2000 foot deep gorge on either side, it is easy to assume that this treacherous topography doomed their dreams, but actually the other routes over the Sierra also faced difficult terrain. As Thompson and West (1882:282) understood over a century ago, "(T)he boldness of the engineering that has constructed the wagon roads of the mountainous regions of California must win the admiration of all who behold the works... Few can conceive the depths and precipitousness of these awful chasms in the earth unless they have had the experience of their passage without the aid of the fine graded roads and the easy riding coach that enterprise, money and labor have prepared for them." The failure to build a major road in the area profoundly affected the history and current cultural landscape of the Middle Fork and it is important to understand this story to fully interpret the region's history.

The 1850 "stampede" that brought thousands to Bird's store and on into the upper reaches of the river, spawned the creation of the first road from Auburn, along the canyon wall of the Middle Fork. First wagons into the Bird Valley area came up the North Fork to Kelley's Bar and were let down the canyon by ropes or by attaching limbs of trees as a drag to retard the wagon's descent (Thompson and West 1882:282). By early summer 1850, a wagon road had been successfully constructed into the Forest Hill vicinity (Thompson and West 1882:283),

These wagons brought merchandise from Sacramento, delivering it on the ridge, from whence it was taken, on men's backs or on pack-mules, to the mining camps in the canons and on the river bars. These pack trails continued on up ridge, to El Dorado Canyon and beyond and south, down ravine and across Middle Fork to Georgetown and Coloma, and north to Yankee Jims, etc. Ox team and wagon arrived in Yankee Jims in the fall of 1850 with provisions for winter.

In 1852 Placer County allocated \$13,200 to build a road from Yankee Jims to Washoe Valley, by way of "Scott's Route", which probably approximated the route of the current Forest Hill Road. Although \$13,200 was a huge sum at that time for the struggling county, "...the expenditure was too small to make a very inviting road, however favorable the route" (Thompson and West 1882:283). Since better roads across the Sierra were built elsewhere, this one fell into disuse. As Thompson and West commented, "(H)ad it been supported in after years with the energy equaling the energy of words in its praise and advocacy, it would have redounded greatly to the prosperity of the section, now so isolated, through which it passed" (1882:283). Rather than bringing trade to Placer County, the road project only created \$7,000 in public debt.

In 1855 the California State Legislature appropriated money to construct a wagon road over the Sierra and appointed a commission to select the route. When the commission chose a route through El Dorado County along the South Fork of the American River, the people in Placer County were incensed. The *Placer Herald* was filled for the next

two years with articles on the subject and attempts to foment private construction to compete with the El Dorado route. The feasibility, merits, and costs of various routes through Placer County were endlessly debated, but nothing happened.

In 1857 the U.S. Congress appropriated money to construct two roads across the “territories” into California. This again unleashed a flurry of activity as people from Mariposa to Siskiyou met to lobby for roads through their favorite passes (Thompson and West 1882:284). Thomas Young, the County Surveyor proposed to use the road from Auburn to Yankee Jims, “...passing near Michigan City...”, and from there to Forks House and on through the Soda Springs area to Squaw Valley and finally into the Tahoe basin. A convention met in May 1857 at Yankee Jims (a democratic stronghold) to promote the project. It is interesting to note that no delegates from Michigan Bluff attended this meeting and that Leland Stanford, who was allegedly a merchant in Michigan Bluff in 1857 and was elected governor in 1861 on the Republican ticket, was conspicuously absent. While the politics of road building is beyond the scope of this study, it is easy to surmise that the history of the Middle Fork would have been much different if Leland Stanford had headed the 1857 road-building convention in the Republican stronghold of Michigan Bluff. But that was not the case, and the Yankee Jim group not only failed to raise the money needed to fund the project, but at their July 8, 1857 meeting voted to return the moneys collected to original subscribers (Thompson and West 1882:287).

In 1859, following the discovery of silver in Virginia City, Nevada, interest again revived among the settlers of the Middle Fork for a road across the Sierra through their region. On February 11, the Placer County and Washoe Turnpike Company met in Foresthill to raise \$50,000 to build a privately funded road along a route proposed in 1857. This time the group was chaired by “...an enterprising citizen of Michigan Bluff” (Thompson and West 1882:287). But it was too late. Leland Stanford had left the area and formed a partnership in a much bigger project, construction of a transcontinental railroad, crossing the Sierra at Donner Pass.

Before turning to a discussion of the railroad, it should be noted that although residents failed in their efforts to build a major trans-Sierra road along the Middle Fork, several smaller, privately funded turnpikes were successful. For example, “...the Volcano Canon Turnpike leads across the canon of that name from Bakers Ranch to the town of Michigan Bluff and down to Horseshoe Bend and beyond and was constructed by J. A. Matteson in 1856. Anyone who has traveled the dirt road from Michigan Bluff to Oxbow Reservoir today marvels at the economic feasibility of a toll road over this route. Another road was built by the same person in 1858 from Bath to Michigan Bluff, five and a half miles in length, with a cost of \$12,000” (Thompson and West 1882:288), so the 1856 toll road must have been successful.

The construction of the transcontinental railroad in the 1860's affected the Project area in two ways: 1) it did not go along the Middle Fork, and 2) it brought Chinese miners into the area. The current railroad route was the outcome of years of study by Theodore Judah, known as “Crazy Judah”. An engineer from Connecticut, Judah dreamed of building a railroad over the Sierra while working on lines from Sacramento to Folsom

and from Sacramento to Marysville in the mid-1850's. He crossed the Sierra many times looking for a route and was finally persuaded by a Dutch Flat druggist and miner to go through Dutch Flat and over the Sierra at Donner Pass. Judah found financial sponsors for his route in the "Big Four": grocer Leland Stanford, hardware store owners Mark Hopkins and Collis Huntington, and dry goods merchant Charles Crocker. Together they formed the Central Pacific Railroad. Fortunately for this group, the coming of the Civil War created pressure in Washington, D.C. for a transcontinental railroad, because it was believed that whoever controlled this railroad would be victorious in the war. "Win the War" Stanford was elected governor of California on the Republican ticket in 1861, President Lincoln signed the Pacific Railroad Act in 1862, and construction of the Central Pacific Railroad started January 8, 1863, without Judah, who died traveling via Panama to New York to seek investors to buy out his partners (Myer 2002:48).

At first most of railroad workers were Irish. But this proved a problem as new arrivals deserted to establish their own mining claims. The Central Pacific solved their labor challenge by importing 15,000 Chinese. Because the Chinese drank green tea made from boiled water, they were not plagued by dysentery. Because they didn't drink whiskey, they were more reliable and well-behaved. After completion of the railroad, many remained in California to mine sites abandoned by white miners. Their diligence and inventive techniques frequently allowed them to succeed where others had failed. The history of animosity toward the Chinese in California lies beyond the scope of this study. Suffice to say, from the 1860's on, many Chinese mined in the Project area. The historical record for the Project Study Area provides little specific information on the Chinese. Census data is a rare exception. The 1870 Census actually shows a sizable "Chinatown", complete with Chinese merchants and other "specialists" in what was probably the town of Bath. The census taker actually made a marginal notation for "China Camp", which lies near our Project Study Area west of French Meadow. Per his count, there were 19 Chinese miners in one "household" at China Camp in 1870. (U.S. Bureau of the Census, 1870:15-28). There is a Chinese cemetery in Michigan Bluff, though most of the bodies have been exhumed. Since the Chinese miners wanted to ultimately be reburied in China, many "temporary" cemeteries have been lost or forgotten. Cemeteries, as well as other sites types associated with Chinese occupancy may exist in the Project Study Area.

When proponents of motorized tourism started planning the nation's first transcontinental highway in the early 20th century, not surprisingly they selected a route paralleling the railroad (Myer 2002:70-71). The story of the construction of Highway 40 through Placer County is told in a delightful video at the Placer County Museum. Again, the significance for this study is that the highway does not go along the Middle Fork. Thus today while Highway 80 allows people to reach ski slopes in Soda Spring and Squaw Valley, the lack of a major year-round road along the Middle Fork makes reservoirs, hydroelectric facilities, and "back country" hiking and camping, not skiing and luxury hotels, the economic mainstay of "remote" French Meadows and Hell Hole.

8.3.6 Ranching, Logging, Hydroelectricity and Recreation

Since prospectors were unable to find significant amounts of gold in the higher elevation areas surrounding the MFP, and since a major route across Sierra did not go up the Middle Fork, the French Meadows and Hell Hole areas were used in the 19th century primarily for seasonal grazing by valley ranches. Seasonal grazing was evidently already underway in the 1850's because memoirs of two silver miners journeying from Nevada to California over the "Washoe trail" in the winter of 1856 and 1857 mention spending the night in a cabin used in summer by cattlemen. One of the travelers had actually been over the trail before and had visited with the cattlemen in passing. The meadow in questions must have been located along the upper Middle Fork because they ended their journey in Last Chance (Sanborn 1924:209–210).

The Hell Hole area is so remote and its terrain so arduous that 19th century maps show it as unsurveyed. Since the area was not notated on 19th century maps, it is uncertain when the name "Hell Hole" was applied to the area. Certainly, Thompson and West did not use that name in their 1882 history. They do discuss Gray Horse Canyon and Big Meadow which are near-by and may have been the original name for the Hell Hole area. All three areas—Gray Horse, Big Meadow and Hell Hole are listed on a 1913 map.

Thompson and West (1882:383) described the Big Meadow area as a three-mile long, 300- to 400-foot wide valley, excellent for grazing:

High up on the Rubicon there occurs quite a flat stretch of grass land, in great contrast with the general characteristics of that usually rapid, rocky and narrow gorge. For a mile and a half the river winds sluggishly along through a tussocky (sic) bottom, a quarter of a mile wide, where there is splendid pasturage, and at the sides of which are many deer licks, occasioned by the exudation of salts, of which the animals are fond, from the bordering ledges. This place is much frequented in the summer and fall by Indians, from the transmountain tribes, who come over from the eastern slope of the Sierra, and in season and out of season remorselessly slay deer of all ages, sexes and conditions, without regard to game laws or common decency.

George Taverner, from Consumes in Sacramento County claimed the area and used it for summer pasture for sheep. Before Taverner the area was claimed by John and George Hunsucker (Thompson and West 1882:383).

This history credits the name of "Gray Horse Canyon", on the edge of the Hell Hole study area, to the gold prospectors who eventually discovered the Squaw Valley mines. While camped in the valley prospecting, their gray horse kicked over their camp equipment, scattering things everywhere. They named the valley in his honor (Thompson and West 1882:383).

While no definitive explanation of origin of name "Hell Hole" is found, the following story may explain it:

During the wagon road excitements, when the Georgetown party were out in search of a practicable route to Washoe, two members of the expedition—W.S. Montague and John W. McKinney—took a stroll upon this rocky ridge. Rattlesnakes were numerous then in that region, almost anywhere, for the sheep had not, at that time, driven them to cover, as now-a-days, and the two men named did not mind an occasional rattler in their pathway; but upon this particular promontory they began to be too frequent for either safety or comfort of feeling, and when about passing a crevice in a rock, which was about two feet wide, they were stopped by the most wonderful spectacle. It was latterly filled with twisting, writhing, scaly, mottled serpents—a veritable den of monsters such as they had never before conceived the existence of. They had revolvers, and McKinney proposed firing a few shots into the mass. This they did, but then there arose such a horrid stench, to which the thousand orders of Colonge (sic) were as otto (sic) of roses, that the attacking party were forced to beat a retreat, vomiting as they went (Thompson and West 1882:383).

Thompson and West's history does have a section on "French Meadow", although it provides only the following vague and generic explanation for the origin of the name:

A group of Frenchmen prospecting in the meadow sometime between 1850–1856 were found by other prospectors who "...were wont to call the locality the Frenchmen's Meadow, to designate it from other places in the vicinity, which circumstance has indelibly affixed the name" (Thompson and West 1882:406).

Despite repeated searching, relatively little gold was found in the area. The most successful was the Red Star mine just to the southwest of the current reservoir. A ditch was built early on from the river in French Meadow to the mine. Except as a source of water, the valley was used mostly for seasonal grazing. "Sheep and cattle are kept here during the summer in large numbers, being driven in over the road via Murderer's Bar, Forest Hill, Secret House, Tadpole Lake, Main Top and across Duncan Canyon" (Thompson and West 1882:406). The history also notes the "splendid" trout fishing and abundance of game, including bears.

Some of the areas around French Meadows have a colorful history. Just over a range of mountains is Soda Springs Valley, at the head of the North Fork of the American, where a wagon road from the Central Pacific Railroad was constructed to a "noted" summer resort by the 1880's. Just east of French Meadows, is American Valley, where the headwaters of the North and Middle Forks of the American River as well as those of the Rubicon River originate. Here Joge Ballen, called Greek George, had a store and "public house" for travelers. One winter he and his wife decided to spend the winter there and got buried by snow inside their house for five months (Thompson and West 1882:406). The topographic map for this quadrangle is named "Greek Store" in their honor.

Because the area is so hard to access, relatively little logging has been done, except in the Forest Hill area, along the ridge tops and in flats like French Meadows. Certainly during the second half of the 19th century, little saw mills popped up from time to time as

needed to mill logs to build flumes and other mining features. In 1860, there were some 20 saws on the North and Middle forks of the American River (Lardner 1924:12). But until the construction of the Forest Hill Road and the Mosquito Ridge Road by the Bureau of Public Roads in the early 20th century, the higher elevation areas surrounding the Project area were not logged.

The lack of good roads also explains why the area has never attracted many recreational users. There is one minor “tourist attraction” in the area: the northernmost stand of giant sequoias called “Placer County Grove” or “American River Grove”. This grove consists of six old living trees and two large fallen ones. It is on the divide north of Duncan Canyon, just east of Last Chance. According to Thompson and West, the largest tree is 30 feet wide; the bark is thinner than that of the giants in the Mariposa grove, and “...the wood is soft and white” (Thompson and West 1882:407). The Placer County Chamber of Commerce in 1920 opened a road to the grove (Hoover et al. 1966:277).

Another major recreational feature in the Project area is the 100 mile-long Western States Trail, which is used by equestrians for the annual Tevis Cup race. According to one source, the trail follows the old Pony Express Route, which was taken over by Wells Fargo in the 1860’s (Wilderness Conservancy, 1989:22). The equestrian competition is named in honor of Lloyd Tevis, President of Wells Fargo from 1872–1892. The first race was held in 1955 (Wilderness Conservancy 1989:22).

Since 1905 most of the land in the upper portions of the Project area has been administered by the Forest Service. The Forest Service’s mission is to administrate grazing, logging, recreation and other land uses within the National Forests. Some of the roads and recreation facilities in the study area were constructed by PCWA. Those recreation facilities constructed by PCWA are currently operated and maintained by the Forest Service. Roads constructed or altered by the MFP are maintained by the Forest Service and PCWA. Another responsibility of the Forest Service is fire control. The most significant fire along the Middle Fork was the 1960 the Volcano Canyon fire. This fire started near the river and burned-over more than 44,000 acres, including town of Bath (Wilderness Conservancy 1989:122).

PCWA was created in 1957 and is charged with maintaining reliable and affordable water and energy for Placer County’s present and future needs. The Middle Fork American River Hydroelectric Project began in 1963 and was completed in 1967. The uncompleted Hell Hole Dam failed during construction in 1964, washing out much of the down stream river reach (Wilderness Conservancy 1989:123). Today, PCWA owns and operates five interconnected hydroelectric power plants, two reservoirs, five smaller diversions, and 24 miles of tunnels. It is the eighth-largest public power project in California. PCWA’s American River water right water is stored in French Meadows and Hell Hole reservoirs, and is released and diverted at the American River Pump Station, near Auburn and at Folsom Dam for consumptive use in Western Placer County. Recreational facilities that have been constructed by the agency adjacent to the power and water projects are now operated by Forest Service (Myer 2002:102). Recreational use of the area today also includes off-highway vehicle (OHV) use.

9.0 SUMMARY OF RESULTS

The Study objectives applicable to the Phase 1 effort have been substantially accomplished as summarized in the following.

Information regarding known cultural resources in the Study Area and the Expanded Study Area has been collected. This information was derived from research at archaeological data repositories primarily on the Eldorado and Tahoe National Forests and the North Central Information Center of the CHRIS. Known cultural resources are almost exclusively archaeological sites, features and artifacts from the historic and prehistoric periods, as discussed above. Based on research for this report the types and locations of archaeological resources that potentially occur in the MFP Study Area are identified as: prehistoric Native American sites comprising lithic scatters, bedrock mortar features, rock art, midden deposits, and isolated artifacts. Historic era archaeological resources comprise: mining ditches, tailing piles, placer mining sites, hard-rock mines, stamp mill sites, trash dumps, structure foundations, tunnels, rock walls, bridge(s), garden plots, trails, roads, and isolated artifacts. Regarding mining-related resources, as noted previously, these are probably better recognized as part of a larger district, and managed accordingly. Documentation of these resources comprise more than 1,000 pages of confidential archaeological site records and maps not circulated with this Phase 1 report but which are maintained by PCWA and its consultant.

There are no known Traditional Cultural Properties/Places or other cultural resources relating to contemporary and past Native American use of the area, such as plant-gathering areas. It would appear, however, that no previous inventory of such resources has been undertaken in the Study Area or Expanded Study Area. The Native American Heritage Commission has not yet been contacted but information to be submitted to them is being compiled.

The extent of previous archaeological survey in the Study Area is nil, based on data acquired to-date. Numerous studies have been conducted in the Expanded Study Area. The results of these surveys provide the inventory of cultural resources from which the types of cultural resources in the Study Area can be predicted. From the Phase 1 Study it is anticipated that a complete/intensive inventory of cultural resources in the Study Area would be appropriate.

Prospective stakeholders in the licensing process have been identified but it is likely other non-governmental organizations and interested individuals will be identified in future as Project licensing proceeds. To-date the Phase 1 effort has focused on engaging Native American individuals, groups, organizations and Tribes, but historical societies and other groups and individuals have yet to be engaged.

10.0 POTENTIAL CULTURAL RESOURCE MANAGEMENT ISSUES

Study to-date suggests that cultural resource management issues are likely to focus on archaeological resources, especially mining-related districts, sites, features, and artifacts. Issues will involve the definition of property types and evaluation of their historical significance. A potentially complicating issue may be that mining-related resources within the MFP Study Area will constitute only a small part of a significantly larger property type. Early consultation with FERC, the SHPO, and USDA-FS may be useful in determining how best to document and manage these resources. Other types of archaeological resources will likely be managed individually. This issue should be addressed with FERC shortly after PCWA files the Notice of Intent (NOI) and Pre-Application Document (PAD).

Historic properties are evaluated for National Register of Historic Places (NRHP) eligibility according to the eligibility criteria at 36 CFR 60.4 and per instructions provided by the National Park Service in various National Register Bulletins: *How to Apply the National Register Criteria for Evaluation*; *Researching a Historic Property*; *Guidelines for Evaluating and Registering Archaeological Properties*; and *How to Complete the National Register Registration Form*. “Properties are significant within the context of prehistory or history. Historic context is information about historic trends and properties grouped by an important theme in the prehistory or history of a community, State, or nation during a particular period of time” (National Register Bulletin: *How to Apply the National Register Criteria for Evaluation*). In other words, in evaluating the historical significance of a property one takes into consideration an important historical theme to which the property can be related (e.g., the Gold Rush), the level of its significance (e.g., community, State, national), whether it is significant in history or prehistory, and the “period of significance”, that is the time period in which it was historically important.

For example, historic mining features dating to the Gold Rush would be evaluated in the historic context where the “theme” is the Gold Rush; the level of significance could be “national” because the Gold Rush was of national (as well as community and state) historical significance; the features date to the historic period, and the hypothetical period of significance is 1850 to 1854. In considering the historic context it is important that the property type be defined in such a way that it is clear that the property is directly related to the historic context.

Studies are anticipated to identify properties associated with at least two historic contexts: “The Gold Rush (1848 to 1858)”; and, “Native American Cultural Adaptations in the Sierra Nevada (ca. 8000 BP to 100 BP)”. Other historic themes and associated property types may become apparent as studies progress and historic contexts may need revision as appropriate. For example, the historic context regarding gold mining may be refined to address mining by Chinese in the late 1880’s and mining during the Depression Era.

The process of refining the historic context of historically significant properties will be on-going as the cultural resource inventory is completed and the NRHP eligibility of

properties is determined in consultation with stakeholders, USFS and SHPO. This process will extend into at least 2007.

The MFP itself will become eligible for National Register consideration in 2017. While not necessarily a near-term management issue, consultation with FERC as to whether the Project should be evaluated as part of relicensing studies, or subsequent to issuance of the new license, would be useful.

In the Cultural Resources Inventory Study Plan PCWA committed to continue to identify and engage stakeholders interested in the management of cultural resources in the Study Area. This is an on-going process that will be facilitated throughout the Integrated Licensing Process (ILP) with public notice of filings, meetings, and the organization of stakeholders to promote their participation in the ILP. The near-term next step will be, however, to engage local historical societies and interested persons who have not responded to initial inquiries regarding the MFP relicensing.

11.0 NEXT STEPS

The information developed as part of Phase 1 of the Cultural Resources Inventory Study will be used as a basis for the Phase 2 studies. The Phase 1 Study report will be provided to the Forest Service and to federally recognized tribes and other tribes in the region to help facilitate discussions regarding the Phase 2 studies. Confidential information, such as archaeological site records and map locations, will not be provided to agencies or persons other than the USDA-FS. At this time, PCWA anticipates undertaking the activities, described below.

11.1 ARCHAEOLOGY

For archaeology it is apparent that a comprehensive field survey to inventory resources in the FERC Project boundaries will be appropriate and necessary to meet regulatory standards. This will be a major focus of the Phase 2 cultural resources inventory effort. There is no archaeological information for the French Meadows and Hell Hole Reservoir basins identified in the background research to-date. It is apparent that early archaeological surveys in the Ralston Powerhouse–Ralston Afterbay Dam–Oxbow Powerhouse area did not document all archaeological sites and features that were encountered. More pertinent, however, is that the professional methods and regulatory requirements for documenting archaeological sites and the way archaeological resources are defined has changed considerably since the first surveys conducted in the 1960's. Specifically, rather than characterize mining sites and features as individual archaeological resources, current management practices would recognize these as contributing elements of a larger district or similar property. That is the property type which would be evaluated for National Register eligibility, along with the individual potential contributing elements (e.g., cabin foundations, tailings piles, stamp mill sites, etc.).

11.2 ETHNOGRAPHY

Ethnographic studies of the Nisenan and Washoe address those cultures from a historical perspective. Ethnographies do not account for contemporary and historical Native American perspectives regarding use of the MFP Study Area. There is a lack information whether Nisenan or Washoe have continued historical resource procurement practices in the Study Area. How contemporary Nisenan and Washoe value the types of cultural resources associated with the MFP, and what those types of cultural resources might be is yet to be determined. This information will have to be obtained by consulting Nisenan and Washoe directly, but with the deliberate purpose to identify those cultural resources that may qualify as historic properties (i.e., Traditional Cultural Properties/Places).

The Ethnography overview presented above is a succinct summary of materials, most of which is derived from published and secondary sources. The literature and field data housed in various repositories could be examined in more detail to learn specific information regarding place names, botanical resources, and gathering and hunting areas in the vicinity of the Project. These would include, for example, the Bancroft Library at UC Berkeley; Special Collections at UNR, Nevada Historical Society in Reno; the Inter-Tribal Council of Nevada in Reno; and at the Washoe Tribal Council in Gardnerville, Nevada.

This element of the Phase 1 effort could continue in the early months of 2006, along with initial interviews with knowledgeable Native Americans. These studies would not affect the scheduling of the Phase 2 effort already slated to begin mid-2006. Information collected would allow coordination with Phase 2 field efforts so that, if appropriate, knowledgeable Native Americans and other stakeholders could coordinate with Phase 2 field personnel to identify cultural resources on the ground.

11.3 HISTORY

The overview of history presented in this report captures the signal events that took place in the Expanded Study Area, most notably the “stampede” for gold on the Middle Fork. What is less apparent is the full cast of cultural characters that were involved, particularly those ethnic groups that were deliberately minimized in historical accounts by Anglo recorders: Native Americans, Chinese, Basque, and African Americans. Basque herders were widespread in the upper Sierra Nevada during the late 19th century. Research thus far finds no specific accounts of their operating in the Study Area, although this seems probable. Arborglyphs (tree carvings) are sometimes found in aspen groves, memorializing the Basque presence. Chinese miners typically maintained a distinctly Chinese material culture that is conspicuous in the archaeological record. Archaeological discovery of these materials may signal the need for additional historical research regarding Chinese on the Middle Fork. Native Americans and African Americans are occasionally depicted in photographs from the Gold Rush but these groups lacked a material culture or other signature readily recognizable on the ground. Identifying these populations in the historical or archaeological record will be difficult.

Making further identification of ethnic groups associated with historical events in the Study Area should wait the results of Phase 2 inventory studies. As noted, the presence of these groups may be signaled by material cultures that will make additional historical research (if necessary) more efficient.

Some of the mines from the Gold Rush and subsequent discoveries operated into the 20th century. None of these are directly associated with the MFP, but they do signal that a comprehensive picture of the history of mining in the area will need to consider these later developments as well as the Gold Rush period in developing a historic context for evaluating the historical significance of mining resources.

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TABLES

Table 1. Prehistoric Cultural Chronology of the Forest Hill and Georgetown Divides.

Culture Period	Age	Cultural Characteristics
PaleoIndian	9000 B.C. – 6500 B.C.	Highly mobile populations, subsistence focus on hunting
<i>Early Holocene</i>	<i>8000 B.C. – 6000 B.C.</i>	
Archaic/Millingstone	6500 B.C. – 3500 B.C.	Mobile populations, diversified subsistence pattern with increase use of seed resources indicated by millingslab/ handstone tool kit
<i>Archaic</i>	<i>6000 B.C. – 1200 B.C.</i>	
Early Sierran	3500 B.C. – 600 B.C.	Mobile populations, diversified subsistence pattern, advent of mortar/pestle technology, evidence of more regular settlement/subsistence patterns in Sierra Nevada
<i>Early Sierran</i>	<i>1200 B.C. – 600 A.D.</i>	
Middle Sierran	600 B.C. – A.D. 1000	Period of cultural fluorecence through-out the region, extensive inter-regional trade, large semi-permanent settlements, atlatl/dart technology supplemented by bow/arrow ca. A.D. 600
<i>Middle Sierran</i>	<i>A.D. 600 – A.D. 1400</i>	
Late Prehistoric Sierran/ Protohistoric	A.D. 1000 – A.D. 1500/ A.D. 1500 – A.D. 1769	Rapid population growth, intensification subsistence pattern, complex settlement patterns with permanent villages and seasonal camps, primary use of mortar/ pestle and bow/arrow, tribelet territories maintained, inter-regional trade declines, “monetary” shell bead exchange; European settlement indirectly affects Sierra Nevada Native American cultures
<i>Late Sierran (including Protohistoric)</i>	<i>A.D. 1400 – A.D. 1769</i>	

Table 2. Inventory of Previously Recorded Archaeological Sites in the Expanded Study Area (sites documented as occurring in the Study Area are indicated by an “*”).

Site Number	Forest	Description
05-17-54-01	Tahoe	Unknown (historic?)
05-17-54-02	Tahoe	Old Stamp Mill site; mill removed
05-17-54-03	Tahoe	Foundations of 6 miners cabins
05-17-54-06	Tahoe	Lithic scatter, bedrock mortar (BRM)
05-17-54-10	Tahoe	Historic tunnel
05-17-54-16	Tahoe	Rock wall cabin foundation
05-17-54-92	Tahoe	Rock outcropping with 5 BRMs
05-17-54-116*	Tahoe	Flake scatter (w/ projectile points and BRM)
05-17-54-117	Tahoe	Flake scatter
05-17-54-133	Tahoe	Historic mining site
05-17-54-136	Tahoe	Rock outcrop with 2 BRMs
05-17-54-214	Tahoe	Historic trash dump
05-17-54-228*	Tahoe	BRMs w/ 13 cups
05-17-54-254	Tahoe	Small lithic scatter
05-17-54-255	Tahoe	Lithic scatter, 2 grinding slicks
05-17-54-256	Tahoe	Lithic scatter, BRMs, grinding slick
05-17-54-257	Tahoe	BRM, light lithic scatter
05-17-54-265	Tahoe	Light lithic scatter
05-17-54-266	Tahoe	Small lithic scatter
05-17-54-267	Tahoe	Small lithic scatter
05-17-54-279	Tahoe	Light density lithic scatter, 3 BRMs, pestles
05-15-54-303*	Tahoe	Unknown
05-17-54-308	Tahoe	2 BRMs
05-17-54-322	Tahoe	Light lithic scatter
05-17-54-370*	Tahoe	Sparse lithic scatter
05-17-54-400	Tahoe	BRM, flake scatter with midden
05-17-54-427	Tahoe	Historic ditch
05-17-54-432	Tahoe	Historic bridge
05-17-54-437	Tahoe	Sparse lithic scatter
05-17-54-440	Tahoe	2 BRMs on a large boulder
05-17-54-441	Tahoe	2 BRMs
05-17-54-442	Tahoe	2 BRMs
05-17-54-443	Tahoe	Historic trash dump
05-17-54-445	Tahoe	Lambert Ditch
05-17-54-450	Tahoe	Historic mining site: 2 ditches and an artifact scatter
05-03-53-02	Eldorado	Prehistoric rock shelter

Table 2. Inventory of previously recorded archaeological sites in the Expanded Study Area (sites documented as occurring in the Study Area are indicated by an “*”) (continued).

Site Number	Forest	Description
05-03-53-04	Eldorado	Prehistoric midden, historic placer mining
05-03-53-49	Eldorado	Historic homestead
05-03-53-51	Eldorado	Historic mining complex
05-03-53-64*	Eldorado	BRM and lithic scatter
05-03-53-65* (Big Meadow)	Eldorado	13 BRMS (39 cups, 3 slicks) petroglyphs, dense lithic scatter
05-03-53-67	Eldorado	Segment of Ralston Ditch (see Star Fire TS-12 and P-31-1304)
05-03-53-74	Eldorado	Historic log cabin, prehistoric flake scatter
05-03-53-77	Eldorado	Historic hardrock mining site and trash dump
05-03-53-78	Eldorado	Historic stamp mill/placer mine and prehistoric BRM
05-03-53-79	Eldorado	Small flake scatter
05-03-53-113	Eldorado	Lithic scatter, 2 loci, no midden
05-03-53-116	Eldorado	BRM and sparse lithic scatter
05-03-53-117	Eldorado	BRM, lithic scatter with groundstone fragments
05-03-53-119	Eldorado	# BRMs, 2 pestles
05-03-53-121	Eldorado	1 BRM, 1 piece debitage
05-03-53-123	Eldorado	1 BRM, excavated in 2000
05-03-53-165	Eldorado	Lithic scatter with some groundstone
05-03-53-192	Eldorado	“Core reduction” site
05-03-53-199	Eldorado	Lithic scatter (1 projectile point)
05-03-53-205	Eldorado	Historic trail
05-03-53-209	Eldorado	Daggett Ditch
05-03-53-224	Eldorado	Lithic scatter
05-03-53-225	Eldorado	Lithic scatter
05-03-53-341	Eldorado	Remnants of historic camp
05-03-53-342	Eldorado	Historic camp with artifact scatter
05-03-53-237	Eldorado	Lambert Ditch (see 17-54-445)
05-03-53-284	Eldorado	Small ditch segment
05-03-55-19	Eldorado	BRM, no lithic scatter
05-03-55-122	Eldorado	Dense lithic scatter
05-03-55-201	Eldorado	2 BRMs, 4 pestles, lithic scatter
05-03-55-204	Eldorado	Historic stone foundation
P-09-2204-H		Volcanoville ditch segment
P-09-2256-H		Mikalauskas Ditch
No#		Pyshora Property ditch
No#		Wood THP ditch
No#		Mt. Gregory Cemetery

Table 2. Inventory of previously recorded archaeological sites in the Expanded Study Area (sites documented as occurring in the Study Area are indicated by an “*”) (continued).

Site Number	Forest	Description
P-31-1367 (CA-PLA-1058)	Eldorado	Lithic scatter, projectile point
P-31-1369 (CA-PLA-1060)	Eldorado	Lithic scatter, projectile point
P-31-1370 (CA-PLA-1061)	Eldorado	3 historic mining prospects
P-31-1371 (CA-PLA-1062)	Eldorado	1 historic mining prospect
P-31-1252*	Eldorado	Grinding slick
P-31-1304	Tahoe	Ralston Ditch
No#		“Long Chip #1” large mining ditch
No#		“Long Chip #2” small ditch
FGS Co. #1		2 BRMs, 1 milling slick
Lower Meadow Site		2 BRMs, 1 possible milling slick
Star Fire TS-7	Tahoe	2 short segments of ditch
Star Fire TS-9	Tahoe	Hydraulic/sluice mined area
Star Fire TS-10	Tahoe	Wooden flume remnants
Star Fire TS-11	Tahoe	3 BRMs, sparse lithic scatter
Star Fire TS-12	Tahoe	Remnants of ditch, may have been part of Ralston ditch (see P-31-1304)
Star Fire TS-13	Tahoe	BRM and historic debris

FIGURES

Placeholder for Figure 1

Figure 1. Cultural Resources Inventory
Study Area and Expanded Study Area

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Placeholder for Figure 2

Figure 2. Ethnographic Territories of the Hill Nisenan, Washoe,
and Northern Sierra Miwok

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Placeholder for Figure 3

Figure 3. Historic Places Associated with the MFP

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