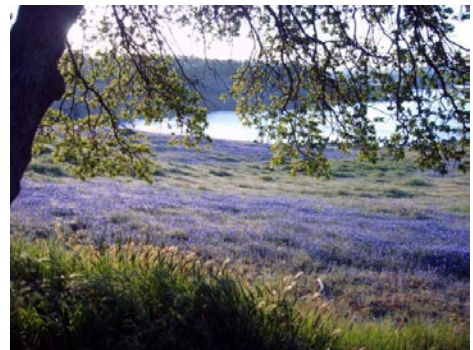


NATIVE AMERICAN TRADITIONAL CULTURAL PROPERTIES STUDY

PRIVILEGED/CONFIDENTIAL

**DON PEDRO PROJECT
FERC NO. 2299**



Prepared for:
Turlock Irrigation District – Turlock, California
Modesto Irrigation District – Modesto, California

Prepared by:
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April 2015

The Native American elders that provided the privileged/confidential information used in the document titled ***Native American Traditional Cultural Properties Study, Don Pedro Project (FERC No. 2299)*** (prepared by Applied EarthWorks, Inc., for Turlock Irrigation District and Modesto Irrigation District) have granted permission for this information to be made available to the public.

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In Memoriam (1941-2014)

Sonny Hendricks, Tuolumne Me-Wuk elder and consultant for this study.
(Photo by John Lytle, courtesy of Shelly Davis-King.)

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- **Jerry Cox**, Tuolumne Band of Me-Wuk Indians
- **Robert “Stanley” Cox**, Tuolumne Band of Me-Wuk Indians
- **Kevin Day**, Tribal Chair, Tuolumne Band of Me-Wuk Indians
- **Reba Fuller**, Tuolumne Band of Me-Wuk Indians and Spokesperson, Central Sierra Me-Wuk Cultural and Historic Committee
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- The late **Sonny Hendricks**, Tuolumne Band of Me-Wuk Indians

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- **Rodney Lingo**, Tuolumne Band of Me-Wuk Indians
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- **Gary Robles**, Central Sierra Me-Wuk

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Native American Traditional Cultural Properties Study

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Filed separately at the University of California, Merced Library:

Confidential Notes of the Principal Anthropologist (Moratto n.d. [2013])—**RESTRICTED; NOT FOR DISTRIBUTION**

Acronyms and Abbreviations

ac	acres
ACEC.....	Area of Critical Environmental Concern
Æ.....	Applied EarthWorks, Inc.
AF	acre-feet
ACOE.....	U.S. Army Corps of Engineers
ADA.....	Americans with Disabilities Act
AIRFA.....	American Indian Religious Freedom Act
ALJ.....	Administrative Law Judge
APE.....	Area of Potential Effects
ARMR.....	Archaeological Resource Management Report
ARPA.....	Archaeological Resources Protection Act
BA.....	Biological Assessment
BDCP	Bay-Delta Conservation Plan
BLM.....	U.S. Department of the Interior, Bureau of Land Management
BLM-S	Bureau of Land Management – Sensitive Species
BMI.....	Benthic macroinvertebrates
BMP	Best Management Practices
BO	Biological Opinion
BOR	Bureau of Reclamation
BVR	Buena Vista Rancheria
CalEPPC	California Exotic Pest Plant Council
CalSPA.....	California Sports Fisherman Association
CAS.....	California Academy of Sciences
CCC.....	Criterion Continuous Concentrations
CCIC	Central California Information Center
CCSF.....	City and County of San Francisco
CCVHJV	California Central Valley Habitat Joint Venture
CD.....	Compact Disc
CDBW.....	California Department of Boating and Waterways
CDEC.....	California Data Exchange Center
CDFA.....	California Department of Food and Agriculture

Acronyms and Abbreviations (continued)

CDFG.....	California Department of Fish and Game (as of January 2013, Department of Fish and Wildlife)
CDMG.....	California Division of Mines and Geology
CDOF.....	California Department of Finance
CDPH.....	California Department of Public Health
CDPR.....	California Department of Parks and Recreation
CDSOD.....	California Division of Safety of Dams
CDWR.....	California Department of Water Resources
CE.....	California Endangered Species
CEII.....	Critical Energy Infrastructure Information
CEQA.....	California Environmental Quality Act
CESA.....	California Endangered Species Act
CFR.....	Code of Federal Regulations
cfs.....	cubic feet per second
CGS.....	California Geological Survey
CJC.....	Columbia Junior College
CMAP.....	California Monitoring and Assessment Program
CMC.....	Criterion Maximum Concentrations
CNDDB.....	California Natural Diversity Database
CNPS.....	California Native Plant Society
CORP.....	California Outdoor Recreation Plan
CPUE.....	Catch Per Unit Effort
CRAM.....	California Rapid Assessment Method
CRLF.....	California Red-Legged Frog
CRRF.....	California Rivers Restoration Fund
CSAS.....	Central Sierra Audubon Society
CSBP.....	California Stream Bioassessment Procedure
CT.....	California Threatened Species
CTR.....	California Toxics Rule
CTS.....	California Tiger Salamander
CVRWQCB.....	Central Valley Regional Water Quality Control Board

Acronyms and Abbreviations (continued)

CWA	Clean Water Act
CWHR.....	California Wildlife Habitat Relationship
Districts	Turlock Irrigation District and Modesto Irrigation District
DLA	Draft License Application
DPRA.....	Don Pedro Recreation Agency
DPS	Distinct Population Segment
EA	Environmental Assessment
EC	Electrical Conductivity
EFH.....	Essential Fish Habitat
EIR	Environmental Impact Report
EIS.....	Environmental Impact Statement
EPA.....	U.S. Environmental Protection Agency
ESA.....	Federal Endangered Species Act
ESRCD.....	East Stanislaus Resource Conservation District
ESU	Evolutionary Significant Unit
EWUA.....	Effective Weighted Useable Area
F	Fahrenheit
FERC.....	Federal Energy Regulatory Commission
FFS	Foothills Fault System
FL.....	Fork length
FMU	Fire Management Unit
FOT	Friends of the Tuolumne
FPC	Federal Power Commission
FR.....	Federal Register
ft/mi.....	feet per mile
FWCA.....	Fish and Wildlife Coordination Act
FYLF.....	Foothill Yellow-Legged Frog
g.....	grams
GIS	Geographic Information System
GLO	General Land Office
GPS	Global Positioning System

Acronyms and Abbreviations (continued)

HCP.....	Habitat Conservation Plan
HDR	HDR Engineering, Inc.
HHWP.....	Hetch Hetchy Water and Power
HORB	Head of Old River Barrier
HPMP.....	Historic Properties Management Plan
ILP.....	Integrated Licensing Process
ISR	Initial Study Report
ITA.....	Indian Trust Assets
kV.....	kilovolt
m	meters
M&I.....	Municipal and Industrial
MCL.....	Maximum Contaminant Level
mg/kg	milligrams/kilogram
mg/L.....	milligrams per liter
mgd	million gallons per day
mi	miles
mi ²	square miles
MID.....	Modesto Irrigation District
MJC.....	Merced Junior College
MOU	Memorandum of Understanding
MSCS.....	Multi-Species Conservation Strategy
msl.....	mean sea level
MVA	Megavolt Ampere
MW	megawatt
MWh	megawatt hour
mya.....	million years ago
NAE	National Academy of Engineering
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAS.....	National Academy of Sciences
NAVD 88.....	North American Vertical Datum of 1988

Acronyms and Abbreviations (continued)

NAWQA	National Water Quality Assessment
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
ng/g	nanograms per gram
NGOs	Non-Governmental Organizations
NGVD 29	National Geodetic Vertical Datum of 1929
NHI	Natural Heritage Institute
NHPA.....	National Historic Preservation Act
NISC	National Invasive Species Council
NMFS.....	National Marine Fisheries Service
NOAA.....	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPS	U.S. Department of the Interior, National Park Service
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NRI.....	Nationwide Rivers Inventory
NTU	Nephelometric Turbidity Unit
NWI.....	National Wetland Inventory
NWIS	National Water Information System
NWR	National Wildlife Refuge
O&M.....	operation and maintenance
OEHHA.....	Office of Environmental Health Hazard Assessment
OIA	Office of Indian Affairs
OHP.....	Office of Historic Preservation
ORV	Outstanding Remarkable Value
PAD.....	Pre-Application Document
PDO.....	Pacific Decadal Oscillation
PEIR.....	Program Environmental Impact Report
PG&E.....	Pacific Gas and Electric Company
PGA.....	Peak Ground Acceleration
PHG.....	Public Health Goal

Acronyms and Abbreviations (continued)

PM&E	Protection, Mitigation and Enhancement
PMF.....	Probable Maximum Flood
POAOR	Public Opinions and Attitudes in Outdoor Recreation
ppb.....	parts per billion
ppm	parts per million
PSP	Proposed Study Plan
QA.....	Quality Assurance
QC.....	Quality Control
RA.....	Recreation Area
RBP	Rapid Bioassessment Protocol
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RM	River Mile
RMP	Resource Management Plan
RP.....	Relicensing Participant
RSP	Revised Study Plan
RST	Rotary Screw Trap
RWF.....	Resource-Specific Work Groups
RWG	Resource Work Group
RWQCB.....	Regional Water Quality Control Board
SC.....	State candidate for listing under CESA
SCD.....	State candidate for delisting under CESA
SCE	State candidate for listing as endangered under CESA
SCT	State candidate for listing as threatened under CESA
SD1	Scoping Document 1
SD2	Scoping Document 2
SE.....	State Endangered Species under the CESA
SFP	State Fully Protected Species under CESA
SFPUC	San Francisco Public Utilities Commission
SFSU	San Francisco State University
SHPO	State Historic Preservation Office
SJRA	San Joaquin River Agreement

Acronyms and Abbreviations (continued)

SJRG	San Joaquin River Group Authority
SJTA	San Joaquin River Tributaries Authority
SPD	Study Plan Determination
SRA	State Recreation Area
SRMA	Special Recreation Management Area or Sierra Resource Management Area (as per use)
SRMP	Sierra Resource Management Plan
SRP	Special Run Pools
SSC	State species of special concern
ST	California Threatened Species under the CESA
STORET	Storage and Retrieval
SWAMP	Surface Water Ambient Monitoring Program
SWE	Snow-Water Equivalent
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TAF	thousand acre-feet
TCP	Traditional Cultural Properties
TDS	Total Dissolved Solids
TID	Turlock Irrigation District
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRT	Tuolumne River Trust
TRTAC	Tuolumne River Technical Advisory Committee
UC	University of California
USDA	U.S. Department of Agriculture
USDOC	U.S. Department of Commerce
USDOI	U.S. Department of the Interior
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Department of the Interior, Fish and Wildlife Service
USGS	U.S. Department of the Interior, Geological Survey
USR	Updated Study Report

Acronyms and Abbreviations (continued)

UTM.....	Universal Transverse Mercator
VAMP.....	Vernalis Adaptive Management Plan
VELB	Valley Elderberry Longhorn Beetle
VRM	Visual Resource Management
WPT	Western Pond Turtle
WSA.....	Wilderness Study Area
WSIP	Water System Improvement Program
WWTP	Wastewater Treatment Plant
WY	water year
μS/cm	microSeimens per centimeter

1.0 INTRODUCTION

1.1 General Overview of the Don Pedro Project

Turlock Irrigation District (TID) and Modesto Irrigation District (MID) (collectively, the Districts) are the co-licensees of the 168-megawatt (MW) Don Pedro Project (Project) located on the Tuolumne River in western Tuolumne County low in the Sierra Nevada foothills, near the eastern edge of the Central Valley, of California. Don Pedro Dam is located at river mile (RM) 54.8 and Don Pedro Reservoir has a normal maximum water surface elevation of 830 ft above mean sea level (msl; NGVD 29). At elevation 830 ft, the reservoir stores over 2,000,000 acre-feet (AF) of water and has a surface area slightly less than 13,000 acres (ac). The watershed above Don Pedro Dam is approximately 1,533 square miles (mi²). The Project is designated by the Federal Energy Regulatory Commission (FERC) as project no. 2299.

Both TID and MID are local public agencies authorized under the laws of the State of California to provide water supply for irrigation and municipal and industrial (M&I) uses and to provide retail electric service. The Project serves many purposes including providing water storage for the beneficial use of irrigation of over 200,000 ac of prime Central Valley farmland and for the use of M&I customers in the City of Modesto (population 210,000). Consistent with the requirements of the Raker Act passed by Congress in 1913 and agreements between the Districts and City and County of San Francisco (CCSF), the Project reservoir also includes a “water bank” of up to 570,000 AF of storage. CCSF may use the water bank to more efficiently manage the water supply from its Hetch Hetchy water system while meeting the senior water rights of the Districts. The “water bank” within Don Pedro Reservoir provides significant benefits for CCSF’s 2.6 million customers in the San Francisco Bay Area.

The Project also provides storage for flood management purposes in the Tuolumne and San Joaquin rivers in coordination with the U.S. Army Corps of Engineers (ACOE). Other important uses supported by the Project are recreation, protection of aquatic resources in the lower Tuolumne River, and hydropower generation.

The Project Boundary extends from RM 53.2, which is one mile below the Don Pedro powerhouse, upstream to RM 80.8 at an elevation corresponding to the 845 ft contour (31 FPC 510 [1964]). The Project Boundary encompasses approximately 18,370 ac with 78 percent of the lands owned jointly by the Districts and the remaining 22 percent (approximately 4,000 ac) owned by the United States and managed as a part of the U.S. Bureau of Land Management (BLM) Sierra Resource Management Area.

The primary Project facilities include the 580-ft-high Don Pedro Dam and Reservoir completed in 1971; a four-unit powerhouse situated at the base of the dam; related facilities including the Project spillway, outlet works, and switchyard; four dikes (Gasburg Creek Dikey and Dikes A, B, and C); and three developed recreational facilities (Fleming Meadows, Blue Oaks, and Moccasin Point Recreation Areas). The location of the Project and its primary facilities is shown in Figure 1-1.

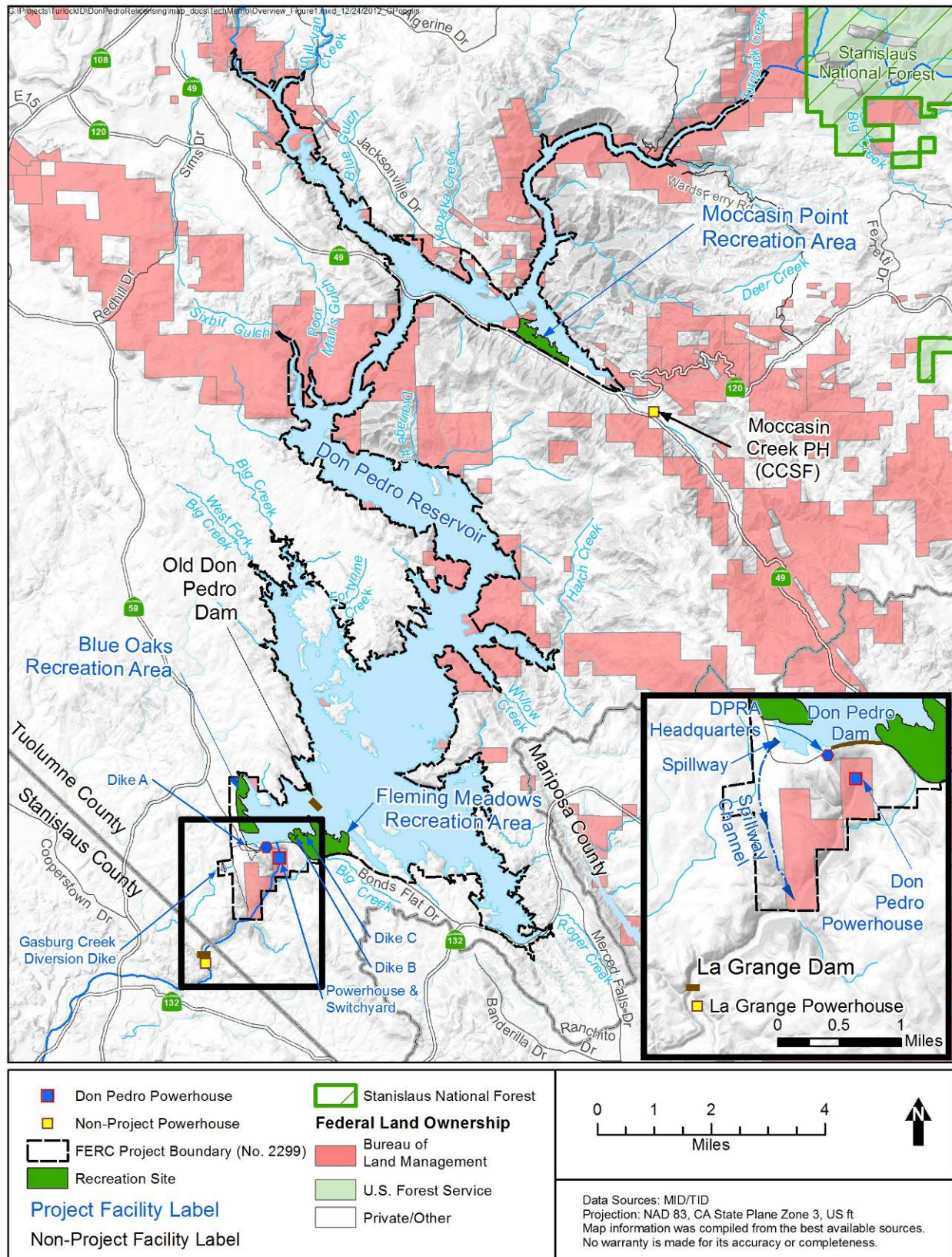


Figure 1-1. Don Pedro Project location.

1.1.1 Introduction – Project Location and Description

The Districts operate Don Pedro Reservoir, also called Lake Don Pedro, in the central Sierra Nevada foothills just above the eastern margin of the Central Valley. TID and MID have applied to the FERC for relicensing to authorize their continued operation and maintenance, including recreation activities, of the Don Pedro Project, FERC No. 2299 (the Project). As the Project requires a federal license, it constitutes a federal “undertaking” as defined at 36 CFR 800.16(y) and thus is governed by Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA). Various studies have been or are being performed as part of the relicensing process. Among these is the investigation of Native American Traditional Cultural Properties (TCP’s) that may be affected by Project-related activities. The goals and scope-of-work for this investigation are set forth in the *Study Plan CR-2: Native American Traditional Cultural Properties Study Plan* (TCP Study Plan; TID/MID 2011b). The aims, methods, and results of the TCP study are presented in the following pages.

The current Don Pedro Reservoir was formed when waters of the Tuolumne River were impounded behind “new” Don Pedro Dam and powerhouse, built between 1967 and 1971 by the City of San Francisco, MID, and TID (Creighton n.d.:Site 19; DPRA 2013). The dam is located approximately 22 miles south of Sonora, 17 mi west of Coulterville, and 35 mi east of Modesto (Figure 1-1). Containing more than 16 million cubic yards of earth and rock fill, the dam rises some 585 feet from a base elevation of 275 ft at the level of the original streambed to a crest height 860 ft above msl (DPRA 2013; Moratto 1971). The construction of “old” Don Pedro Dam, a solid concrete structure 285 ft high, was begun in 1921 and completed in 1923. The old dam was left in place and still stands approximately 1.5 mi upstream from the new dam. The old dam lies below several hundred feet of water, as it is flooded by the much larger “new” reservoir which attains a normal surface elevation of 804 ft and a maximum gross pool of 830 ft above msl (D. Barnes 1987).

Situated in southeastern Tuolumne County, Don Pedro Dam is approximately 2.0 mi northeast of the Stanislaus County line and about the same distance northwest of the Mariposa County line. The dam is 3.1 mi northeast of La Grange Diversion Dam and north of the uppermost reach of La Grange Reservoir. Don Pedro Reservoir is accessed by several highways and many smaller roads. State Route 132 touches the southeastern tip of the reservoir; Highway 49/120 crosses the river 3.3 mi southeast of Chinese Camp and skirts the Moccasin Creek arm of the reservoir west of the point where Route 49 to Mariposa divides from Route 120 to Yosemite National Park; and, finally, local Route J-59, connecting Highway 108/120 to Merced, lies a few miles west of the reservoir and provides access to it via Bonds Flat Road and other routes linked to J-59.

The name “Don Pedro” can be traced to one of the Gold Rush camps adjacent to the Tuolumne River. Don Pedro’s Bar was about 6.0 mi northeast of the community of La Grange. The bar and mining camp were named for Pierre “Don Pedro” Sainsevain, a pioneer who was present locally by July 18, 1848. The *Columbia Gazette*, October 29, 1853, reports that a party of ten men was taking gold worth \$1,000-1,500 per day from that location. During the early 1860s, the camp was recognized as a city with its own post office and a population of up to 1,500. The post office was closed in 1866 (Gudde 1975:98).

Don Pedro Reservoir captures the inflow from a watershed covering 1,533 mi². The reservoir extends some 26 mi upriver from the dam site and floods the lower reaches of Woods, Moccasin, Kanaka, Big, Roger, Hatch and Ramos creeks as well as other tributaries. In plan, the main body of the reservoir is irregular, featuring multiple bays and inlets, while the upper reaches are more dendritic and largely follow the channels of Woods Creek, Moccasin Creek, and the river canyon (Figure 1-2). Although Don Pedro Reservoir is not part of the Hetch Hetchy water system operated by the City and County of San Francisco, the Hetch Hetchy Aqueduct, conveying water westward from Moccasin Reservoir, does pass under the Upper Bay of the reservoir. With 161.6 mi of shoreline, the normal reservoir pool covers 20.3 mi² or 12,960 acres of surface and has a capacity of 2,030,000 AF. Don Pedro Reservoir is the fifth-largest artificial lake in California (DPRA 2013).

1.2 Area of Potential Effects

For any federal undertaking governed by NHPA Section 106, the Area of Potential Effects (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16(d)). The Project’s APE encompasses the entire area of the reservoir gross pool, plus a narrow buffer above the high water mark and additional lands including the dam, recreation improvements, and maintenance facilities in the Bonds Flat vicinity at the southwestern end of the Project. This APE is depicted in Figure 1-2 (see also TID/MID 2011c:Attachment A, “Area of Potential Effects Maps”). Lands within the APE are owned and managed chiefly by either MID and TID or by the U.S. Department of the Interior (USDOI), Bureau of Land Management (BLM). More specifically, the APE includes:

...all lands within the FERC boundary that are (1) within 100 ft. beyond the normal maximum water surface elevation (830 ft.), (2) within designated Project facilities and formal recreation use areas, (3) within informal recreation use areas identified by the Don Pedro Recreation Agency, (4) within the Red Hills Area of Critical Environmental Concern (ACEC), or (5) along the reservoir edges, especially the reservoir reaches, where there are portions of intermittent and perennial flowing streams [TID/MID 2011c:5].

Within the Project APE, 261 archaeological sites were identified and recorded during intensive field surveys in 2012-2013 by HDR Engineering, Inc. (HDR) and Far Western Anthropological Research Group, Inc. (FWARG) (Risse et al. 2014a, 2014b). Other sites may remain undiscovered, including those that are buried or that lie in deeper portions of the reservoir. Of this total: 138 apparently are historical, non-Indian sites; 88 are “prehistoric” sites (i.e., locations evincing past Native American activities); and 35 are known to include both prehistoric and historic-era components. In addition, field workers have documented 37 buildings and structures, mostly dating to the twentieth century, and 171 “isolates” (i.e., cultural objects seemingly not associated with a known archaeological site), consisting of 109 “prehistoric” artifacts and 62 items of historic age (Risse et al. 2014a, 2014b). Although these discoveries are currently being evaluated, it is likely that many of the sites will be deemed eligible for the National Register of Historic Places (NRHP) in accordance with the criteria at 36 CFR 60.4, and thus will be classified as “historic properties” that must be considered under NHPA Section 106.

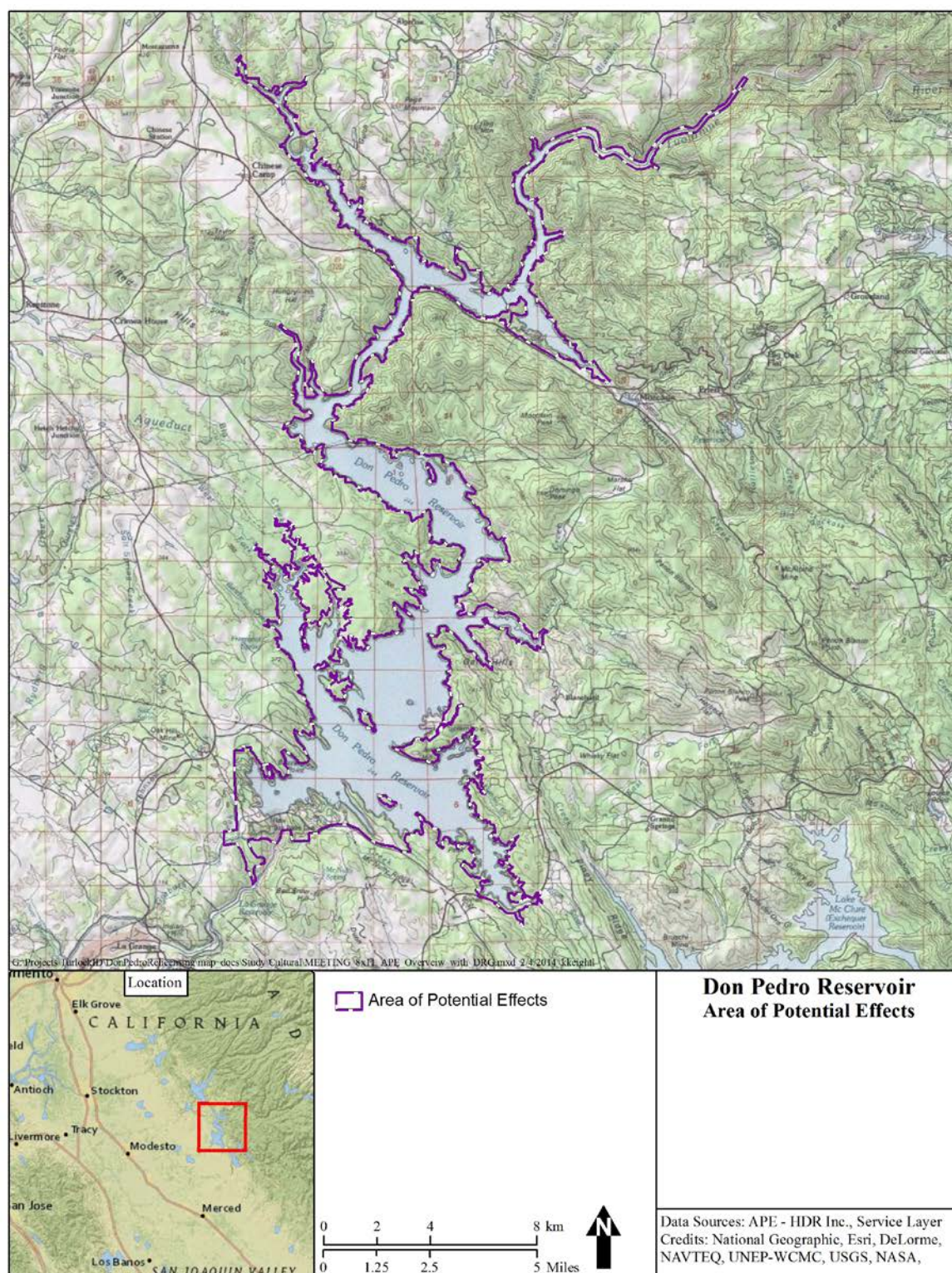


Figure 1-2. Don Pedro Reservoir map, showing boundary of the Project's Area of Potential Effects (APE).

1.3 Scope and Purpose of Study

The Native American TCP Study Plan (TID/MID 2011c) mentioned above requires the performance of the TCP study to include seven “steps” or tasks. These are briefly enumerated below and discussed more fully below, particularly in Chapter 7.

- Step 1: Obtain SHPO [State Historic Preservation Officer] Concurrence on the APE;
- Step 2: Archival Research;
- Step 3: Tribal Consultation and Identification of Resources;
- Step 4: Archaeological Site Visit;
- Step 5: National Register of Historic Places Evaluation;
- Step 6: Identify and Assess Potential Effects on National Register-eligible Properties; and
- Step 7: Reporting [TID/MID 2011a:6-9].

The aims of this study are to identify and evaluate possible TCPs within the APE, assess potential effects of the undertaking (Project) on any identified TCP(s), and recommend measures to resolve the undertaking’s adverse effects on any TCP(s) within the Project APE. These aims are to be met through a systematic program of library and archival research, interviewing Native American elders who have knowledge of traditional cultural practices, and field visits to places selected by elders within the APE (see Chapter 7).

1.4 Report Organization

This report consists of 11 chapters, References Cited, and appendices. Beyond the present Introduction, Chapter 2 summarizes the environmental setting of Don Pedro Reservoir. Chapter 3 sketches aspects of the Project’s cultural context, touching briefly on regional and local archaeology, prehistory, and history. The detailed treatment of ethnohistory in Chapter 4 examines historical events and processes that dramatically affected Me-wuk society and culture, especially after ca. A.D. 1847. Chapters 5 and 6 consider in some depth the ethnography of the Central Sierra Me-wuk, that is, their cultural practices recorded by anthropologists and other observers from the 1870s into the twenty-first century. Together, the first six chapters set the stage for the summary of study methods and description of findings that appear as Chapters 7 and 8, respectively. The next two chapters evaluate selected cultural properties in terms of the accepted TCP criteria (Ch. 9) and assess the undertaking’s potential effects on TCPs (Ch. 10). Finally, Chapter 11 presents conclusions and recommendations.

This TCP Study report concludes with five appendices: A: Consultation Log; B: Records of Archaeological Sites Visited by Elders; C: Traditional Cultural Property Form for the Lower Kanaka Creek Traditional Native Plant-Gathering District; D: the SHPO’s letter concurring with the Project APE; E: Responses to Comments and Other Changes Made to the May, 2014 Draft Native American Traditional Cultural Properties Study Plan; and F: the SHPO’s letter concurring with the National Register eligibility of a TCP within the Project’s APE. The Consultation Log is identified as “**CONFIDENTIAL AND RESTRICTED; FOR FERC AND DISTRICT USE**”

ONLY” because it includes certain sensitive information and candid remarks made off the record by Native Americans with the understanding that their statements would not be published or made available to other specified Native Americans. That log is intended to be accessible only to appropriate FERC and District personnel (including the Districts’ cultural resources contractor, HDR) who have a legitimate need to confirm that the required communications for this study indeed took place. Appendices B, C, D, E, and F, however, can be made available not only to HDR and the Districts, but also to interested tribes, FERC, BLM, the SHPO, and NAHC.

Research for this study also resulted in the Principal Anthropologist’s (i.e., Dr. Moratto’s) notes of individual interviews and group meetings with Native American elders held variously over the telephone and face-to-face at tribal offices, in people’s homes, in the Don Pedro Recreation Agency’s headquarters on Bonds Flat Road, at the Modesto Irrigation District’s offices in Modesto, and at dispersed field locations in the Project area. These notes are marked **“RESTRICTED; NOT FOR DISTRIBUTION”** as requested by certain Native American elders who volunteered sensitive information on the condition that it would not be circulated. The confidentiality of the field notes’ contents is authorized by both Federal and State law, notably Section 304 of the NHPA, Section 9(a) of the Archaeological Resources Protection Act (ARPA), exclusions permitted by the Freedom of Information Act (FOIA), the Native American Graves Protection and Repatriation Act (NAGPRA) and its implementing regulations (43 CFR 10), and by Section 6254(r) of the California Government Code.

Much of the primary information contained in the field notes—including all information directly pertinent to the TCP study—has been edited, redacted, generalized, or otherwise made suitable for, and is now included in, the TCP Study report. The attribution for such information as presented in the TCP Study report typically takes the form of “(Me-wuk elder[s], notes).” The unpublished notes, together with a copy of the TCP Study report, have been placed in the Special Collections of the campus library at the University of California, Merced. The library will restrict all access to the notes for 50 years, i.e., until January 1, 2065.

1.5 Relicensing Process

The current FERC license for the Project expires on April 30, 2016, and the Districts will apply for a new license no later than April 30, 2014. The Districts began the relicensing process by filing a Notice of Intent and Pre-Application Document (PAD) with FERC on February 10, 2011, following the regulations governing the Integrated Licensing Process (ILP). The Districts’ PAD included descriptions of the Project facilities, operations, license requirements, and Project lands as well as a summary of the extensive existing information available on Project area resources. The PAD also included ten draft study plans describing a subset of the Districts’ proposed relicensing studies. The Districts then convened a series of Resource Work Group meetings, engaging agencies and other relicensing participants in a collaborative study plan development process culminating in the Districts’ Proposed Study Plan (PSP) and Revised Study Plan (RSP) filings to FERC on July 25, 2011 and November 22, 2011, respectively.

On December 22, 2011, FERC issued its Study Plan Determination (SPD) for the Project, approving, or approving with modifications, 34 studies proposed in the RSP that addressed Cultural and Historical Resources, Recreational Resources, Terrestrial Resources, and Water and

Aquatic Resources. In addition, as required by the SPD, the Districts filed three new study plans (W&AR-18, W&AR-19, and W&AR-20) on February 28, 2012 and one modified study plan (W&AR-12) on April 6, 2012. Prior to filing these plans with FERC, the Districts consulted with relicensing participants on drafts of the plans. FERC approved or approved with modifications these four studies on July 25, 2012.

Following the SPD, a total of seven studies (and associated study elements) that were either not adopted in the SPD, or were adopted with modifications, formed the basis of Study Dispute proceedings. In accordance with the ILP, FERC convened a Dispute Resolution Panel on April 17, 2012. The Panel issued its findings on May 4, 2012. On May 24, 2012, the Director of FERC issued his Formal Study Dispute Determination, with additional clarifications related to the Formal Study Dispute Determination issued on August 17, 2012. Documents relating to the Project relicensing are publicly available on the Districts' relicensing website at www.donpedro-relicensing.com.

1.5.1 Study Plan

The Districts' continued operation and maintenance (O&M) and/or recreation activities at the Don Pedro Project (Project) has the potential to affect TCPs. The potential effects may be direct (e.g., result of ground-disturbing activities), indirect (e.g., public access to Project areas), or cumulative (e.g., caused by a Project activity in combination with other past, present, and reasonably foreseeable future projects). The present study focuses on investigating the potential for Project-related activities to affect TCPs. This report describes the objectives, methods, and results of the Traditional Cultural Properties Study (CR-02) as implemented by the Districts in accordance with FERC's SPD and subsequent study modifications and clarifications. FERC's SPD approved without modifications the Districts' Native American Traditional Cultural Properties study plan as provided in the Districts' RSP filing.

1.5.2 Study Goals and Objectives

FERC licenses may permit activities that may "...cause changes in the character or use of historic properties, if any such historic properties exist..." (36 CFR 800.16[d]). FERC must therefore comply with Section 106 of the NHPA and its implementing regulations at 36 CFR 800 that require any federal department or independent agency having authority to license any undertaking to take into account the effects of the undertaking on historic properties. As defined under 36 CFR 800.16(l), historic properties are prehistoric or historic sites, buildings, structures, objects, districts, *or locations of traditional use or beliefs* that are included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Historic properties are identified through a process of evaluation against specific criteria found at 36 CFR 60.4.

To be considered a historic property, a TCP must have integrity and meet at least one of the NRHP criteria defined at 36 CFR 60.4. When a place of traditional practices is evaluated as eligible for listing in the NRHP, it is termed a TCP. A TCP is defined as any property that is "...eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b)

are important in maintaining the continuing cultural identity of the community” (Parker and King 1998:1).

Examples of TCPs are provided in *National Register Bulletin* 38 (Parker and King 1998:1):

- (1) Locations associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world.
- (2) A rural community, whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents.
- (3) An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices.
- (4) Locations where Native American religious practitioners have historically gone and are known or thought to go to today, to perform ceremonial cultural rules of practice.

The primary goal of this study is to assist FERC in meeting its compliance requirements under Section 106 of the NHPA, as amended, by determining if licensing of the Project will have an adverse effect on eligible TCPs. The objective of this particular study is to identify TCPs that may potentially be affected by Project O&M, evaluate their eligibility for the NRHP, and identify Project-related activities that may affect TCPs and/or locations of ethnographic use. At a later date, the results of the study will be used to develop the *Historic Properties Management Plan* (HPMP), which will ensure that all cultural properties identified within the APE will be appropriately considered and managed during the life of the new FERC license.

The Project also may be subject to compliance with other relevant federal laws including the National Environmental Policy Act (NEPA) of 1969 (42 USC 4321-4347), the Archaeological Resources Protection Act (ARPA) of 1974 (16 USC 470AA-470MM), the American Indian Religious Freedom Act (AIRFA) of 1978 (42 USC 1996 and 1996a), the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001-3013), Executive Order 11593 (Protection and Enhancement of the Cultural Environment) of 1971 (36 FR 8921; 16 USC 470), and Executive Order 13007 (Indian Sacred Sites) of 1996 (61 Federal Register [FR] 26771-26772).

2.0 ENVIRONMENTAL SETTING

2.1 Introduction

The purpose of this chapter is to summarize the natural environment of the Don Pedro Project area, emphasizing the conditions to which Native American societies adapted and the resources that were culturally useful in prehistory. Accordingly, the foci here are on local watercourses, toolstone, and both plants and animals of economic value. Also discussed are topographic diversity, from the source of the Tuolumne River in the high Sierra to its mouth in the San Joaquin Valley, and how different elevations along the river affected biotic communities as well as seasonal movements and land uses by native communities (see also Chapters 5 and 6).

The name Tuolumne—as applied to the meadows, canyon, river, falls, peak, pass, and county—is derived from the Central Sierra Me-wuk *taawalimni*, “squirrel place” (Gudde 1998:403). An alternate derivation, “Yokutsan: *Tawalimnu*” (Wikipedia 2013), is unconfirmed. Variant spellings have appeared over time, including *Taulámne* and *Tahualamne* in Padre Muñoz’s (1806) diary, *Taualames* by Padre Viader (1810), and *Río de los Towalumnes* on Frémont and Preuss’ 1848 “Map of Oregon and Upper California” (Frémont and Preuss 1853). The modern spelling, “Tuolumne,” first appeared on Derby and Hollingsworth’s (1849) map of the gold mining districts (Gudde 1998:403).

2.2 Tuolumne River

The Tuolumne River is 149 mi long. It arises at the Mt. Lyell glacier in Yosemite National Park, drains high-altitude meadows, races through deep canyons carved into the western face of the Sierra Nevada, and then flows through the foothills and across the eastern plains of the Central Valley to its confluence with the San Joaquin River near Modesto. The river’s headwaters consist of the Lyell and Dana forks, which converge at 8,583 ft in Tuolumne Meadows, while at its terminus the stream debouches into the San Joaquin River at a point only 26 ft above msl. From the peak of Mt. Lyell at 13,120 ft to the river’s mouth, the drainage of the Tuolumne River thus spans 13,094 vertical ft within a watershed basin of 1,960 mi². The natural flow of the river is interrupted by Lake Eleanor Dam, O’Shaughnessy Dam, (“new”) Don Pedro Dam, La Grange Dam, and their reservoirs. The river’s unimpaired discharge below La Grange Dam is estimated to average of 2,680 ft³/s and range from a minimum of 14 ft³/s to a maximum of 130,000 ft³/s (TID/MID 2013).

Like all rivers draining the west slope of the Sierra Nevada, the Tuolumne was of vital importance to the Indians who lived nearby. It was a reliable year-round source of fresh water for drinking, food preparation (including acorn leaching and boiling), fishing, swimming, bathing, and for meeting other domestic needs. Trails paralleling the river, both near its banks and along slope and ridge routes well above the stream, served as transportation corridors—used for gathering, hunting, fishing, visiting, seasonal settlement shifts to higher or lower elevations, resource conveyance and trade (cf. Davis-King and Snyder 2010). Moreover, the river sliced through varied geologic formations in the mountains, and as a result its bed in the foothills contained many types of rocks suitable for tool manufacture, food preparation, and other uses by native peoples.

The river's fishery was bountiful, with aquatic habitats variously supporting rainbow trout (*Oncorhynchus mykiss*; also called steelhead when anadromous), Sacramento pikeminnow (*Ptychocheilus grandis*), Pacific brook lamprey (*Lampetra pacifica*), Sacramento sucker (*Catostomus occidentalis*), Chinook (King) salmon (*Oncorhynchus tshawytscha*), and possibly smaller numbers of pink (humpback) salmon (*Oncorhynchus gorbuscha*), chum (dog) salmon (*Oncorhynchus keta*), and coho (silver) salmon (*Oncorhynchus kisutch*)—all of which are edible and nutritious (McGinnis 1976; Moyle 1984). Salmon (*kosimo*, Central Sierra Me-wuk) ascended the Tuolumne at least as far upstream as La Grange, “as did also the white salmon” (*toynoyo*), where in the late spring they were taken with a two-pronged harpoon (Barrett and Gifford 1933:188-189). “White salmon” most likely refers to the Sacramento pikeminnow—formerly called Sacramento squawfish, pike, chub, or whitefish—which may attain a length up to 45 inches (Moyle 1976:190-193; Yoshiyama 2014).

The riverine and riparian habitats of the Tuolumne River and its tributaries in the Project area would have attracted a wide range of wildlife: amphibians and reptiles such as frogs and the western pond turtle (*Clemmys marmorata*); resident and migratory waterfowl (e.g., coots, ducks, loons, and geese); raptors (e.g., hawks, bald eagle (*Haliaeetus leucocephalus*), and osprey (*Pandion haliaetus*)); small and medium-sized mammals (e.g., brush rabbits (*Sylvilagus bachmani*), striped skunks (*Mephitis mephitis*), river otters (*Lutra canadensis*), and raccoons (*Procyon lotor*)) as well as larger animals (e.g., mule deer (*Odocoileus hemionus*) and grizzly bears (*Ursus arctos*)). The riparian corridors and surrounding countryside also would have sustained a great variety of vegetation important in the traditional economy of Indian people, as discussed below and in Chapter 6.

2.3 Topography, Geology, and Lithic Resources

2.3.1 Topography

The uppermost part of the Tuolumne watershed consists of Alpine and glacial landforms such as cirques, arêtes, and horns, many of which jut well above the treeline, dominated by Mount Lyell. The Dana and Lyell forks and smaller streams tumbling down from these rugged peaks converge at Tuolumne Meadows (8,583 ft elevation), the largest natural meadow in the High Sierra. From there, the river flows past *Glen Aulin* (Gaelic: “Beautiful Valley”) and through the Grand Canyon of the Tuolumne—a deep V-shaped gorge, with many waterfalls and dramatic highland vistas. Downstream from the confluence with Piute Creek and below White Wolf lies Hetch Hetchy Reservoir (storing up to 360,400 AF), impounded by O’Shaughnessy Dam in a granite-walled, U-shaped valley that has been called “the other Yosemite.” Below the dam, several large tributaries—Eleanor Creek, Cherry Creek, the Middle and South forks, the Clavey River (or Clavey Fork), and the North Fork Tuolumne—add their waters to the river’s main stem. This is extremely rugged country, with steep slopes rising abruptly hundreds of feet from the canyon bottom. Notable in this area of the Tuolumne watershed are the precipitous, chaparral-clad Jawbone Ridge and the stunning views from the Rim-of-the-World overlook. At the canyon bottom, between Meral’s Pool and Ward’s Ferry, the turbulent river includes 18 mi of Class IV whitewater (TID/MID 2011c:Vol. II:5-209).

Descending into the Sierra foothills, the river enters the upper reaches of Don Pedro Reservoir (described in Chapter 1). Here the topography varies from mountainous terrain in the northeast to gently rolling hill country farther to the southwest. Away from the river are many small valleys and “flats” ideal for human settlement in such localities as Chinese Camp, lower Big Creek, and Bonds Flat. There are also prominent uplands nearby, including Hog Mountain, rising to 2,481 ft between lower Woods Creek and the river, and Domingo Peak at 2,486 ft, south of Moccasin Creek, in addition to the steep slopes of Piney Ridge, just east of the reservoir’s middle and south bays. A short distance downriver from Don Pedro Dam lie La Grange Reservoir and La Grange Diversion Dam, beyond which the relief becomes increasingly gentle as it transitions to the eastern plains of the Central Valley. Finally, below La Grange Diversion Dam, the river flows about 50 mi across the plains and valley floor before emptying into the San Joaquin River at the San Joaquin River National Wildlife Refuge two miles north of Grayson.

2.3.2 Geology and Lithic Resources

From its source in the high Sierra to its exit from the foothills below Don Pedro Dam, the Tuolumne River cuts through diverse geologic formations. In the mountains drained by the upper reaches of the Clavey River, North Fork, and main stem Tuolumne River, the geologic landscape consists mainly of Mesozoic granitic rocks. As these streams unite and flow southwestward through the metamorphic foothills, the river encounters geologic structures of Paleozoic marine, Pre-Cretaceous meta-sedimentary, Pre-Cretaceous meta-volcanic, Jurassic/Triassic meta-volcanic, Mesozoic ultrabasic intrusive, and Upper Jurassic rocks of marine origin (Rogers 1966). Much of the lower, larger portion of Don Pedro Reservoir is underlain by Jurassic/Triassic meta-volcanic rocks, though the Red Hills coincide with a Mesozoic ultrabasic formation.

In the Project area, the Mesozoic Sierra Nevada batholith is represented by medium-grained granitic rocks containing 2-20 percent dark (ferromagnesian) minerals together with veins of milky quartz. Among the Paleozoic marine rocks of the Calaveras Formation are marble, recrystallized limestone, dolomite, quartz-mica schist, slate, micaceous quartzite, quartz-mica hornfels, meta-conglomerate, phyllite, and amphibolite schist. Comprising the Pre-Cretaceous meta-sediments and meta-volcanics are phyllite, stretched conglomerate, thin-bedded tuff, slate, fibrous amphibolite schist, and sericite schist. While the Upper Jurassic meta-volcanic Logtown Ridge Formation produces metamorphosed tuffaceous sediments, meta-chert, and greenstone along with quartz porphyry, the Upper Jurassic marine units of the Mariposa Formation yield slate, meta-sandstone, meta-graywacke, meta-siltstone, and meta-tuff (Bowen and Crippen 1948; Clark and Lydon 1962; Hart 1959; Jenkins 1948; Oakeshott 1971; Rogers 1966). Virtually all of these materials were used in prehistory for the manufacture of one or more kinds of flaked and/or ground stone implements (Moratto 1971, 2002; Moratto and Goldberg 1982). A few examples are mentioned below.

Absent local sources of obsidian, the pre-contact Indians of the Project area selected chert, basalt, greenstone, massive and crystalline quartz, quartzite, schist, phyllite, metavolcanic rocks, and other cryptocrystalline and fine-grained lithic materials for flaked artifacts. Perhaps the most abundant toolstone in the area was greenstone, found in the Logtown Ridge Formation. Another material valued for its conchoidal fracture and knapping qualities was chert, also called flint:

One mile east of Tuolumne, on edge of Tuolumne River Canyon, Tuolumne County: A short tunnel about four feet high and ten feet long was driven in aboriginal times into the outcrop of gray flint. A waste and chipping rejectage dump lies in front of the flint workings [Heizer and Treganza 1944:331].

Numerous other chert and meta-chert sources and prehistoric quarries have been found elsewhere in the central Sierra Nevada, for example: near Sonora (Rondeau 1978); close to Moaning Cave (Moratto, personal observation); at several locations on the Stanislaus National Forest (Moratto 1981); not far from Vallecito (Motz 1978); in Stanislaus River streambed cobbles and gravels, and at not less than two quarries (in addition to the riverbed) within the New Melones Reservoir area (Moratto and Goldberg 1982:26).

Another economically valuable lithic resource was steatite or soapstone, a rock with high talc content that is easy to carve and resistant to cracking when heated. This was the material of choice for cooking vessels, boiling stones, smoking pipes, and arrow shaft straighteners. It was also made into atlatl weights, disk beads, and pendants. In addition, powdered steatite was used like talcum powder on babies to relieve chafing (Barrett and Gifford 1933:211; Moratto 1987). Steatite is common in the foothill metamorphic belt of the central Sierra.

There is a stratum of steatite (*pukia*, C[entral Sierra Me-wuk]) at the same level in both the south and north walls of the north fork of the Tuolumne River. The latter deposit is about a mile from the outskirts of Tuolumne and is cut by the old Duckwall Road. A spring close by is called Indian spring by Americans, *Kolakota* by the Miwok. The soapstone quarry itself is called *Lotowayaka*. The quarry on the south side of the canyon is called *Tile* by the Miwok [Barrett and Gifford 1933:211].

Steatite sometimes also occurs as “float” material in river gravels downstream from such exposures.

Granite was valued by the Indians as a material for making manos, millingslabs, cobble pestles, portable mortars, and hammerstones, although manos and hammerstones were also made of quartzite and schist was a good alternate material for pestles and millingslabs. Granite outcrops were selected for milling stations, but where granitic bedrock was lacking milling stations were established on available outcrops of virtually any kind of rock: limestone, marble, schist, metavolcanic rock, and even phyllite (Moratto and Goldberg 1982:30). Native peoples of the Tuolumne River country also prized quartz crystals (possibly from the Mokelumne Hill locality), hematite (red), limonite (yellow), chalk (white), and malachite (green) pigments from various sources in the central Sierra Nevada foothills (Barrett and Gifford 1933; Heizer and Treganza 1944).

Finally, the Tuolumne River and its tributaries in the foothills were auriferous. The streams had carved through the southern Mother Lode, exposing hardrock ore veins and creating rich placers that later would be mined intensively during the Gold Rush. Although the California Indians apparently had little or no use for gold in prehistoric times, they quickly learned of its value in the late 1840s and began to extract it for sale or trade to non-Indians. Soon, however, foreign miners drove the Me-wuk people away from their lands and traditional means of subsistence.

This topic is addressed further in the “History” section of Chapter 3 and covered at length in Chapter 4, Ethnohistory.

2.4 Climate

Climatic patterns in the Sierra Nevada are influenced partly by latitude and more significantly by elevation. Aspect and local insolation are also factors. The foothills normally experience a warm, dry interval of five or six months (approximately May through September) and cool, moist conditions for the rest of the year. The higher mountains, however, have four distinct seasons, with the “winter” being progressively longer as one moves upward in altitude. Temperatures in the Sierra

are generally warm in summer with maxima of 80 to 100 degrees F [Fahrenheit] and minima of 15 to 37 degrees F, depending on elevation. In winter, maximum temperatures range from 55 to 70 degrees F and the minima from about 0 degrees F to -30 degrees F [Storer et al. 2004:12].

Historically recorded mean temperatures in the Don Pedro Project area include monthly minima ranging from 37 degrees F in December and January to 58 degrees F in July and August, and maxima range from 54 degrees F in December and January to 94 degrees F in July (Table 2-1). Elevation affects temperature, which in turn is a factor controlling the type and amount of precipitation that falls locally. Temperatures decline approximately 1 degree F for each 300 ft rise in altitude, cooling the air and causing it to drop some of its moisture. Consequently, precipitation

increases 2 to 4 in. for each 300-ft rise, reaching a maximum at about 5,000 to 6,000 ft elevation in the central part of the range. Above that elevation the amount of precipitation declines because much of the moisture in the air has already fallen [Storer et al. 2004:12].

In the Sierra, precipitation tends to increase from south to north. Approximately 95 percent of the rain and snow falls between October and May, with more than half accumulating during the January-to-March period (Storer et al. 1994:13). Within the Don Pedro Project area, most precipitation occurs as rainfall. Mean monthly totals range from 0.07 in. of rain in July to 6.39 in. of rain and snow in January (Table 2-1). As one moves upslope from Don Pedro Reservoir, annual precipitation amounts in the Tuolumne watershed rise to a maximum of about 60 in. in the vicinity of Piute Creek (Rantz 1969).

Precipitation falls mostly as rain at altitudes below the snowline (2,000-3,000 ft), and as snow above 6,000 ft (Storer et al. 1994:13). Upper elevations near the Tuolumne River headwaters normally have severe winters and heavy snows, rendering the high country uninhabitable by pre-contact Indians during that season (Barrett 1908:335). “Typical winter temperatures in the High Sierra (mostly above 9,500 ft)... are nighttime lows between -14 degrees F and 12 degrees F” (Storer et al. 1994:14). During especially cold intervals, even Yosemite Valley and other relatively low-altitude valleys in the mountains were abandoned in favor of warmer environs farther downslope (Barrett 1908:335).

Table 2-1. Mean temperatures and precipitation, averaged historically, at Don Pedro Reservoir (DPRA 2013; Weather for You 2013).

Month	High Temp. (°F)	Low Temp. (°F)	Precipitation (inches / cm)
January	54	37	6.39 / 16.23
February	61	41	5.76 / 14.63
March	67	44	5.67 / 14.40
April	74	46	2.49 / 06.32
May	81	51	1.22 / 03.10
June	88	56	0.26 / 00.68
July	94	58	0.07 / 00.25
August	92	58	0.14 / 00.46
September	87	56	0.57 / 01.45
October	78	48	1.84 / 04.67
November	64	42	3.83 / 09.73
December	54	37	4.26 / 10.82

2.5 Vegetation and Wildlife

Since the late nineteenth century, naturalists have approached the classification of the Sierra Nevada's vegetation in many different ways, resulting in a plethora of taxonomic schemes. Some of these schemes are very broad in their geographic ken, an example being the "biotic provinces" advocated by Dice (1943). Only two such biotic provinces are recognized in the mountains and foothills: Sierran, extending from the yellow pine belt to the crest of the range, and Californian, encompassing all flora and fauna downslope from the yellow pine belt (Dice 1943; Munz 1968:10). Later, Barbour and Majors' (1977) *Terrestrial Vegetation of California* described the state's provinces in considerably more detail, including the Sierran Floristic Province.

At a taxonomic level more fine-grained than the province, C. H. Merriam in 1898 organized biotic associations and distributions according life zones. Merriam (1898) defined six zones—Lower Sonoran, Upper Sonoran, Transition, Canadian, Hudsonian, and Arctic Alpine—each recognized by a distinctive complement of plants and animals. In the Sierra Nevada, these zones form a series of long, narrow belts paralleling the axis of the range. The boundaries of the life zones vary according to elevation, climate, soil type, slope, and aspect. Some species are restricted to a single zone, while others occupy two or three zones and a few are present in any zone where their habitat is available (Storer and Usinger 1963:25-26). Applying Merriam's scheme to the Project locality, we find that nearly all of the lands around Don Pedro Reservoir fall within the Upper Sonoran life zone. The Lower Sonoran zone begins west of La Grange Dam and extends downward across the Central Valley, while markers of the Transition zone appear at the uppermost (northeastern) reach of Don Pedro Reservoir and continue upslope in the Tuolumne watershed to the country around Hetch Hetchy Reservoir. These three life zones are characterized as follows (after Merriam 1898; Storer and Usinger 1963):

Lower Sonoran Life Zone

Elevation: Generally below 500-900 ft above msl, depending on local conditions.

Topography: Great Central Valley plains and bottomlands; gentle slopes.

Climate: Alternating hot/dry and cool/moist seasons. Daily high temperatures may rise to more than 100 degrees F during mid-summer. Winter rainfall is approximately 7-15 in.

Biotic Communities: Lakeshore/wetland; riparian woodland/gallery forest; grassland; grass/oak savanna; vernal pool.

Typical Plants: Native bunch grasses, cattail (*Typha latifolia*), tule/bulrush (*Scirpus* sp.), sedges (*Carex* spp.), Jimson weed (*Datura meteloides*), valley oak (*Quercus lobata*), willows (*Salix* spp.), Frémont cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*).

Typical Animal Species: Tule elk (*Cervus nannodes*), antelope (*Antilocapra americana*), grizzly bear (*Ursus arctos*), coyote (*Canis latrans*), kit fox (*Vulpes macrotis*), badger (*Taxidea taxus*), Raccoon (*Procyon lotor*), golden beaver (*Castor canadensis*), bobcat (*Lynx rufus*), striped skunk (*Mephitis mephitis*), jackrabbit (*Lepus californicus*), cottontail (*Sylvilagus* spp.), ground squirrel (*Otospermophilus beecheyi*), valley quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), American crow (*Corvus brachyrhynchos*), yellow-billed magpie (*Pica nuttalli*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), ducks, coots, geese, herons, cranes, and western pond turtle (*Clemmys marmorata*).

Upper Sonoran Life Zone

Elevation: Ranging from 500-900 to 2,000-3,000 ft, depending on local conditions.

Topography: Rolling hills to moderately rugged terrain.

Climate: Alternating hot/dry and cool/moist seasons. Summers rainless and hot, while winters are mild to cool with 15-40 in. of precipitation, mostly as rainfall.

Biotic Communities: Grass/oak savanna; oak woodland; oak/gray pine woodland; chaparral; riparian woodland.

Typical Plant Species: In the woodlands are gray pine (*Pinus sabiniana*), blue oak (*Q. douglasii*), interior live oak (*Q. wislizenii*), scrub oak (*Q. dumosa*), California buckeye (*Aesculus californica*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), manzanitas (*Arctostaphylos* spp.), buck brush (*Ceanothus* sp.), yerba santa (*Eriodictyon californicum*), grasses, clarkia (*Clarkia* sp.), brodiaea (*Brodiaea* sp.), milkweed (*Asclepias* spp.), Mariposa lily (*Calochortus* spp.), and soaproot (*Chlorogalum pomeridianum*). Chaparral communities host chamise (*Adenostoma fasciculatum*), buck brush, manzanitas flannelbush or fremontia (*Fremontodendron californicum*), poison oak, toyon, coffeeberry (*Rhamnus rubra*), yerba santa, and soaproot. The riparian community features willows, Frémont cottonwood, white alder (*Alnus rhombifolia*), broadleaf maple (*Acer macrophyllum*), elderberry (*Sambucus* sp.), California wild grape (*Vitis californica*), blackberry (*Rubus ursinus*), horsetail rush (*Equisetum* sp.), sedges, and cattail.

Typical Animal Species: Mule deer (*Odocoileus hemionus*), grizzly bear, mountain lion (*Felis concolor*), coyote, gray fox (*Urocyon cinereoargenteus*), badger, raccoon, bobcat, striped skunk, spotted skunk (*Spilogale putorius*), black-tailed jackrabbit, cottontail, ground squirrel, golden beaver, river otter (*Lutra canadensis*), great

blue heron (*Ardea herodias*), valley quail, mourning dove, acorn woodpecker (*Melanerpes formicivorus*), red-shafted flicker (*Colaptes cafer*), western scrub jay (*Aphelocoma californica*), American crow, common raven (*Corvus corax*), bald eagle, osprey (*Pandion haliaetus*), turkey vulture (*Cathartes aura*), western pond turtle, and western rattlesnake (*Crotalus viridis*).

Comments: Typical of the Sierra foothills. The Project lies almost entirely within the Upper Sonoran life zone.

Transition Life Zone

Elevation: Between 2,000-3,000 ft and 6,500 ft in the central part of the range.

Topography: Highly variable, from rugged mountains and sheer granite-walled canyons to mountain valleys and meadows.

Climate: Warm/dry summers are often interrupted by thunderstorms and rain; winters are cool, with 25-80 in. of precipitation, including snow.

Biotic Communities: Yellow pine forest; mixed evergreen forest; mixed pine/oak/incense cedar woodland; chaparral; riparian woodland.

Typical Plant Species: Ponderosa pine (*P. ponderosa*), sugar pine (*P. lambertiana*), incense cedar (*Calocedrus decurrens*), black oak (*Q. kelloggii*), black Cottonwood (*Populus trichocarpa*), willows, manzanita, prostrate mahala mat (*Ceanothus prostratus*), poison oak, kitkitdizze (*Chamaebatia foliolosa*), bracken fern (*Pteridium aquilinum*), horsetail rush, and sedges.

Typical Animal Species: Mule deer, black bear (*Ursus americanus*), mountain lion, coyote, striped skunk, raccoon, western gray squirrel (*Sciurus griseus*), chipmunks (*Tamias* spp.), golden beaver, river otter, mountain quail (*Oreortyx pictus*), band-tailed pigeon (*Columba fasciata*), Steller's jay (*Cyanocitta stelleri*), common raven, and bald eagle.

Comments: This zone coincides with the main timber belt of the Sierra.

These life zones have continued to be used and revised since they were first introduced by Merriam (1898) more than a century ago. One of the more recent iterations prefers the term "plant belts" and reduces Merriam's original six zones to a total of four covering the entire west slope of the Sierra: (1) Central Valley (more or less equivalent to the Lower Sonoran life zone); (2) Foothill Plant Belt (incorporating all of the Upper Sonoran zone plus the lower part of the Transition, up to 4,000 ft in the central part of the range); (3) Mixed Conifer Plant Belt, capturing all vegetation between approximately 4,000 and 6,500 ft in the central Sierra; and (4) Boreal region, including the Upper Montane Belt (6,500-8,000 ft in the central Sierra) and the Alpine Belt, which accounts for all of the vegetation between the treeline of the Upper Montane Belt and the Sierra crest (Storer et al. 2004:19-22, Plate 12). In this vegetation taxonomy, the Don Pedro Project area is situated entirely within the Foothill Plant Belt.

At a more refined taxonomic level, the Sierra can be subdivided into biotic communities, that is, relatively small geographic areas characterized by more-or-less uniform environments within which particular plants and animals tend to occur in association with one another. Examples applicable to the Project area would include riparian woodland, oak-grass savanna, blue oak/gray pine woodland, and chaparral communities. A related concept that has gained favor among

botanists in recent years is that of the vegetation series. “A series is a type of vegetation defined by dominance of a particular species, group of species, or genus” (Barbour 1995:back cover). The *Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) defines several hundred series known to occur in the state. Of these, some of the vegetation series found in the Don Pedro Project area are the Cattail, Chamise, Foothill Pine, Scrub Oak, Blue Oak, Interior Live Oak, and Interior Live Oak Shrub series (Sawyer and Keeler-Wolf 1995). These and other series attest to the biotic diversity within the study area. Numerous plant species available in these series were harvested by the Me-wuk and used variously as foods, medicines, and raw material for their arts and industries. This topic is discussed at length in Chapter 6, with detailed summaries in Tables 6-1 – 6-3.

3.0 ARCHAEOLOGY, PREHISTORY, AND HISTORY

The purpose of Chapter 3 is to briefly summarize aspects of archaeology, prehistory, and history to help form a context for understanding and interpreting the cultural information (about ethnohistory, ethnography, and cultural properties) that is discussed at length in the subsequent chapters. The focus here will be exclusively on the Don Pedro Project area.

3.1 Archaeology

Many overviews of archaeological investigations in the central Sierra Nevada have appeared in recent years (e.g., Hull 2007; Hull and Moratto 1999; Moratto 1999a, 1999b, 2002; Moratto et al. 1988; Rosenthal 2011), and there is no need to replicate such regional overviews here. The Project vicinity was first examined for cultural resources in 1968-1970 when State Archaeologist Francis A. Riddell, representing the Central California Archaeological Foundation (CCAF) in Sacramento, together with students from Columbia Junior College (CJC) in Columbia, intuitively surveyed selected areas and documented 27 sites, of which 19 were within the “new” Don Pedro Reservoir boundaries, i.e., within the area below the 830 ft contour (Anonymous 1968; Riddell 1970):

Our survey indicates little of archaeological significance along Woods Creek. Apparently mining operations have destroyed most of the evidence which may have been there. Our survey of Moccasin Creek was reasonably thorough, but we did not go up the Tuolumne River beyond its junction with Moccasin Creek. We were unable to survey from Jacksonville to the New Dam, except for Ramos Creek, Hatch Creek (in part), Roger Creek, Lucas Gulch and Mexican Gulch. Possibly as much as 75 percent of the reservoir still needs to be surveyed [Riddell 1970:1].

In September and October, 1970, at the request of Mr. Riddell and under contract with the California Department of Parks and Recreation, San Francisco State College (SFSC) field crews, aided by volunteers from Merced Junior College (MJC), directed by Michael J. Moratto performed a partial reconnaissance of accessible lands within the reservoir area, including parcels surveyed previously by CJC. By the time when field crews began work, New Don Pedro Dam had already been built, the flood gates had been closed, and the reservoir pool was beginning to fill. In all, 41 prehistoric and 28 historic-era sites were found and recorded (Moratto 1971:39). Construction, which had begun in 1967, involved the relocation of highways and roads, demolition of old bridges and erecting new ones, hauling 16 million cubic yards of earth from borrow pits for placement in the dam core, building spillway facilities, and clearing the fluctuating-pool zone in the reservoir basin (Moratto 1971:2). Most of the historical buildings and structures, including the Gold-Rush town of Jacksonville, had been razed during construction and clearing operations prior to the archaeological surveys.

During the fall and winter of 1970-1971, SFSC and MJC collaborated in salvage excavations at seven archaeological sites in the Don Pedro Reservoir area: 4-TUO-279 on the Tuolumne River in what is now the Upper Bay vicinity (Henn 1971); 4-TUO-280 on Big Creek in the North Bay area (Moratto 1971a:66); 4-TUO-298 (Jackson 1971; Wilson 1971) and 4-TUO-300 (Moratto 1971b), both on Roger Creek in the South Bay locality; 4-TUO-307 (Péron and Péron 1971) and

4-TUO-314 (Slaymaker 1971a), both on the lower Moccasin Creek arm of the reservoir; and 4-TUO-326 on the river in the upper reach of the reservoir, below Wards Ferry Bridge (Slaymaker 1971b). The results of that work do not represent the full spectrum of archaeological resources in the Project area because of geographic constraints, the very small excavation sample, and limited range of cultural materials recovered. Due to the rising reservoir, for example, all archaeological sites below approximately 600 ft above msl were inaccessible. Also, while midden deposits were found at 24 of the recorded sites, bulldozing had nearly eradicated nine of these before they could be sampled (Moratto 1971c:141).

Time-sensitive artifacts and four radiocarbon dates suggested the ages of occupation at several sites: 4-TUO-279 and 4-TUO-298, between AD 1500 and 1800 (Henn 1971; Jackson 1971); 4-TUO-300, ca. AD 550-1450 (Moratto 1971b); 4-TUO-308, probably post-AD 1400; and 4-TUO-326, late prehistoric (Slaymaker 1971b). Of the tested locations, 4-TUO-314 at Moccasin, evidently was the largest and deepest site. Even in its badly damaged condition, there were accumulations of original midden as deep as 9.8 ft, and artifact types suggested that the site might have been inhabited from ca. AD 500 or earlier until late prehistoric times (Moratto 1971c; Slaymaker 1971a). Beyond such tentative hints as to the age of a few sites, the data gathered in 1971 are insufficient to permit reliable inferences about prehistoric settlement patterns, architecture, subsistence practices (beyond the use of various milling implements), or cultural succession in prehistory.

Following the salvage investigations related to construction of “new” Don Pedro Dam and Reservoir, the Project locality witnessed many cultural-resource surveys in connection with residential developments, recreation enhancements, a Wild and Scenic River study, installation of power lines, grazing lease renewals on BLM lands, transportation improvements, and other projects. These are listed in Table 3-1. In this regard, a comprehensive archaeological report has been prepared in support of the FERC relicensing, in compliance with the FERC-approved Historic Properties Study (TID/MID 2011a). The findings of that report are based on recent intensive field survey of the APE and site recording—tasks that were performed in close coordination with members of the Tuolumne Me-Wuk community (Risse et al. 2014a, 2014b¹).

Table 3-1. Archaeological investigations in and near the Don Pedro Project area.

Year	Nature of Investigation	Reference(s)
1968-1970	Archaeological surveys within the New Don Pedro Reservoir Project area by Columbia Junior College.	Anonymous (1968); Riddell (1970)
1970-1971	New Don Pedro Reservoir archaeological survey and salvage excavations by San Francisco State College and Merced Junior College.	Moratto (1971)
1976	Tuolumne Wild and Scenic River survey.	Moratto (1976)
1976	Cultural resource inventory, Tuolumne Wild and Scenic River.	Colston and Balen (1976)
1980	Survey of proposed parking facility near Moccasin Point.	Moratto (1980)
1986	Cultural resource inventory of the Bloss Ranch near La Grange.	Balen (1986)
1986	Survey of South Shore Club at Lake Don Pedro.	Jones and Stokes (1986)
1986	Survey of right-of-way grant to FHWA on Highway 120.	Decker (1986)
1988	Brunette Ranch archaeological survey.	Van Bueren

¹ Risse et al. 2014 is currently under review by potentially affected Tribes and participating federal agencies.

Year	Nature of Investigation	Reference(s)
		(1988)
1989-1992	Clavey River Project cultural resource survey.	Napton (1992)
1993	Bird CFIP cultural resource survey.	Gilbert (1993)
1994	Richards Ranch survey.	Balen (1994)
1999	Jenkins Hill Estates Subdivision survey.	Werner (1999)
2000	BLM cultural resources inventory/review of the Filiberti grazing lease renewal.	Decker (2000)
2000	Moccasin Point parking lot and access road survey.	Francis (2000)
2000	South Shore Club development project survey.	Bevill and Nilsson (2000)
2002	BLM cultural resources inventory/review of the Fehr grazing lease renewal.	Decker (2002)
2003	Bonds Flat electrical transmission line survey.	Jensen and Jensen (2003)
2004	Cultural resources inventory, Caltrans District 10 Rural Conventional Highways: cultural resources in Tuolumne County.	Leach-Palm et al. (2004)
2004	Cultural resources inventory, Caltrans District 10 Rural Conventional Highways: geoarchaeological study.	Rosenthal and Meyer (2004)
2004	BLM cultural resources inventory/Sec. 106 review for Ritts grazing lease renewal.	J. Barnes (2004a)
2004	BLM cultural resources inventory/Sec. 110 640-ac inventory, Poor Mans Creek area.	J. Barnes (2004b)
2005	BLM survey of the Lackey DG sale area.	Decker (2005)
2005	Sierra Foothills residential subdivision survey.	Jensen (2005)
2006	Don Pedro View subdivision archaeological survey.	Varner (2006)
2007	BLM cultural resources inventory, Salambo Mine vehicle closure.	Decker (2007)
2007	BLM cultural resources inventory/Sec. 110 640-ac survey in the Red Hills.	J. Barnes (2007)
2008	BLM cultural resources inventory/review of the Engler grazing lease renewal.	J. Barnes (2008a)
2008	BLM cultural resources inventory/survey of Turlock Irrigation District test trenches near Brown Adit.	J. Barnes (2008b)
2008	Moccasin effluent pond survey.	Alan (2008)
2009	BLM cultural resources inventory/reviews of the Hope, Gaiser, and Banks grazing lease renewals.	J. Barnes (2009)
2012-2014	Comprehensive, intensive cultural resources surveys of the Don Pedro Project area in support of the MID/TID application for FERC relicensing of the Project. Surveys performed by HDR, Inc. and Far Western Anthropological Research Group, Inc.	Risse et al. (2014a, 2014b)

3.2 Prehistory

Because of the paucity of scientific excavations along the Tuolumne River, there does not yet exist a reliable prehistory for the Don Pedro Project area. The best one can do is to propose, as an interim measure, that the cultural chronologies already developed for Yosemite National Park to the east (Hull and Moratto 1999; Moratto 1999a, 1999b), the Stanislaus River to the north (Moratto 2002; Moratto et al. 1988), the central Sierra Nevada in general (Hull 2007; Rosenthal 2011), and the eastern San Joaquin Valley (Moratto 1972, 1984; Rosenthal et al. 2007) may be applicable to some extent.

Fortunately, archaeology is not the only source of information about prehistory. Historical linguistic studies suggest that “Proto-Miwok became a dialect of Utian, separate from the precursor of Costanoan, sometime between 1000 and 500 BC and probably in the mountains

north of San Francisco Bay between Napa County and the Sacramento Valley... (Callaghan 1997:18-19)” (Golla 2011:253). This was followed by an expansion into southern Sonoma and Marin counties. Miwok speakers also spread eastward into the Central Valley, which Moratto (1984:555-557) correlates with the Berkeley Pattern’s displacement of the Windmill Pattern after ca. 500 BC. “The linguistic data indicate that the split between the Eastern and Western branches of Miwok began about this time, initially representing dialectical divisions correlated with the diverse environments in which the language had come to be spoken” (Golla 2011:253).

[I]t seems likely that many of the distinctive differences between Western and Eastern Miwok are attributable to the geographic separation of the two groups by the Patwin intrusion, which appears to have begun shortly after 500 AD (Moratto 1984:211-214). This is also roughly the time depth of the Sierra Miwok split from the Plains Miwok. The speakers of Sierra Miwok apparently remained in a small, linguistically undifferentiated area for several centuries before spreading southward and developing the modern dialect boundaries, none of which appears to be more than five hundred to seven hundred years old [Golla 2011:253].

Archaeological evidence suggests ancestral populations of Sierra Me-wuk first arrived in the Stanislaus River country (where they are represented by the Horseshoe Bend Phase) by ca. AD 1300 (Moratto 2002:42-43), in the Merced River drainage (Mariposa Phase) sometime before ca. AD 1500-1600 (Moratto 1999b:164), and along the Chowchilla River (Madera Phase) by ca. AD 1500 (Moratto 1972). Assuming a steady expansion southward in the central Sierra would suggest that the Me-wuk were present in the Tuolumne River watershed by approximately AD 1400.

Rosenthal (2011) has published *A New Frame of Reference...* for archaeological research in the north-central Sierra Nevada. One of the chapters in that volume compares prehistoric economic patterns in the north-central Sierra Nevada and Central Valley in terms of their distinct adaptive responses to biogeographic differences (Rosenthal and Wohlgemuth 2011). Statistical analyses of Archaic assemblages indicate a broad range of specialized implements in Valley sites as contrasted to sets of more general-purpose, expedient tools in the Sierra foothills. Moreover, studies of plant remains show that (1) intensification of acorn use appeared by ca. 500 BC in the Valley, roughly 2,000 years earlier than in the foothills, and (2) intensification of small seed use in the Valley by Recent Prehistoric-I times was five centuries earlier than the same development in the foothills. Faunal analyses also point to clear inter-regional distinctions, with the Sierra manifesting more efficient foraging and less intensification than the Valley.

It is probably significant that measures of acorn intensification in the Sierra Nevada jump substantially during the Recent Prehistoric period, at a time Moratto (2002:42-43) has suggested this region was colonized by a new ethnic group—the Me-Wuk. This seems to suggest that colonization of the Sierra may have been accomplished through more intensive foraging practices (Bettinger and Baumhoff 1982; White 1988), replacing an earlier economic mode which sustained resident Sierra populations for more than 6,000 years [Rosenthal; and Wohlgemuth 2011:190].

Together, these findings suggest that the ancestral Eastern Me-wuk living on the plains may have practiced acorn intensification as early as 500 BC, and that their descendants may have conveyed the practice eastward when they began to spread upward into the foothills of the north-central Sierra Nevada at approximately AD 1200-1400. What triggered this population expansion remains to be determined. One intriguing observation is that the Me-wuk spread into the foothills seems coincident with the end of the Medieval Climatic Anomaly (MCA), a time of xerothermic climate between ca. AD 800 and 1350 (see Jones et al. 2004; Schwitalla 2013; Schwitalla and Jones 2012). It is possible that Me-wuk territorial expansion into and within the foothills of the central Sierra was both (1) stimulated by improving environmental conditions (mesic climate, more surface water, increased plant and animal resources, and greater carrying capacity for humans) and (2) facilitated by the prior underutilization of the landscape by Indians as the MCA waned.

3.3 History

There are many published histories of the central Sierra Nevada generally, Tuolumne County in particular, and of various localities within the county (e.g.: Anonymous 1882; Anonymous 1909; Buckbee 1935; Davis-King and Marvin 1994; Farquhar 1966; H. Lang 1882; M. Lang 1963; Marvin and Brejla 2010; O'Neill 1983; Stoddart 1963; Thornton et al. 2002). Historical summaries and overviews also have been written specifically for the Don Pedro Project area (e.g.: Dietz 1981; Marvin 2013; see also Creighton 1987). In addition, Chapter 4 of this report is devoted to Me-wuk ethnohistory during the past two centuries. The intent of the present section is not to reiterate what has already been written; rather, what follows is guided by a singular focus and a limited goal, as discussed below.

Since time immemorial, native societies inhabited the Tuolumne River country that today encompasses Don Pedro Reservoir. This continuum, beginning more than 120 centuries ago, was abruptly severed by the Gold Rush during the mid-nineteenth century. Legions of foreign miners invaded the foothill territories of the Me-wuk and their neighbors, driving out the Indian people, killing game, destroying streams and fisheries, and felling oak trees (Hurtado 1988; Secrest 2003; Starr and Orsi 2000). No other single historical event had such a devastating impact on Me-wuk population and culture as did the Gold Rush. On its eve, countless Indians were prospering in settlements throughout the Mother Lode area; by a few years later, the lives and livelihood of those same people had been devastated. The discussion here is concerned with events that heavily impacted the homeland and economy of the native people of the middle Tuolumne River watershed, and particularly of the Don Pedro Project area, during the tumultuous years beginning only a few months after James Marshall had discovered gold at Sutter's sawmill on the American River in January, 1848.

Thomas Stoddart (1963:53-54) avers that in the summer of 1848 emigrant prospectors from Philadelphia discovered gold on Woods Creek, a stream named after one of the party, "Rev. Jas. Woods." Their camp was called Woods Crossing. However, the preeminent Tuolumne County historian Carlo De Ferrari (1963:56-57) believes that this account is in error, and he argues persuasively that the gold discovery and eponymy should instead be credited to Benjamin Wood of Oregon. This conclusion, in turn, differs from the State Historic Landmark (No. 431) plaque for Jamestown, which states that "James Woods first discovered gold in Tuolumne County west

of this point on Woods Creek shortly before the town was founded...on August 8, 1848 (Elder 1990:283). In any event, all sources agree that placer gold deposits near Woods Crossing were exceedingly rich (De Ferrari 1963:57). The *Mining Bureau Report* records that in 1848 William Gulnac found there a 150-pound mass of quartz ore containing 75 pounds of gold (Gudde 1975:375). The place had a post office (1851-1853), two mills with 16 stamps in 1858, and a 4-stamp mill at the crossing (Gudde 1975:375). Woods Creek, of course, flows into the Tuolumne River in what is now the upper portion of Don Pedro Reservoir.

“With the gold excitement and rush of 1849 and following years, there was hardly a foot of gravel along the many streams in the whole Miwok area that was not panned or sluiced” (Barrett 1908:338). Some of the local mining techniques have been captured in old photos and drawings that depict: “winnowing gold, near Chinese Camp;” placer gold mining with pan, cradle, and sluice in 1854 on the Tuolumne River near Chinese Camp; and miners on the upper Tuolumne River using a flutter wheel and sluice box to find nuggets (Marvin and Brejla 2010:17, 21, 25). Other illustrations show miners’ tents and a brush bower at Woods Creek in 1849, the mining camp at Hawkins Bar on the Tuolumne River in 1849, and lodging at a ferry crossing on the same river (Holliday 1999:70, 112-113, 185).

Gold mining at boulder and gravel bars along the Tuolumne River began early in 1849:

Hawkins’ Bar, below Jacksonville, was the site of the first river diggings on the Tuolumne. Its population increased from fifteen in April 1849 to 700 by the following September. Extensive plans for damming and diverting the river were made but had to be abandoned because of an unexpected rise in the flow of water. By 1852 Hawkins’ bar was practically deserted.

...During 1850 the river camps along the Tuolumne were among the largest in the county, thousands of miners being engaged in attempting to divert the river in order to mine its bed. Few of the camps, however, enjoyed any great prosperity and all of them, Hawkins’, Swett’s, Stevens’, Payne’s, Hart’s, Morgan’s, Roger’s [Rodgers], Signorita, York, and Texas bars, have completely disappeared [Hoover et al. 1990:519].

The local Me-wuk witnessed thousands of strangers swarming into their domain, literally turning the river and land upside-down, and showing no concern for the country or its Native people. Gravel bars along the Tuolumne River were especially hard-hit. A prime example is Don Pedro’s Bar, about six miles northeast of La Grange. This mining camp was named for Pierre (“Don Pedro”) Sainsevain, a pioneer of 1839, who was present on the river by July 18, 1848. The *Columbia Gazette*, October 29, 1853, reports that a party of 10 men was taking gold worth \$1,000-1,500 per day (1853 evaluation) from Don Pedro’s Bar. The camp was recognized as a city with its own post office and a population of up to 1,500, during the early 1860s (Gudde 1975:98). From one claim at Don Pedro’s Bar, gold valued at \$100,000 (late nineteenth-century valuation) was taken out before 1889 (Hoover et al. 1990:519).

Don Pedro’s Bar was only one of many placer deposits being worked along the Tuolumne River. Rodgers Bar, southeast of Don Pedro’s Bar, was a rich producer in 1850 and still important in 1856. Indian Bar, five miles south of Jacksonville, had a small population—mostly of

Chinese—in 1854-1855. In 1861, the Sandborn claim there was reported to have yielded a profit of \$10,000 in a single season. Six-Bit Gulch, a camp along this tributary of the Tuolumne was worked as early as 1849 and was inhabited until 1866 or later. It was near Hungry Hill, Minnow Gulch, and Poor Mans Gulch (Gudde 1975:166-167, 295, 321). Red Mountain Bar was situated on the river just below Six Bit Gulch and above Swetts Bar. This was an area of active mining from 1849 through the 1850s (Gudde 1975:288). Rough and Ready, on Rough and Ready Creek above Jacksonville, had produced not less than \$200,000 in gold by 1868 (Browne 1868:41; Gudde 1975). Further details regarding damming companies and mining activities along the Tuolumne River are provided by Anonymous (1882:52-53).

Jacksonville, on the Tuolumne River near the mouth of Woods Creek, was settled by Julian Smart, who planted an orchard and garden there in the spring of 1849 (Anonymous 1882:50; Elder 1990:140). The town was named for Col. Aldan Moore Apollo Jackson, who discovered gold and built the first store there in June 1849. Later that summer, about 40 people were mining and keeping shop in Jacksonville. By the summer of 1851 it ranked second in population only to Sonora, and in October of that year a post office was established. In the early 1850s Jacksonville was the scene of extensive river operations, including the building of great dams and wing dams at high cost in labor and materials [Anonymous 1882:51-53; Gudde 1975:174; Hoover et al. 1990:525]. The nature and magnitude of such mining projects were incomprehensible to the Me-wuk who traditionally viewed themselves as a respectful part of nature, not as dominant over it or empowered to destroy the natural world that sustained them.

The list of Tuolumne River gold camps continues. There were also Willow Bar, about four mi south of Jacksonville, and Kanaka Bar, located at the confluence of Kanaka Creek and the Tuolumne River, between Jacksonville and Stevens Bar (Gudde 1975:181, 372). [“Kanaka”, meaning “people” or “person” in various Polynesian languages, was a common designation during the nineteenth century for natives of the Sandwich (Hawai’ian) Islands. The term, as employed in British colonies and in the North American fur trade and gold mining, came to mean a worker from the Pacific islands.] Another center of mining frenzy was Moccasin, described by Hoover et al. (1990:519) as once a thriving camp at the mouth of Moccasin Creek; this is now the site of the Moccasin Creek Power House. This camp experienced vicissitudes of growth and decline. Gardiner (1970:187) reported in the summer of 1882 that the place was deserted, and “even the Chinamen pass it by.” In 1855, Hutchings (1855) called Moccasin a town, while in the following year Heckendorn and Wilson (1856) characterized it as a noted place. By 1859, it featured a 12-stamp, steam-driven mill (Gudde 1975:219).

Mining also took place farther upstream, in the mountains well above the elevation of Don Pedro Reservoir. For example,

Big Oak Flat, situated on the south side of the Tuolumne River, was first located and the diggings opened by James Savage, a white man, who had acquired influence over a large number of Digger Indians, whose labor he utilized in his mines, paying them with provisions, blankets, etc., and also protecting them—or pretending to protect them—from the encroachments of other whites [Anonymous 1882:54].

Gold seekers also drove the Me-wuk from their homes and off their lands in numerous places in the Sonora, Jamestown, Turner Flat, Montezuma, Tuolumne, Soulsbyville, and Stent localities, to name a few (Cook 1976a:255-364; Forbes 1968:59-68; Heizer 1974a, 1974b; Heizer and Almquist 1971:23-64; Holliday 1999:163-164; Hurtado 1988:100-124; Secrest 2003:83-110, 159-180; see also Ch. 4).

As the placers were exhausted, lode mining began in the Jacksonville district in the late 1850s (Clark 1970:77). The Eagle-Shawmut mine, a consolidation of the Eagle and Shawmut claims, was one of the most productive. By 1867, it had a 10-stamp mill, which was then idle (Gudde 1975:105). Ore from the Eagle-Shawmut mine was especially rich, averaging \$2.75 worth of gold per ton. This mine was operated on a large scale from 1897 until 1942 (Clark 1970:77). The *Mining Bureau Report* of 1927 records that the gold output of the Jacksonville district (including Don Pedro and Stevens bars) had totaled \$9 million (Gudde 1975:174). Clark (1970:77) reported the following value of gold production from mines in the Jacksonville district: “Clio \$100,000+, Eagle-Shawmut \$7.4 million, Harriman \$100,000+, Mammoth \$100,000, Moccasin, Orcutt, Republican, Tarantula \$100,000+, Wheeler [no value given].” The Jacksonville District was a microcosm of the Southern Mines, representing but a handful of the myriad placer and lode claims worked in this region of the Mother Lode. Gold mining in the watersheds of the Stanislaus and Tuolumne rivers continues today, albeit without the frenzy of the mid-nineteenth century Rush.

4.0 ETHNOHISTORY OF NATIVE AMERICANS IN THE DON PEDRO PROJECT AREA

4.1 Introduction

The archaeological record attests to the long-term presence of Native Americans in the Don Pedro Project area (Chapter 3). Nonetheless, specific ethnographic and historical references to Native Americans in and near what became the reservoir are few in number and wanting in details. The Project area lies within the traditional territory of the Central Sierra Me-wuk (alternatively, Me-Wuk or Miwok), one of the three branches that comprise the Sierra Me-wuk. These groups have been the subject of various ethnographic and ethnohistorical investigations from the 1870s to the present day (Chapters 5 and 6), yet practically all of the data reported in these studies pertains to locations outside of the Project area. Similarly, while there are several nineteenth- and twentieth-century narratives of Tuolumne County history, they contain only a handful of anecdotes about Native Americans in or near the Project area.

With these limitations in mind, this chapter presents historical and ethnographic evidence of Native Americans in the Project area within the context of the ethnohistory of the Central Sierra Me-wuk. The following discussion relies in part on the works of Hall (1978) and Muñoz (1980) along with primary (or near-primary) historical accounts. Unlike these ethnohistories, which were explicitly prepared to support archaeological investigation, the current treatment accords with the purpose of this Traditional Cultural Properties (TCP) study, focusing less on the material expressions of culture and more on the cultural contacts and exchanges that reshaped the economic and social structures of the Central Sierra Me-wuk. Thus, the aim of this chapter is to provide a historical context in which to identify, interpret, and evaluate cultural properties.

In the early and middle nineteenth century, the indigenous peoples of California confronted the ever growing numbers of foreign settlers and their attendant governments using both negotiation (in the commercial and political realms) and militancy. As with any independent nation facing an external threat, the objective of the Native American groups was to obtain, secure, and preserve the land and resources necessary to ensure their survival and maintain their sovereignty. Considering the disparities in population size and military capability between natives and Euro-Americans, however, the conquest and subjugation of aboriginal California were perhaps inevitable. With much of their autonomy lost, the primary concern of Sierra Me-wuk became very much like that of any ethnic group that (willingly or unwillingly) has been part of this country's history—that is, how to adapt, or much less survive as a disenfranchised and stigmatized people, given the socio-economic inequalities inherent within the larger American society.

The ethnohistory below emphasizes the interactions between native and foreign cultures and effects thereof on the Central Sierra Me-Wuk, using references that specifically relate to the Project area whenever possible. It examines a 100-year period, from the first decade of the nineteenth century to the first decade of the twentieth century, covering the Spanish/Mexican, Gold Rush, and post-Gold Rush eras. In particular, this investigation analyzes census records from 1880 and 1900 to supplement historical and ethnographic accounts as well as to better illustrate and (when possible) quantify the socio-economic gaps that separated the Central Sierra

Me-wuk from the non-Indian population of Tuolumne County. Because economic status is both a measure of present and a predictor of future political clout, educational access, social standing, and employment opportunity, the data presented below indicate not only the economic inequality experienced by early historic-era Native Americans, but also the obstacles faced by those who endeavored to improve their circumstances.

4.2 Early Cultural Exchange, Native American Demography, and Ethnographic Villages

Euro-American forays to explore the upper San Joaquin Valley began early in the nineteenth century. In his 1810 report, Father José Viader wrote about the village of *Taulames* situated at a ford on the San Joaquin River near the mouth of the Tuolumne River (Cook 1960:260, 284). However, these initial contacts by the Spanish military and Franciscans were with Northern Valley Yokuts and not the Central Sierra Me-wuk, whose western boundary lay about 35 miles east of the San Joaquin River (Kroeber 1976:Plate 37).

While the Sierra Me-wuk had few if any direct contacts with the missions or military in the 1810s and 1820s, the indirect effects of exchanges between their Yokuts neighbors and Euro-Americans during this period would in time be considerable. The records of the Franciscans clearly indicate the missions' influence on the Northern Valley Yokuts as early as 1816. From 1816 to 1837, Missions San José and Santa Clara recorded 576 baptisms of Indians from villages along the Stanislaus and Tuolumne rivers (Hall 1978:23; Merriam 1955:217-225). Based on the names of the settlements, the overwhelming majority of baptisms appear to have been performed on Yokuts. The effects on the Me-wuk of such contacts included greater access to horses and European manufactured goods received in trade with the Yokuts as well as the movement into Me-wuk territory of Yokuts refugees and fugitives escaping from the Spanish and, later, Mexicans (M. Moratto, personal communication 2014).

As was the case with coastal native groups, missionization in particular and the increasing influence of Euro-American culture in general greatly compromised the indigenous economy, resulting in a disruption or alteration in the traditional subsistence base. Cook (1962:207) notes that “[i]t is significant that by 1828 all the northern Yokuts and remnants of the Plains Miwok had turned to horse meat as a staple article of diet.” Procurement of horses meant raiding the stocks of the missions and later those of the ranchos, which, in turn, were followed by confrontations between the Indian bandits and the pursuing Mexicans. Armed conflict reached its peak in 1828 and 1829 when the Mexican military and the celebrated rebel Estánislao² faced-off in a series of battles along the lower Stanislaus River (Cook 1962:168-180; Gray 1993). Even after Mariano Vallejo subdued the insurgents, horse raids continued into the 1830s, perpetrated by a number of Yokuts, Me-wuk, and other groups in the San Joaquin Valley and bordering foothills. The most notable depredations were carried out under former neophyte Chief José Jesús (Yokuts) from his base near present-day Knights Ferry (Cook 1962:202; Gray 1993; Hall 1978; Phillips 1993).

² Cook (1962:165) states that Estanislao, who was a neophyte at Mission San José, was “a member or son of a member of one of the Miwok tribelets, possibly the Lakisamni, who were then living on the Stanislaus River.” Based on Hall’s (1978) analysis, however, it seems doubtful that the mission’s sphere had reached the Sierra Me-wuk prior to 1830. Moreover, Kroeber (1976:485) considers the Lakisamni as a Northern Yokuts tribelet.

By far, the most devastating effect of contact was the 1833 epidemic, probably of malaria, that left the Yokuts settlements in the Central Valley mostly depopulated. An estimated 75 percent of the Indians in the Valley died as a result of this pestilence (Cook 1955a; Gilbert 1968:12). To escape plague and find refuge from the missions, military, and rancheros, the Yokuts thus began migrating east into the foothills and specifically to what became Knights Ferry, situated on the Stanislaus River and near the ethnographic boundary between the Northern Valley Yokuts and the Central Sierra Me-wuk.

[A]fter 1833, Knights Ferry became the home of many Yokuts-speaking people from different triblets, and the area between Knights Ferry and Jamestown was settled by more and more newcomers from the west [Hall 1978:46].

Foothill areas in Me-wuk territory became a refugium for Yokuts fleeing from Colonial mission-recruitment and punitive expeditions, thereby necessitating major social and demographic adjustments by the resident Me-wuk. Though historical documentation is lacking, it is certainly possible that a similar eastward movement of Yokuts occurred up the Tuolumne River as well. To the Sierra Me-wuk, the eastern exodus of the Yokuts meant the loss of their traditional means to acquire goods from the coast. Curiously, Barrett and Gifford's monograph on Miwok (Me-wuk) material culture makes no mention of the Yokuts in their section on trade (1933:255-256). This omission may be at least partly due to the ages of Gifford's informants, who were born in the 1830s and 1840s and whose recollections began several years after the migration of the Yokuts. Alternatively, Hall states:

Before Spanish colonization the Yokuts were important middlemen in the trade of shells from the coastal people, through the Yokuts and Miwok, in exchange for the obsidian and salt of the Mono... . It is quite possible that after 1833 the Miwok traveled more freely into and across the San Joaquin Valley, partly to provide the resources no longer supplied by the Yokuts... . It is also possible that the near-decimation of the Yokuts led the (Sierra) Miwok to move into the valley periodically to raid horses [Hall 1978:43].

Accordingly, Barrett and Gifford (1933:256) report that the Sierra Miwok (Me-wuk) journeyed to the ocean to acquire the shell material for beads directly from the source—a practice that was both viable and probably necessary for the Sierra Me-wuk given the Yokuts' depopulation of the Valley in the 1830s.

Whatever its implications for inter-regional trade, the influx of Yokuts even more importantly brought the Sierra Me-wuk in closer contact with Euro-Americans. Baptism continued—apparently on a voluntarily basis—even during and after the secularization of the missions. In particular, two *Cotuplanime* women were baptized at Mission Santa Clara in 1837 (Hall 1978:23; Merriam 1955:218). Merriam (1907:345; 1977:147) lists Ko-tup'-plan-nah or Co-to-plan'-e-mis as an ethnographic village located near Rawhide (two miles northwest of Jamestown) within Central Sierra Me-wuk territory. Thus, it appears that at least some Central Sierra Me-wuk were Christianized by the missions, but the lack of similar cases strongly suggests that conversion was not widespread.

Not all exchanges were so peaceful, and as Hall suggests in the quote above, the Sierra Me-wuk likely engaged in horse thievery, thus incurring retaliation by the Mexican rancheros. In his memoirs, José María Amador tells of a series of skirmishes in about 1837 when he and his men pursued a band of Indians that had made off with 100 head of livestock from his San Ramón rancho (Cook 1962:197-198). Amador chased the thieves to the Tuolumne River, tracking them along the river and “up into the mountains.” Without going into all the details—which, as Cook (1962:209-210) repeatedly cautions in his notes, are at times plainly exaggerated by Amador—two points bear mentioning from this account. First, the 200-strong raiding band was made-up of an equal number of “Christian fugitives” and “heathen” or “wild” Indians. It seems possible that the latter group included Central Sierra Me-wuk, since the missions’ influence on them was far weaker than on coastal and valley tribes. Second, Amador’s detachment contained “Indian auxiliaries”, who were almost assuredly all neophytes (i.e., recently baptized Indians from the missions; literally, “new plants”) and not Sierra Me-wuk. Ethnographic information also exists for such confrontations. Tom Williams, a Central Sierra Me-wuk informant for ethnographer E. W. Gifford, referred to a place near Jamestown, where when he was a child in the 1830s, “some Miwok were killed by an armed force of Spaniards and western Indians and left unburied (Gifford 1955:266).”³ Here, too, it is notable that the Euro-American force included a native auxiliary.

Equine larceny, retaliatory attacks, and general lack of order continued into the 1840s. And with an ever increasing number of foreigners from Europe and the United States arriving in Mexican California during this decade, the situation grew even more complex for all sides concerned. As Cook (1962:193) put it, the incessant raids on ranches and missions were becoming intolerable for the Mexican Californios and were an obvious indication of the political and military impotency of the provincial government. Swiss entrepreneur John Sutter—who built his fort New Helvetia in what is now Sacramento—and merchant Charles Weber—the founder of Stockton who immigrated to the United States from his native Bavaria—brazenly pursued their own interests in this vacuum of power. Sutter apparently had no qualms with purchasing pilfered horses from ranchos and may have even encouraged such thievery (Cook 1962:193, 209).

Many neophytes remained within the sphere of the Californios, continuing to serve rancheros or what was left of the missions. Some Yokuts, like José Jesús, forged alliances with Californians who had recently become landowners. Sutter (1939:68) recounts a visit by José Jesús, in which he was accompanied by Sagaki 2d [sic], Chief of the *Gotaplanimnes*, a possible alternative spelling of the Central Sierra Me-wuk village of *Cotuplanime* referred to above. For the most part, however, the Sierra Me-wuk appear to have been left to their own devices, and in at least one instance, they were clearly at odds with Jesús and his white allies. In December 1847 Weber, with help from José Jesús and the chief of the Si-yak-um-nás (unknown affinity), staged an attack on a village located at what later became known as Murphy’s Camp [and then simply Murphys] in the Stanislaus watershed to recover horses stolen by “Indians from the mountains” (Gilbert 1968:20). Although the settlement apparently lay within the ethnographic boundaries of the Central Sierra Me-wuk [See discussion of tribal territories and boundaries in Section 5.4], the tribe under attack was referred to as the “Polos”, identified by Merriam (1977:152) as residing near San Andreas in Northern Sierra Me-wuk territory. This inconsistency may in fact reflect the

³ Mexico as well as the California provinces gained independence from Spain in 1821. Thus, the “Spanish” referred to in William’s account may have in fact been Mexican Californios.

continual displacement of tribes during the mid-century. José Jesús and mountain tribes remained hostile to each other into the early 1850s (Barbour et al. 1853:250-251 as quoted in Hall 1978:49). This topographic designation, “mountain tribes,” would have referred to Northern and Central Sierra Me-wuk groups and perhaps to the Washo and/or Western Mono as well.

Similar instances of war and disease throughout California had grave demographic consequences to the various Native American groups. In the 1950s and early 1960s, Sherburne Cook (1955b) and Martin Baumhoff (1963) sought to quantify this loss by reconstructing indigenous populations prior to, during, and immediately after the Gold Rush. Once again, Hall’s (1978:40-42, 95-96) commentary is useful in this regard. By her estimation, the pre-contact population of the Central Sierra Me-wuk ranged between 2,000 and 2,500; from 1830 to 1850, disease and violent death had reduced the figure to 1,500 during the first years of the Gold Rush—a decrease of 25 percent to 40 percent in this 20-year interval. Perhaps equally instructive is that Hall’s analysis demonstrates how simple demographic assumptions can blur the historical effects and circumstances supposedly reflected by such statistics. For instance, Cook (1955b:36-37) enumerated 70 Central Sierra Me-wuk villages (i.e., villages within the drainages of the Stanislaus and Tuolumne rivers) collectively recorded by Merriam, Gifford, and Kroeber. Using Gifford’s interviews to calculate an average village size of 21 persons for the year 1850, he then multiplied the number of villages by average occupancy to arrive at a product of 1,470 people.

Hall (1978:10-11) concurred that Cook’s estimate for 1850 was accurate, but she critiqued him on two methodological points. First, Cook assumed that all 70 villages existed contemporaneously when in fact some may have been settled at different times while others may have been new names for the same village moved to a new location. This is a relevant factor, considering the continual displacement of Me-wuk settlements during the middle part of the century. Second, the average of 21 persons per village is probably more representative of the 1860 population given that Gifford’s informant was born in the 1840s. For his part, Baumhoff (1963:217) also agreed that the Central Sierra Me-wuk numbered around 1,470 in 1850. But because he assumed a mortality rate of 66 percent in the period 1830-1850 owing largely to the epidemic of 1833, he arrived at a pre-contact population of 4,410. Hall (1978:40-42) argued that while the 1844 smallpox outbreak and venereal disease most probably did afflict the Central Sierra Me-wuk, the devastating effects of the 1833 plague were likely not felt beyond the valley, given that the malarial vector, the *Anopheles* mosquito, did not venture outside its wet lowland habitat. Therefore, Hall (1978) opines that Baumhoff’s mortality rate for this period was too high, thus resulting in an excessive pre-contact population estimate.

Mention should be made also of evidence for the early spread of epidemic diseases well into the central Sierra Nevada and the resultant effects on native Me-wuk and Paiute populations. Kathleen Hull, for example, in *Pestilence and Persistence: Yosemite Indian Demography and Culture in Colonial California* (2009), discusses the “Black Sickness” (thought by Bunnell [1990:64-65] to have been smallpox or measles) in Yosemite. This fatal disease led to the abandonment of Yosemite Valley for a number of years. Analyzing both tree ring dates and historical accounts, Hull (2009:64) concluded that “pathogen infiltration and native relocation [occurred] sometime between circa 1785 and 1800.” People apparently began to settle in the Valley again sometime after 1805. Considering the regular contacts between the Awahnichi of

Yosemite and their Me-wuk and Paiute neighbors, the lethal episode of Black Sickness shows that native peoples of the Sierra—on both sides of the range—were not immune to the devastating impacts of exotic disease, even decades before face-to-face contacts with foreigners.

From the 57 ethnographic villages listed by Merriam (1907) and Kroeber (1925) and mapped by Levy (1978:400), only two appear to have been within the Project area: *Siksike-no* and *Sopka-su*, both situated along Woods Creek. An additional two settlements—*Pasinu* and *Pangasemanu*, also recorded by Kroeber (1925)—lay along the Tuolumne River near the northeastern terminus of the Project area and close to the confluence of the river’s main channel and its North Fork. Based on his field work in the early part of the twentieth century, Gifford (1944:379) reported the personal names of three generations of a family whose lineage is associated with *Siksikeno*. His earlier work also provided an extensive list of Sierra Me-wuk names, their meaning, and corresponding moiety (Gifford 1916). Thus, Gifford was able to identify the *Siksikeno* lineage as belonging to the Land moiety. In a 1926 article, Gifford explained the significance of the lineage and its geographic place in Me-wuk culture.

The Miwok term for such a lineage is *nena*. The word *nena* has a two-fold meaning. It means not only a male lineage or patrilineal joint family, but it also means the ancestral home in which the lineage is supposed to have arisen. The lineage name is always a place name. Few Miwok today live at their *nena*, but every Miwok knows his *nena* and can name the ancestral spot from which his patrilineal forefathers hailed. The *nena* is more than the birthplace, in fact today it usually is not the birthplace, yet it is always remembered. The *nena* had as its head a chief who was, so to speak, the patriarch of the lineage. The chieftainship normally descended in the direct male line, from father to eldest son. The lineage was a land-owning group, the limited real estate which was held by it being used in common by all members of the lineage. Each *nena* is exogamous and belongs to one of the patrilineal exogamous moieties called respectively Land and Water [Gifford 1926:389].

References to *Siksikeno* or the individuals associated with this location unfortunately could not be corroborated in the historical record. Moreover, no further ethnographic or historical information could be found regarding the other three ethnographic villages or *nena* mentioned above. Certainly, however, Gifford’s explanation does give some insight with respect to the *nena* in Me-wuk prehistory and history. Because a *nena* is associated with a lineage, each location is perhaps better seen as the residence or homestead of a single extended family and not necessarily a village in the conventional sense of the term (i.e., a community of multiple separate lineages).

4.3 Gold Rush: Native Americans In and Out of the Diggings and the “Indian Question”

The nineteenth-century term “Indian Question” meant, essentially, “What should the U.S. Government’s policy be with respect to Native Americans? Should they be removed to Indian farms or reservations? Compelled to learn English and abandon their native tongues? Christianized? Sent to boarding schools? Forced to learn trades? In short, what is to be done with the Indians?”

When gold was first found at Sutter's Mill in January 1848, California's meager population—including Native Americans—was in the sole and immediate position to take advantage of this windfall.⁴ Back then, communication with and travel to the outside world were measured in months. The first newspaper reports of the discovery didn't reach the ports of the Pacific and South America until the early summer. By late summer and early fall, the Eastern Seaboard was also clamoring with excitement. Once preparations were made, a journey from East to West Coasts most optimistically might take six weeks but typically required several months (Holiday 1981:94, 98,103). The first outsiders included about 3,000 Oregonians in October 1848 and as many Sonorans from northern Mexico in December of the same year; by the end of 1849, close to 90,000 newcomers had poured into California from the corners of the globe (Holiday 1981:83, 86, 90). The early Californian miners, who numbered only about 4,000 to 5,000 in the summer of 1848, thus enjoyed at least a brief period with relatively minimal competition, known as the "Pound Rush", especially compared to what was to come (the "Ounce Rush") in the ensuing years.

While Native Americans perhaps did not fully comprehend the commercial worth of gold⁵, they most assuredly understood even at the onset that gold, if extracted from the placers, could be a tradable commodity. By the estimation of Military Governor Colonel Richard Mason, native miners made up about half the population in the gold fields, approximately 2,000 individuals, in August 1848 (Rawls 1976:31). Another account was that of Chester Lyman, a surveyor turned gold miner, who traveled the rivers and tributaries of the Southern Mines in that same summer. [The Southern Mines "were those situated along the fewer and smaller streams and tributaries flowing into the San Joaquin—from the Cosumnes [River] to Mariposa Creek" (Holliday 1999:120; see also maps in Bowen and Crippen 1948, Clark 1970:end pocket, Holliday 1999:141, Hurtado 1988:102)]. At William Dailey's camp on the Cosumnes, he met a Mr. Montgomery who informed him of a ravine site four or five miles from the Stanislaus River, where "[t]here are not many diggings besides [those mined by] Indians (Teggart and Lyman 1923:195)." The ravine lay 30 to 50 miles from the mouth of the Stanislaus River and thus within the ethnographic territory of the Central Sierra Me-wuk.

The amount of gold mined by Native Americans appears to have been so abundant in 1848 that, as Hall put it:

Based on the early reports from the mining regions written by Governor Mason, Consul Larkin, and others some incoming miners equipped themselves not with picks and shovels, but with glass beads, bolts of cloth, and food for trade [Hall 1978:66].

Merchants, such as Weber, John Murphy, and James Savage derived a tremendous profit from Indian trade, although the exchanges were far from equitable and wholly opportunistic. Like many other recently arrived White businessmen, Murphy bartered glass beads for their weight in gold and sold "serapas" at \$60 apiece; Savage assessed gold at \$11 per ounce for his white

⁴ The timing of the Gold Rush was also a windfall of sorts for the United States. Only nine days after the Sutter's Mill discovery on January 24, 1848, Mexico signed the Treaty of Guadalupe Hidalgo, on February 2, 1848, ceding, among other territories, gold-rich Alta California to the United States.

⁵ The United State Mint paid \$20.67 for an ounce of gold from 1834 to 1933. In California, however, dealers purchased gold from miners at \$8-\$16 per ounce, selling it on the East Coast for around \$18 per ounce (Schweikart and Doti 1999:214).

customers but valued an ounce received from Indians at half this rate (Teggart and Lyman 1923:188, 199). According to De Ferrari, the 1860 narrative by Thomas Stoddart is not always first-hand and is at times embellished, yet the following account of trade at Woods Crossing (just southwest of Jamestown) appears to be very consistent with other reports of the day:

Considerable traffic was carried on, both here [at Sonora] and at Woods' Crossing, which was as yet the *principal settlement*. *The Indians at this time were very friendly, and everything that took their eye they* were bound to have, cost what it might... . Besides, their numbers were so immensely in the ascendant at this era, that if they had not been the simplest creatures imaginable, the traders would not have reaped so large a profit from them as they did. Indeed, at this time, the Indian trade was the most important in the country, and although greatly fallen away now, it has ever been deemed by the merchants as one of the best in the State... . At this time it was so good at Woods' Crossing, that the first traders rapidly accumulated large fortunes; trading with the Indians for gold dust, giving weight for weight, for such trifles as beads, printed calicos, raisins, flour, beef, matches, (which they were particularly partial to,) and brass trinkets of showy patterns. It is recorded of one trader, that he actually had the conscience to swindle an Indian out of \$6,000 in gold dust, for a few beads which cost him only \$2.50 in San Francisco [emphasis added; Stoddart 1963:54-55].

Native Americans, given their intimacy with the land, were no doubt well-acquainted with gold and its sources even before the Gold Rush. In fact, they are credited with the first discoveries in what would become the southern mines (Rawls 1976:32). Yet gold's value as precious metal is by no means intrinsic or universal. In the Old World, it had for millennia been forged into ornamentation and jewelry and employed as a medium for trade, mainly because the cultures of Africa, Europe, and Asia had developed metallurgy. Initially, Native Californians understandably could not fathom the Euro-American's insatiable appetite for a metal that cannot be consumed, made into a weapon or tool, or used for any practical purpose in its raw state. In time, however, Native Americans did grow more savvy about the true worth that Euro-Americans placed on this commodity and presumably did not give way to schemes to bilk them from their gold dust.

Last summer [1849] raisins sold at the mines for their weight in gold dust, also beads to the Indians. Now raisins are 50 cts. per lb., and bead are given away as unsalable [Booth 1953:29].

In addition to working and trading as independent miners, Native Americans were employed as laborers by Sutter, Weber, Murphy, Savage, and other businessmen in mining operations throughout central California (Rawls 1976). The structure of such arrangements was a carry-over from the labor system of the missions and ranchos, in which a Euro-American *patrón* would provide clothing, food, and other goods in exchange for the toils of the indigenous *peones*. For Murphy as well as many other entrepreneurs, the dealings with Native Americans involved more than just providing employment and engaging in trade; at his camp near the Stanislaus River, Murphy not only resided among his workers, who appear to have been transplanted Plains Me-wuk, but married the chief's daughter to solidify the loyalty of his work force (Colton 1949:277; Hall 1978:65-66).

As in the previous period, the Sierra Me-wuk were probably less disposed to enter into work agreements than were coastal neophytes and valley Indians, who had had a longer period of enculturation with Euro-American languages, religions, and customs. Nonetheless, it seems that Savage did use Central or Southern Sierra Me-wuk workers, specifically at his claims near Big Oak Flat, about three miles east of the Moccasin Creek portion of the Project area (Heckendorn and Wilson 1856:91; Hall 1978:66-67.) According to Levy's (1978:400) ethnographic map, Big Oak Flat lies within the territory of the Central Sierra Me-wuk, although the village at this location, *Ap'-la-che*, is associated with the Southern Sierra Me-wuk (Hall 1978:59-60; Merriam 1907:346). In a similar account, Daniel Woods writes about an unnamed early miner from Virginia who set up a camp near Deer Creek, a branch of the Tuolumne River that flows just east of Moccasin Creek. There, he ran a profitable trading post and, in a short time, "had many Indians working for him" (Woods 1851:141). Despite clearing \$20,000 in just a few weeks, his gold prospects and trade business proved to be only temporary, and he soon returned to the drudgery of a common laborer.

The year 1849 brought more miners, more nationalities, and more antagonism to California. In his history of Tuolumne County, Herbert Lang (1882:6-8) lists the earliest pioneers of the county, including immigrants from England, Ireland, Italy, Mexico, Poland, Scotland, and various South American countries. In particular, Mexicans and Chileans had first settled the towns of Sonora and Columbia (Heckendorn and Wilson 1856:6, 37). While belligerence to foreigners is not surprising in light of the competition engendered by the ten-fold increase in the number of miners in 1849, the sense of entitlement to the land on the part of Anglo-Americans seems presumptuous considering that California had only been part of the Union since early 1848 and still very much reflected its Hispanic heritage. This xenophobic sentiment is expressed in the preamble of an anti-foreigner resolution adopted by the residents of Tuolumne County in July 1850:

Whereas, The lives and property of the American citizens are now in danger from the hands of lawless marauders of every clime, class and creed under the canopy of heaven, and scarce a day passes but we hear of the commission of the most horrible murders and robberies; and as we have now in our midst the peons of Mexico, the renegades of South America, and the convicts of the British Empire; therefore: *Resolved*, first: That all foreigners in Tuolumne county...be required to leave the limits of this county within fifteen days from date, unless they obtain a permit [Lang 1882:44].

Among other restrictions, the resolution required foreign miners to obtain a mining permit and to surrender their weapons before entering the camps (Lang 1882:45). Three months earlier, the California legislature passed a statute whereby foreign miners were obliged to pay a \$20 per month fee for "the privilege of taking from our country the vast treasure to which they have no right" (Holliday 1981:135). The law was repealed in 1851, but then reinstated in 1852 in response to the tremendous wave of Chinese landing in California. These legal measures prompted many foreigners to leave the mines or seek employment from mining companies (Lang 1882:26-27; Woods 1851:159). In some cases, they had violent effects, such as the forced expulsion of the Sonoran Mexicans from the very town that bears their name (Nadeau 1992:110-116). Numerous fracas and criminal acts involving White Americans and foreigners continued throughout the 1850s (Lang 1882:263-302).

It is in this context of general xenophobia that White perceptions of and restrictions on Native Americans took their form after 1848. Approved in November 1849, the first Constitution of California denied to Native Americans and Blacks the right to vote and to testify in court cases involving Whites. This sanction was later expanded to include the Chinese. This new order also led to the departure of Native Americans from the gold fields. Even though there does not appear to have been any explicit laws or ordinances prohibiting or obstructing Native miners from the gold diggings, as there were against foreign miners, their numbers began to fall precipitously in 1849. Compared to Lyman's 1848 account of the southern mines (Teggart and Lyman 1923), which contains several references to Native Americans mining and trading gold, Wood's description of the same region—covering the period July 1849 to November 1850—mentions only one eye-witness account of Native Americans engaged in mining: along Rattlesnake Creek in June 1850, he saw Indians along with Mexicans, “Chilinos”, Europeans, and Americans working the stream (Woods 1851:137).

Rawls (1976) offers two factors to account for the absence or rarity of Native Americans in the mining districts after 1850. First, as easier stream diggings became exhausted, placer mining gave way to more industrial-type methods, like quartz or hydraulic mining, “each of which required equipment, capital, and skill unavailable to California Indians” (Rawls 1976:38). Second, much like the foreign miners, Native Americans were pushed out of the gold fields for fear of attacks by the growing number of incoming Anglo-Americans. That fear was very much realized at Savage's Big Oak Flat operations in June 1850 when a Texas miner named Rose stabbed and killed Chief Lutario, the head of Indians at the settlement, over a simple squabble (Heckendorn and Wilson 1856:91; Lang 1882:54; Woods 1851:138-139). The native warriors on hand immediately shot Rose dead with arrows, an act which, in turn, was retaliated by nearby Whites killing two and wounding several Native Americans. For several days, Anglo-Americans and Indians were kept in a state of alarm. Savage attempted to reconcile the situation, but apparently to no avail.

As Rawls explains, aggression towards indigenous people had its ideological underpinnings.

Perhaps the fundamental reason for the disappearance of the Indian miners was that after 1849 the gold fields came to be dominated by men who had had no prior contact with the Hispanic system of Indian labor exploitation. Many of these newcomers to California were men who, from experiences on other American frontiers or in crossing the plains to California, had come to regard Indians as threats to their physical safety or as obstacles in the path to their economic success. The newcomers also manifested a jealous opposition to the whites already in California who were able to control or otherwise exploit the labor of Indian miners. Such exploitation was viewed by the new Californians as an unfair advantage in the pursuit of California gold [Rawls 1976:38].

Related to this view was the pervasive use of the term “Digger” and its connotation that Native Americans were a treacherous, bloodthirsty, dirty, and lazy people. Lönnberg (1981:220) points out that for the many broken miners who encountered only failure in the gold fields, White enmity towards the Native American was an expression of their frustrations and crushed expectations. Such attitudes were wholly consistent with the concept of Manifest Destiny as justification for aggression on Native Americans and Mexicans and the conquest of their lands.

Notably, a minority of White Americans was adamantly against measures that effectively obstructed Native Americans and foreigners from mining activities. These were the merchants whose profits depended on well-populated camps and a vigorous economy fueled by a steady production of gold dust. Simply put, the suspension of economic liberties from a significant portion of their customers—no matter what the rationalization—wasn't good for business. Their opposition was met with the same general intolerance suffered by the ousted miners. In one such instance, James Marshall, famous for the groundbreaking discovery at Sutter's Mill, was threatened at gun point for advocating the cause of the Native Americans (Rawls 1976:40). Exchanges between merchants and Indians were often exploitive and duplicitous. They were nevertheless reciprocal. As long as Native Americans had access to gold, they could obtain goods to supplement their standard of living; for their part, the merchants valued the labor of the indigenous population as a means to bolster their bottom line. Herein lay the essential difference between the pre-1849 era and the American period: in the former, Native Americans played an essential role in the production of raw material and goods, whereas in the latter, they had little or no place and thus became marginalized in the local economy.

With regard to how economic sanctions affected the Sierra Me-wuk in particular, it is instructive to further examine White American perceptions of race and ethnicity and their effect on economic rank. Since its founding in 1776, the United States has clearly been able to distinguish, in both legal and social terms, between those categories of people that are entitled to the economic avenues of success and those that are not. Yet as Roediger (2005) and other historians of ethnicity and race have demonstrated, some immigrants and historically disenfranchised Americans have been (and are) more predisposed to attaining economic and social privileges than others. This entitlement depended (and still depends) on the historical, cultural, and racial similarities of the immigrant to the paradigm of the dominant culture and, to a lesser extent, on his/her economic significance. Despite initial antagonism, western Europeans (with the obvious exception of the Irish) easily assimilated into mainstream American culture within a generation or less. Southern and Eastern European groups—like the Italians, Greeks, Poles, Hungarians, Serbians, etc.—took more time owing to their adherence to Catholicism or Orthodox Christianity and differences in appearance from the perceived Anglo-American physical profile. Arguably, Hispanic Americans still suffer discrimination even to the present, yet they were historically accepted into the economy predominantly as laborers and blue collar workers. Many missionized Native Americans passed as Mexicans due to their adoption of Christianity, familiarity with English, and understanding of Euro-American culture. In his 1882 history of Tuolumne County, Lang (1882:74, 147) even uses the term “Mexican Indian” on occasion to describe individuals who plainly exhibit aspects of both Native and Hispanic cultures.

In terms of history, culture, and racial appearance, the Chinese starkly clashed with the Anglo-America ideal and consequently bore the full brunt of American racism in the mid- and late nineteenth century (Sandmeyer 1991). Yet their economic value as a loyal and manageable working force was undeniable, particularly to American capitalists. Before their exodus from the United States in the late 1890s and early 1900s as a result of a series of anti-Chinese laws, they had contributed enormously to the building of the West in such capacities as rail and agricultural workers, masons, and small business owners. Within Tuolumne County, the so-called Celestials congregated in the county's commercial centers, including Chinese Camp located south of

Woods Creek and Sonora where restaurateur Ah Chi maintained the best kept eating establishment in town (Lang 1882:5). By comparison, the Sierra Me-wuk fared poorly in every dimension and, along with the few Blacks in the county, undoubtedly occupied the bottom rung on society's ladder. Much like the Mexican period before, the Sierra Me-wuk's unfamiliarity with Euro-American culture as well as the Digger stereotype afforded them few opportunities to integrate into the mainstream culture. Section 4.4 below further discusses how this depressed status was manifested demographically in the censuses of the late nineteenth century.

Shut out from the gold diggings and without an alternative means to participate in the local economy, the Sierra Me-wuk in time removed themselves from the various mining towns of Tuolumne County. It is known that Native Americans resided in Jacksonville where Woods gave the following description of an Indian enclave there in April 1850.

The huts of the Indians are of various kinds, always rude in their construction. They are similar to the wigwams of the wild Indians found in the Western States. There is one house, however, which deserves a passing notice. It is named Tamascal. It is made underground, in the vicinity of the Indian settlement. In this the sick and infirm are sweated. This is a barbarous custom, and often ends the life of the poor patient [Woods 1851:121-122].

The "Indian settlement" mentioned above, while within or very near the Don Pedro Project area, might have included Central, Northern, or Southern Sierra Me-wuk peoples, Plains Me-wuk, Yokuts, and/or some combination, given that these groups apparently lived in the Southern Mines during the Gold Rush.

In August 1850, Edmund Booth passed through Jacksonville, giving a much different report than that of Woods' only four months earlier:

The people in this village number about 400—all men, no women nor children. A few peaceable Mexicans, who are hired by Americans, and *no Indians* [Booth 1953:28; emphasis added].

Booth (1953:33) also commented in January 1851 that he had "not seen more than three or four Indians" in Sonora since June 1850. The term "Indian" was used loosely in these accounts and often did not differentiate between missionized Native Americans and "wild" Indians. This is illustrated in Booth's (1953:56) statement in May 1852 that "[t]he Indians... are so common that they excite no attention anywhere except among the newcomers." As Hall (1978:84) points out, Booth's 1852 quote referred to the Valley groups (i.e., Yokuts and Plains Me-wuk) and not the Sierra Me-wuk, who, for the most part, had retreated east into the mountains.

While the Sierra Me-wuk did traditionally range into the higher elevations of the Sierra Nevada during the summer months, this region could not support the native population, even in its much reduced state, for the entire year. As a result, the Sierra Me-wuk returned to their previous strategy of raiding settlements for livestock, thus renewing the violent cycle of thievery followed by Euro-American retaliation. It is significant that most horse and mule raids by Native Americans in general and by the Central Me-wuk in particular appear to have occurred during

the winter months when they were obviously facing starvation. Woods (1851:68, 84, 88, 94, 111-112) makes at least five references to instances of Indian hostility or the imminent threat thereof, of which four were recorded between November 1849 and February 1850. Additionally, Hall (1978:75-79) cites several first-hand accounts of such native raids and their White American reprisals.

For the federal government, resolving the “Indian Question” primarily meant quelling the mounting tension between Native Americans and white settlers by relocating the former to reservations. Additionally, the government also expressed some concern about the possible legal implications of removing peoples from their lands that had been occupied since time immemorial. On January 7, 1850 the Senate instructed the Committee on Indians Affairs to “inquire into the expediency of making appropriations for the extinguishment of Indian title” to various regions of the West, including California (*The Congressional Globe* 1849:42, 1850:62). The resolution adds that the committee should also inquire into setting apart a portion of the United States as one or more Indian territories (i.e., reservations), wherein the displaced Indians can be permanently located and protected. Between April 1851 and August 1852, three commissioners from the Office of Indians Affairs—George W. Barbour, Redick McKee and M. Wozencraft—brokered 18 treaties with California Indian groups. As Heizer (1972) states in his republishing of the treaties and related documents, the native signatories in most cases were not the chiefs of tribes but the heads of individual villages. In considering the ignorance of indigenous cultures on the part of the United States, Heizer goes on to comment:

Taken all together, one cannot imagine a more poorly conceived, more inaccurate, less informed, and less democratic process than the making of the 18 treaties in 1851-52 with the California Indians. It was a farce from beginning to end, though apparently the Commissioners, President Fillmore and the members of the United States Senate were quite unaware of that [Heizer 1972:5].

Based on Merriam’s (1907, 1977:141-159) ethnographic lists, some Sierra Me-wuk villages were party to the 1851-1852 treaties. These included the Ah’-wahl-ache (Southern Sierra Me-wuk; Merriam 1907:346), the A-pang-as-se (possibly Central Sierra Mewuk; Merriam 1977:141), the Ap’-la-che (Southern Sierra Me-wuk; Merriam 1907:346), and the Potoyante (Southern Sierra Me-wuk; Merriam 1977:152), which signed Treaty M on March 19, 1851; and the Cotuplanimne (Central Sierra Me-wuk; Merriam 1907:345), which signed Treaty E on May 28, 1851. Significantly, Article 2 of Treaty M, which was essentially the same for all 18 treaties, stipulates the relinquishment of the title to land by the Native American parties and the quit claim of such land to the government of the United States (Heizer 1972:66). Article 3 of Treaty M established a reservation between the lower reaches of the Tuolumne and Merced rivers; Treaty E provided for a reservation between the Stanislaus and Tuolumne rivers (Heizer 1972:Map1). Articles 5 through 7, which were also similar for all 18 treaties, make seemingly generous compensations to Native Americans in return for their land, including livestock, ploughs and other equipment, seeds for sowing, raw material, textiles, schools, technical assistance, and protection under the law. However, the United States Senate unanimously voted down ratification of the treaties (*The Congressional Globe* 1852a:417).⁶

⁶ In addition to voting down the treaties, the Senate ordered an injunction of secrecy, possibly underscoring its legal fears about the seizure of land without due process. It was not until 1905 that the injunction was removed (Heizer 1972).

Nonetheless, Congress' upper house could not ignore the effects of the Indian Question on White settlement and development, nor could it disregard Edward Beale's (the Superintendent of Indian Affairs of California) report that Indian unrest in 1851 had forced the temporary closure of several mining districts (Heizer 1972:25). On August 11, 1852, the Senate appropriated \$100,000 for "the preservation of peace with those Indians who have been dispossessed from their lands in California until permanent arrangements be made for their future settlement (*The Congressional Globe* 1852b:584)." The problem was that solving the Indian Question required more than just an input of money but suitable places to sustain thousands of people. For instance, in referring to the Native American settlements on the Stanislaus, Tuolumne, Merced, and Fresno Rivers, Adam Johnson (1853:244), a sub-agent for the Office of Indian Affairs, complained that "[i]n none of these reservations is there any agricultural land, except in spots; a few acres only can be found together, and those upon the banks of the streams." As a result, the reservations created by Treaties E and M were abandoned within only one to two years after their settlement (Muñoz 1980:44a).

4.4 Post-Gold Rush: Economic Hardship, Obstructions to Traditional Subsistence, and Manifestations of Inequality

The Central Sierra Me-wuk suffered extreme economic hardships during and after the Gold Rush. In modern developed countries, the phrase connotes a difficulty in finding employment to earn enough money in order to maintain a standard of living. During historical times (and for present-day developing countries), hardship also entailed physical deprivation—i.e., a difficulty in finding enough food to survive. Hardship in the former sense adversely affects such factors as class, social status, and psychological health, whereas in the latter sense, it translates into greater susceptibility to sickness and disease, lower fecundity, and higher mortality. The Central Sierra Me-wuk endured both aspects of economic hardship.

In this case, poverty was less a product of being indentured workers within an economy—such as the share croppers of the South or the Chinese labor gangs of the West—and more a result of being cast outside of mainstream society altogether. Nevertheless, the Sierra Me-wuk did assume certain attributes from Euro-American culture. Introduced foods became part of the Sierra Me-wuk diet, including livestock products (i.e., beef, lamb/mutton, and pork), tree (or orchard) fruit, and flour (Hall 1978: 121; Muñoz 1980:32-37). They also donned the clothing of Euro-Americans (Hall 1978:138; Muñoz 1980:40-41). Except for items acquired through begging, charity, or theft, purchase of such goods required gold or money, which was not easy to come by after 1848 for California Indians. The section above described how the arrival of nearly 100,000 gold seekers in 1849 had pushed native miners from the diggings. And as the Gold Rush began to subside after 1852, the labor market became swamped with a glut of former miners looking for work—including 35,000-40,000 Chinese by the end of the decade (Sandmeyer 1991:17)—making it difficult for Native Americans to find a job and derive an income.

Thus, out of necessity, the Central Sierra Me-wuk more or less retained many of the material and economic aspects of their traditional lifestyle. Baskets continued to be manufactured by native hands and used for a variety of purposes (Hall 1978:132-134). Power's (1976:350) description of Sierra Me-wuk dwellings from 1871-1872 as well as earlier historical accounts cited by Hall

(1978:127-132) generally correspond to the traditional types discussed in detail by Barrett and Gifford (1933:198-200). Construction methods and materials may have begun to change later in the 1870s when framed houses were seen at Pigliku, a Central Sierra Me-wuk settlement (Hall 1978: 129).

Traditional procurement of foods and resources also persisted through the mid- and late-nineteenth century, albeit with considerable limitations compared to the pre-contact period. Prior to the Euro-American incursion, the Sierra Me-wuk ranged from the Sierra Nevada foothills to the mountains throughout the year to obtain a variety of resources, including plant and animal foods, tool stone, salt, and tobacco (Levy 1978:402-405). When the Anglo-American miners and homesteaders arrived during and after the Gold Rush, they brought with them their legal system of real property, whereby a given plot of land (or mineral rights thereto) could be purchased and held for the exclusive use of the owner. This concept was entirely foreign to most California Indians, whose subsistence depended on communal ownership of land, or, in more practical terms, equal and unfettered access to the resources within a group's territory. As a result, the Central Sierra Me-wuk no longer could freely move over their territory, which was becoming increasingly subdivided with mining claims, homesteads, fenced-in ranches, and town plats. Breaching property boundaries to forage for food constituted trespassing or theft.

The severity of such restrictions largely varied with the extent of White settlement. At higher elevations, where the Central Sierra Me-wuk spent their summer months, they were less encumbered by property lines, fences, and gun-wielding land owners. Even two decades after the Gold Rush, White residents of Tuolumne County apparently still considered the higher mountains to be a remote, dangerous, and uninhabitable region. Lang (1882:266, 274, 289) lists three instances—in 1853, 1857, and 1871—in which Indians had killed (or purportedly killed) solitary White miners or travelers who had ventured too far into the mountains east of Sonora, suggesting that they enjoyed at least some degree of autonomy in their highland refuge. The situation changed when the Central Sierra Me-wuk descended from the mountains in the colder seasons. At lower elevations, they found White settlers living at logistically prime locations. General Land Office (GLO) maps of the southern Project area from the 1870s show that homesteaders built their farms on flats, close to water, and among the various stands of acorn-bearing oaks that grew in the foothills. Acorns remained a staple for the Central Sierra Me-wuk, but as Cook (1976a:288) notes, the partitioning of the land “increased the difficulty and labor in getting a unit quantity of food and indirectly reduced the total amount available.”

In addition to obstructions caused by property boundaries, livestock ranchers and their beasts directly competed with or otherwise compromised indigenous subsistence practices. Cattle consumed the grasses that produced the seeds gathered by the Indians, while the hogs ate acorns (Cook 1976a: 289). Domesticated animals also drove out the wild game that provided a portion of the native diet (Hall 1978:170).

Moreover, the various commercial endeavors of homesteaders, ranchers, miners, and businessmen indirectly impacted indigenous foraging practices. In a matter of only a few decades, these activities collectively reshaped the physical and biotic environment, which generally reduced the availability and abundance of traditional resources to Native Americans. In Tuolumne County, the degradation of the natural habitat affected the Central Sierra Me-wuk

disproportionately, yet it was not lost to its other residents. Writing in the early 1880s, Lang attempts to reconcile the unmitigated exploitation of the environment with the benefits of development.

Even now, after the lapse of a third of a century, and the desecration of land, the defilement of water courses, and the annihilation of forests... one may lament the work of the pioneers that has destroyed so much of beauty building up a great and glorious State [Lang 1882:2].

Lang's phrase "defilement of water courses" refers specifically to the effects of hydraulic mining, which did take place to some extent in the county (Lang 1882:375,475). This mining method literally washed away entire hillsides, releasing a tremendous amount of sluiced mud, gravel, and even mercury into streams and rivers. Due to its detrimental effect to other businesses, especially in the northern Sierra, Judge Lorenzo Sawyer of the U.S. 9th Circuit Court for the District of California, in the case of *Woodruff vs. North Bloomfield Gravel Mining Company et al.*, declared hydraulic mining a nuisance and issued a perpetual injunction against this practice in 1884 (Isenberg 2005:175-176). Woodruff was a Marysville farmer whose orchards had been blanketed by muck carried by flood waters from hydraulic diggings in the Sierra, and the offending Company was owned by 30 wealthy investors from San Francisco. For the Sierra Me-wuk, hydraulic mining was equally a bane of their subsistence, causing deforestation and destruction of the regional salmon and trout fishery.

In some instances, traditional subsistence also appears to have been limited by social factors. As discussed in the section above, the Sierra Me-wuk were continually displaced from their settlements during the early 1850s due to mining activity, hostile interactions, or government schemes. Hall (1978:121) notes that the dietary importance of the acorn may have lessened during this period, considering that the collection, preparation, and storage of acorns require some degree of permanence at a location (or predictability of location).

Clearly, the barriers to employment and traditional subsistence accounted for the impoverished state of the Central Sierra Me-wuk in the post-Gold Rush period. Similar to Baumhoff's, Cook's, and Hall's treatment of Native American demography above, analysis of census records from the late-nineteenth and early-twentieth centuries demonstrates the demographic effects of such restrictions on the Central Sierra Me-wuk. It additionally quantifies the socio-economic "gap" between the Native American and White residents of Tuolumne County.

The 1880 United State Census presents the first opportunity for statistical investigation in this regard. While the previous 1870 Census was the first to include "Indian" (or "I") as an option for classifying "race", it is very evident that the census takers of this year—at least in Tuolumne County—were not very concerned with polling this demographic category. (The 1870 Census for Tuolumne County lists only three individuals as Indian, and none of them was born in California.) And even though the census workers from 1880 were not particularly diligent about gathering data on Native Americans, the records from this year do provide a good sample size for analysis.

The U.S. Census Bureau figures show that the total population of Tuolumne County in 1880 was 7,848 (Forstall 1996:23). The current investigation identified 326 persons, or a little more than 4 percent of the total population, who were denoted as “Indian” in the census roles.⁷ Given the presence of Yokuts, Plains Me-wuk, Northern and Southern Sierra Me-wuk, and possibly neophytes from the Coast in the Stanislaus and Tuolumne River watersheds during the Mexican and Gold Rush periods, it is certainly possible that the descendants of these peoples made-up a portion of the County’s Indian population in 1880. Nevertheless, this investigation assumes that the Central Sierra Me-wuk—whose ethnographic territory encompasses much of Tuolumne County—comprised the decided majority of the 326 Native Americans. Accordingly, there are about 25-30 individuals with traditional Hispanic given names (e.g., Antonio, Lucinda, Lupe, etc.), suggesting that their ancestors were probably Valley or coastal Indians that had been Christianized at the missions. However, the remainder of Native Americans (about 300) possessed American names (e.g., Mary, Tom, etc.) or, to a lesser extent, indigenous given names (e.g., Waseessa), indicating a lack of Mexican influence and suggesting a probable affinity with the Sierra Me-wuk.

Compared to the period 1830-1850, during which the number of Central Sierra Me-wuk fell from 2,000 or 2,500 to about 1,500 (Hall 1978:95-96), the following three decades registered an even greater population decline from 1,500 in 1850 to around 300 in 1880 (an 80 percent decline). In addition to smallpox, diphtheria, and other epidemics, endemic diseases plagued Native Americans. In particular, syphilis likely entered the Sierra Me-wuk populations during the Mexican period and had become widespread by the time of the Gold Rush (Hall 1978:73). The disease often causes death in the infected adult and can be transmitted from mother to fetus during pregnancy, thus leading to miscarriage or infant mortality. To an even greater degree, malnutrition disproportionately afflicts children. Chronic hunger results in early death as well as protein-deficiencies and other maladies, which, on reaching maturity, reduce fertility and resistance to sickness and disease.⁸ According to Hall (1978:79), White-Indian hostility accounted for the deaths of at least 100 Central Sierra Me-wuk during the Gold Rush. Although antagonism subsided after the Gold Rush, violent deaths among the Central Sierra Me-wuk still occurred and were often related to excessive alcohol-use on the part of both sides (Hall 1978:92-94).

Notably, the census figures indicate that even though impoverished, most Central Sierra Me-wuk continued to live in a traditional, family-oriented environment. Of the 326 Indians counted in 1880, 290 or 89 percent lived in 47 Native American households—i.e., households headed by a Native American. Thirty-four of these residences (72 percent) were family units—i.e., households containing at least one parent (or guardian) and one child. Extended and nuclear families accounted for a large portion (88 percent) of the family units, although there were four instances of single-parent households with no supporting adult family members. Other types of living arrangements (i.e., with no children) included: bachelor households (4), elderly households (4), solitary males (3), and all female households (2).

⁷ Cook (1976b:54-57, as cited in Hall 1978:96) counted 347 Indians from the 1880 census of Tuolumne County. The current investigation found that 21 individuals were recorded twice (double-counted) on pages 18 and 40 of the Township #3 precinct roles. Discounting for these double entries, the current investigation arrived at 326 Native Americans in Tuolumne County in 1880.

⁸ The reader is referred to Cook (1976a), who addresses in detail the effects of disease, malnutrition, and various other factors on California Indian populations.

Thirty-six individuals from the Native American population in Tuolumne County lived in White households. These included: Indian women married to non-Indian males; men and women serving as in-house laborers or servants to White families; or Indians living as boarders in White households. For example, Mary Duncan, a Native American maid, lived in Chinese Camp at the residence of J.E. Duncan, the Constable of Township #3 (Lang 1882:308). In another instance, “Slim Jim”, a female prostitute, shared a residence with two White laborers. In these cases, the Native Americans lived in a White social environment, with one exception—this was the Cox family, headed by native Virginian M. Cox, which resided in the Stanislaus River precinct populated almost entirely by Indians. Today, Cox is a prominent family name among the Tuolumne Me-Wuk.

Education and adult literacy were focal points of the 1880 Census, and it is along these dimensions that enormous gaps separated the Central Sierra Me-wuk and White Americans in Tuolumne County. The near absence of schooling among the former is staggering, particularly by today’s standards. Within the Native American population, there were 68 youngsters ranging in age between 6 and 16; of these, only one individual, a 16 year old boy, is listed as attending school. Uneducated young Native Americans included two boys, ages 10 and 13, who were already working as laborers, and four school-age boys who were living in a White social environment but without the benefit of school. This statistic appears even more dire when it is compared with the corresponding figure for the White population. In order to make this comparison, the current investigation randomly sampled 41 White households from the Tuolumne County Census, which produced demographic data for 216 individuals (or about 2.5 percent of the total population).⁹ The White sample contains 43 youngsters within the same age range (6-16 years old), of which 31 (72 percent) attended school. Significantly, four of the 12 un-enrolled children were six years-old (possibly considered still too young by their parents) and probably began school in the following year. It is not surprising that approximately three-quarters of White children were receiving education in spite of the general lack of social infrastructure in the western United States during the late nineteenth century. Pioneers throughout the West invariably built a school as the first institution of their nascent community. What remains to be demonstrated, however, is whether the underrepresentation of Native American students at this time was a matter of family/tribal circumstances or social barriers.

Besides gathering data on education, the 1880 Census form included two columns for “cannot read” and “cannot write” intended to gauge the level of adult literacy within the populous. Of the 231 adult Indians (>17 years-old), 139 (60 percent) were positively identified as illiterate. Undoubtedly, this figure is a gross underestimate of the actual percentage of illiteracy. That the census taker left the two illiteracy fields blank for 92 adult Indians is, in most cases, a product of a lack of diligence on the part of the recorder rather than an indication of an aptitude for reading and writing on the part of the Native American. Based on the results from the 1900 census (see below), it seems that approximately 90 percent of the adult Indians in Tuolumne County in 1880 were in fact illiterate. By comparison, of the 150 White adults in the sample, only six individuals (4 percent) were considered fully or partially illiterate. (In three of these cases, the individual could read but not write.) The ability to read and write does not necessarily require formal

⁹ Data on the entire Tuolumne County population obviously would have been more ideal to make demographic comparisons. However, data entry and processing for all 7,848 people listed in the census roles was well beyond the scope and budget of this study. The current investigation made every effort to ensure that the sampled households were selected randomly.

education, yet, as is the case with schooling, it appears that opportunities to acquire literacy were much more available for the White population than for the Central Sierra Me-wuk.

Expectedly, there was a noticeable difference in the types of occupation between Native Americans and Whites. According to the census, only 30 Indians held non-domestic jobs in Tuolumne County in 1880. These included general laborer, farm laborer, vaquero, washer woman, and miner. (The fact that Native Americans were engaged in mining suggests a resumption of prospecting following the early years of the Gold Rush (1848-1852) and after the intense competition for claims had lessened.) The sample of the White population similarly contains many individuals working as laborers but additionally includes a whole host of professional, skilled, and entrepreneurial occupations—such as lawyer, business owner, (yeoman) farmer, blacksmith, millwright, foundryman, artist, music teacher, and even a magician—that is entirely absent in the Native American population. Analysis of the differences in occupation is limited, unfortunately, mainly because this field is left empty for so many adult Native Americans. Again, the neglect of the census worker may have accounted for some of the blank entries. Yet, given the history of the Central Sierra Me-wuk since contact and their de facto exclusion from the local economy, it would seem the preponderance of adult Native Americans were in fact unable to find employment. In a few cases, the census suggests that the Central Sierra Me-wuk were still primarily engaged in traditional subsistence practices. Two sixty year-old men are listed as “hunters.” Also, the census taker used the term “Digger” to describe the occupations of a seven-member family living at the Tuttletown Rancheria. In this context, the term seems to be a reference to the family’s traditional lifestyle rather than a tribal affiliation (see below).

By 1900 the United States Census Bureau was making greater effort to track the nation’s Native American population. The 1900 Census included a special form or “Schedule No.1” used specifically to record data on Indians. The schedule contained two sections: the upper half entailed the usual battery of demographic fields (i.e., name, age, relation to head of household, nativity, occupation, education, etc.), whereas the lower portion—entitled “Special Inquiries Relating to Indians”—posed questions regarding tribal associations, percentage of “white” blood, incidence of polygamy, citizenship, and type of dwelling. Individuals living in Indian households were included in Schedule No.1; those living in non-Indian households were recorded on the general census form. Assuredly, the questionnaire did provide some useful demographic data, yet it is very apparent from the types of queries and implementation of this schedule that the Bureau still had much to learn about the indigenous population.

As the government was attempting to improve its understanding of Indians, the condition the Central Sierra Me-wuk had scarcely improved over the previous two decades. In some respects, their situation had worsened. In 1900, the total population of Tuolumne County had grown to 11,166 (Forstall 1990:22)—a 40 percent overall gain or a moderate 1.7 percent annual growth rate from 1880. By contrast, the Native American population continued to plummet, with only 130 Indians recorded in Tuolumne County.¹⁰ Certainly, it is possible that some Native Americans had integrated into mainstream society and, in so doing, were able to present themselves as Hispanic Americans and therefore as racially White to the census takers.

¹⁰ The current investigation’s count of 130 is virtually the same as Kelsey’s 1905-1906 figure of 128 as cited by Hall (1978:96). The present study enumerated two Indians living in White households that were not included in Schedule No. 1.

Accordingly, only two Indians or 1.5 percent of the indigenous population were recorded living within the White population in 1900 compared to the 11 percent residing in White households in 1880. More likely, however, the same adversities that had been weighing on the Central Sierra Me-wuk since the early 1800s (i.e., disease, poverty, starvation, violence) generally account for the 60 percent decline in population in the period 1880-1900.

As noted above, Schedule No. 1 sought to gather data on individual, paternal, and maternal tribal affiliation—information that at least in theory, could be used to assess this analysis' assumption that the predominant majority of Native Americans living in Tuolumne County in the late nineteenth century and early twentieth century were Central Sierra Me-wuk. Unfortunately, despite Power's (1976) work from the 1870s, which identifies Indian groups by their present-day titles (including "Mí-wok"), the state of ethnography in California had not yet reached a point whereby the census taker could distinguish among the state's various tribes. As a result, the 1900 Census uniformly lists the Indians of Tuolumne County as "Diggers" or "California Diggers", thus concealing whatever inter-tribal diversity existed in the County at the turn of the century. As was the case in 1880, although the roles did contain five or six individuals with traditional Hispanic given names, they comprise a very small minority of the Indian population, suggesting most of the County's Native Americans were Central Sierra Me-wuk.

Compared to the Census' inability to discern tribal affinity, data regarding the presence and amount of "White blood" in each Native American appears to be a potentially productive avenue of study. The degree of interbreeding between once disparate populations is a venerable topic in the field of biological anthropology and has implications for social trends as well. Of the 123 individuals to whom the question of White ancestry was posed, 53 or 43 percent claimed a White parent, grandparent, or great grandparent. Further study along these lines would be difficult due to the limited data available. In many cases, the census worker inaccurately recorded the percentage of White genetic affinity; the fractions entered under this category thus cannot be taken at face value and require calculation for verification.

With one exception, in which a mother and daughter inhabited a "movable" home, all Native Americans living in Tuolumne County in 1900 resided in "fixed" dwellings. Moreover, other than a family and a single male who both rented their domicile, the remaining 36 Indian households owned their house. Without supplementary information, it is difficult to proceed beyond the very general nature of these statistics. Obvious questions include whether the Central Sierra Me-wuk owned the land as well as their homes, how ownership was acquired (particularly within the context of the issues discussed in Section 4.5), and to what extent the dwellings were built using traditional or, alternatively, western building methods. When Barrett and Gifford (1933:127, 198) performed their field work during and after 1906, they found that "purely aboriginal structures (i.e., dwellings)" were "completely lacking and intermediate types common." Public buildings may have more closely approached traditional forms. In 1903, Merriam (1966:154) photographed a Sierra Me-wuk ceremonial house near Groveland, which appears to have been built with traditional materials and methods.

As in previous years, the 1900 Census included questions about education and literacy. Corresponding to the decline in overall population, the number of Native Americans of schooling age (6-16 years old) in Tuolumne County fell to 19 youngsters from the 63 recorded for this age bracket 20 years earlier. Even so, seven of these children (37 percent) were attending school or

had otherwise learned to read and write, indicating that some strides had been made since 1880 when only one Indian student was enrolled in school.

In an effort to garner more accurate results, the Census Bureau had revised the two illiteracy questions (cannot read; cannot write) from the 1880 Census to “can read” and “can write” by the time of the 1900 Census. While these changes to the census form as well as greater attentiveness on the part of the census taker apparently produced better data, the percentage of literacy among Indians in Tuolumne County in 1900 still remained low. Of the 94 adult Indians (+17 years old), only 13 individual (14 percent) could read and write. (The problems mentioned above in collecting data for these categories in the 1880 Census preclude a temporal comparison of literacy levels for the years 1880 and 1900.) Aside from one individual, all Indian residents of Tuolumne County could speak English; the lone exception was a 38 year old woman, who claimed the highest percentage of White ancestry (75 percent) of the County’s Native Americans.

With respect to occupations, Indians in Tuolumne County in 1900 held many of the same jobs or same types of jobs as 20 years earlier, including: day laborer, farm laborer, wood chopper, and washer woman as well as such ranch-hand work as cowboy, cattle driver, and “horse tamer”. Notably, two household heads were listed as “farmers” and one as a “blacksmith”. Although these three individuals made-up a very small portion of the Native American population, they do represent at least some commercial progress from 1880 when Indian skilled workmen and farmers are altogether lacking from the census roles.

At the same time, however, other recorded “occupations” listed in the 1900 roles clearly indicate that the Central Sierra Me-wuk still lived in poverty and depended on their traditional means for sustenance. Two elderly women were recorded as “beggars,” while a 30 year-old man was considered an “opium fiend.” Theodoratus’ (1976:602) ethnographic investigation for the New Melones Project on the Stanislaus River provides evidence that the latter was not an isolated case of addiction. Numerous informants commented on problems caused by the drug, which had been introduced to the Sierra Me-wuk by the Chinese. She goes on to cite Alfred Tozzer (1900), whose Native consultants in 1900 informed him that prevalent opium use had led to a drastic drop in the Native American population of Calaveras County.

The census roles from Tuolumne County also include a 50 year-old mother listed as an “acorn picker”—an occupation whose relevance is also found in contemporary ethnographic accounts. Three years after the 1900 Census, Merriam (1967) toured various Central Sierra Me-wuk settlements in Tuolumne and Calaveras counties—including Big Creek, Big Trees, Murphys, Cherokee, Jamestown, and Bald Rock. Like most ethnographers of the day, Merriam was primarily concerned with reconstructing pre-contact Me-wuk society—specifically, compiling vocabulary lists. Still, his notes do offer a picture of Central Sierra Me-wuk life at the turn of the century. For instance, his statement that “Mew-wah Indians are living in filth and squalor” substantiates the fact that even 50 years after the Gold Rush, they had experienced no improvement of any consequence to their quality of life (Merriam 1967:333). In particular, Merriam mentions that at the Mé-wa Rancheria near Cherokee, one of the families was preparing for an acorn feast and that at a permanent camp near Murphys, he saw numerous baskets filled

with acorns in various stages of processing—split, pounded, finely powered meal, and liquid acorn mush (Merriam 1967:333-334).

The 1900 Census identified another middle-age woman as a “basket weaver”. This occupation obviously accords with the importance of this hand-made item in the subsistence practices of the Central Sierra Me-wuk, but as Merriam comments, the manufacture of baskets also generated cash.

Several of the women are making basket to sell, but nearly all are perverted. By this I mean that the old styles are not preserved, but both form and design are varied to suit the wants of the miserable purchasers. Many baskets are made in imitation of choke-mouth Washoos [a reference to a form of Washoe basket and not to Washoe basketmakers], and the designs are absurd. The tendency is not only to overload with design, but to put as many different designs as possible on each basket. And only a few of the designs are those of their own tribe [Merriam 1967:337].

Merriam’s candid lament reveals his greater purpose to recreate the state of Sierra Me-wuk culture free from Euro-American corruptions. Nevertheless, the production of baskets solely for resale (and not for traditional use) was one avenue by which the Central Sierra Me-wuk were able integrate within the larger economy without resorting to menial employment. Similarly, the younger generations of Central Sierra Me-wuk in the early twentieth century likely sought to blend into mainstream society as best as possible as a way to improve their quality of life. Yet adapting to the styles, mannerisms, and values of the dominant culture is not synonymous with disdain for ancestral heritage. It may have been that, like other ethnic groups in the United States, the Central Sierra Me-wuk had distinguished—ideologically as well as practically—between the Me-wuk and non-Me-wuk worlds, separating the economic necessities of existing in a non-traditional environment from the sense of history and community that come with relating to one’s own people. Consequently, in the acculturative process, it appears that practical and economic traits—such as manufactured clothing, steel tools, and firearms—were readily adopted by the nineteenth-century Me-wuk, while traditional social and ideological (i.e., kinship, religious, ceremonial, etc.) knowledge and behaviors were relatively resistant to change and persisted over time.

4.5 Summary and Conclusions

Beginning in 1769-1770, when Spanish missions were established at San Diego and Monterey, native societies in southern and central Alta California were increasingly affected by the presence of foreigners. Spanish incursions were limited initially to the coastal zone from San Francisco southward; but by the 1770s, colonial expeditions were probing the interior, including the southern San Joaquin Valley and, early in the 1800s, all the way to the margins of the Sierra Nevada foothills. By circa 1785-1800, exotic diseases had found their way into the heart of the Sierra and were taking a grim toll of the Yosemite Me-wuk and their neighbors. Not long thereafter, Canadians and Americans entered the Valley to trap beaver. They ascended Sierran streams, interacted with local tribes, and in 1830-1833 unleashed a great epidemic—probably malaria—that claimed the lives of an estimated 75 percent of the Valley’s native population. The combination of diseases, punitive expeditions, and forced recruitment of Indians for the

missions devastated Yokuts populations in the Valley, causing intense demographic pressure on the foothill Me-wuk who offered succor not only to Yokuts survivors of the epidemics and Spanish/Mexican military raids but also to Indian horse thieves and refugees from the coastal missions.

Sierra Me-wuk societies and cultures were still struggling to adapt to the direct and indirect impacts of Spanish and, after 1821, Mexican/Californio expansion when they were inundated by tens of thousands of “Argonauts” from all over the world during the Gold Rush, beginning in 1848 and lasting for a decade or more. Because the Mother Lode was mostly in their territory, the Me-wuk soon were displaced from their traditional villages in the mining districts and became impoverished refugees in their own country. The miners felled oak trees, sluiced debris into salmon streams, shot deer, and otherwise eliminated food resources that had sustained the Native peoples for generations. These actions—together with introduced diseases, alcohol, and direct violence—decimated foothill Me-wuk populations, including those whose homes had been along the Stanislaus and Tuolumne rivers, and dispersed the small bands of survivors into remote locations, often higher up in the mountains above the gold fields.

During the Gold Rush and for much of the following century, Me-wuk populations remained small, displaced, extremely impoverished, mostly landless, and socially marginalized. Like all California tribes, the Me-wuk were removed from their lands by the Federal Government and were forced or tricked into signing treaties ceding those lands in 1851, only to have the U.S. Senate refuse to ratify all 18 of the negotiated treaties and “ordered them filed under an injunction of secrecy which was not removed until January 18, 1905” (Ellison 1925 *in* Heizer 1972:1). This left the tribes in limbo. Their legal status was that of government wards, with minimal legal standing and no right to vote in national elections. Nineteenth-century census data provide at first no, and then only limited, information about Indians, so it is virtually impossible for scholars to piece together a clear picture of which Me-wuk people once lived within the Project area or to determine who their descendants, if any survive, might be. At best, the census data can suggest trends in population levels and the extent of integration into American society. Much of the Native culture and cultural information was lost due to historical events, and it is in this context that the present attempt is made to identify TCPs in the Don Pedro Project area.

While the various nationalities and ethnicities that landed on the shores of the United States in the nineteenth and early twentieth centuries suffered many of the same indignities, injustices, and struggles as Native Americans, the treatment of Indians differed from the immigrant experience in ways that are quite telling of the underlying motivations and methods of this country’s leading political interests. The political clout wielded by gold miners, land speculators, railroads, agricultural enterprises, and settlers were major drivers of the nation’s political agenda, which in turn led to removal of Indians from their lands under the banner of Manifest Destiny and the concomitant awkwardness of schemes to address “the Indian Question.”

To illustrate, the Americanization of immigrants entailed at least some degree of mutual consent between the United States and the individual (or individual immigrant family): the government and corporate business accepted the newcomers as a class of cheap labor, though one undeserving of the full complement of privileges; correspondingly, an immigrant’s decision to stay typically involved weighing the great economic opportunities of his/her new county against

its inherent intolerance for all things foreign. By contrast, no such “social contract” existed between the United States and Native Americans. Far from being voluntary and based on individual volition, the incorporation of Indian groups into the United States was accomplished en masse and often through forcible means. Moreover, their social and economic opportunities for improvement and integration were narrow if not entirely absent throughout the nineteenth century. Unlike immigrants, who generally held the options of staying in America or returning home, Native Americans were already home and had no other choice but to remain under the rule of the United States.

Except for possibly Black slaves, whose 250 years of servitude created the immense agricultural wealth of the South prior to the Civil War, no other historically disenfranchised people have paid so dear a price—in both human and economic terms—as Native Americans in becoming part of the United States. The discussion above charted the near extinction of the Central Sierra Me-wuk, from a population of 2,000 or more before contact with Euro Americans to less than 130 at the turn of the century. Almost as tragic as the loss of human life was the loss of lands. In the case of the Central Sierra Me-wuk, the mineral wealth of their territory directly contributed to the enrichment and development of Tuolumne County in particular and the state of California in general. Yet except a brief period during the early Gold Rush, the Central Sierra Me-wuk were excluded from sharing in this wealth. It is necessary to emphasize here that the poverty that marked the existence of the Central Sierra Me-wuk during the mid- and late nineteenth century was not the result of a “bad deal” or a case similar to the selling Manhattan Island for \$24 worth of goods. The pre-conditions necessary to make a legitimate bi-lateral transaction never materialized between Indian and white parties in Tuolumne County. And even the most ardent advocate of Manifest Destiny would be hard pressed to demonstrate that the appropriation of Central Sierra Me-wuk lands and other Native American territories in general occurred with due process.

Since the 1802 Indian Trade and Intercourse Act, the federal government has recognized the sovereign status of tribes and prescribed that land cessions and exchanges can only be achieved through treaty between the federal government and the Indian nation—a clear acknowledgement that Native American groups have legal claim to the land that they have occupied for centuries if not millennia. Of course, the history of Indian treaties is an infamous topic, one marked by broken promises, deception, and duress on the part of the U. S. Government. As discussed above, the heads of some Central Sierra Me-wuk villages did agree to rescind their claim to ancestral lands under Treaty M, which, if carried out to the letter, might have actually provided compensation to alleviate their impoverished state. As it happened, however, the Senate did not ratify Treaty M or the other 17 California Indian treaties, thus nullifying all of the agreements’ conditions. By voting down Treaty M, the Senate relieved itself from compensating for the land, but by the same token, it invalidated the Central Sierra Me-wuk’s quit claim of their territories. It can be argued that the Central Sierra Me-wuk abandoned their land and effectively gave up claim to the property, yet as discussed above, the continual movement of villages, particularly during the Gold Rush and early period of White settlement, was largely brought about by White intrusion on native lands, deception (in the case of Treaty M), threat of violence, and other extra-legal factors.

From the point of view of the U. S. Government, the “Indian Question” was its first exercise as a budding imperialist power in dealing with the occupation of distant lands and their natives. Returning to the circumstances surrounding Treaty M, in 1852 the Senate unanimously refused to validate the 18 treaties with California Indians, even though the documents contained the very condition—i.e., extinguishment of Indian title—that it had instructed the Committee and Office of Indian Affairs to obtain only two years earlier. Though outwardly contradictory, the actions of the Senate suggests that its primary objective was in fact the removal of Indians from their ancestral lands and away from the White population and that it was not committed to implementing the Indian Trade and Intercourse Act by overtly seeking the relinquishment of Indian territorial claims. With the relocation of California Indians onto reservations in 1852, the treaties had served their purpose and were no longer necessary. The unratified treaties were subsequently concealed from the public, possibly as a legal precaution. For the Senate, the treaties and conditions thereof were never intended to be a legal end but merely a deceptive means to attain a political end. This example is only one in a series of similar agreements with Indians that go back to the American Revolutionary War.

The legacy of federal duplicity and overt racism against California and other Indians continued to be felt well into the twentieth century. Heart-wrenching examples are captured by Jack Burrows in *Black Sun of the Miwok* (2000), a collection of six vignettes recalling Central Sierra Me-wuk people whom Burrows had personally known, or known of, during the 1920s and 1930s in the vicinity of Murphys. There was Old Yellow Jacket, who had been blinded decades earlier when miners had blown out his eyes with blasting powder and who suffered the taunts of White children who strew his path with thistles. There was the memory of Old Lucy, with her horribly mutilated legs swathed in dirty rags, who in 1895 was stoned to death by a gang of White boys, “to put her out of her misery” (Burrows 2000:x-xi). And there were the recollections of Walker, a Me-wuk headman, who described the plentiful food the land had to offer until the “Whiteman” came and killed the animals and cut down trees, and how after this, the “Eenjun” (Indian) had to beg the Whiteman for food and eventually... “No more Eenjun. Sun go black” (Burrows 2000:vi).

Nor have the vestiges of inhumanity and racism vanished with the advent of the new millennium in Central Sierra Me-wuk territory.

Staff Sergeant Ray Jeff, [was] a full-blood Miwok Indian..., whose name is honored on the roster of the most decorated soldiers of World War II: three silver stars, the bronze star, the Combat Infantryman’s Badge, two Purple hearts. Ray Jeff was killed covering the retreat of his platoon... on Kwajalein atoll in the Marshall Islands. Ray is buried—as he wished to be—“under the buckeye” on my grandfather’s ranch near Vallecito [Burrows 2000:ix-x].

Today in 2014, however, the current land owner denies access for local Indians who wish to visit Ray Jeff’s grave to pay their respects, highlighting issues raised by changed ownership of traditional Me-wuk lands and attendant cross-cultural insensitivity.

5.0 ETHNOGRAPHY—PART 1

5.1 Introduction

Chapter 4 provides an ethnohistoric context for the present study by summarizing early historical events and processes that resulted in social disintegration and traumatic cultural changes among the Central Sierra Me-wuk. The current chapter (Ethnography—Part 1), along with Chapter 6 (Ethnography—Part 2), picks up the story in the late nineteenth century and carries it forward well into the twentieth. The aim of these two chapters is to describe Me-wuk cultural traditions during this time span as a basis for evaluating, in subsequent parts of this report, possible Traditional Cultural Properties within the Don Pedro Project area. While Chapter 5 examines Native language, territory, demography, social organization, land use, and settlement patterns, Chapter 6 covers subsistence, “material culture,” medicine and curing, cosmology, and ritual and ceremony. Special attention is given to the domains of subsistence and medicine—especially the plant and animal resources used as food, herbal cures, and basketry material—because the Me-wuk continue to use many of these same resources today as essential for the maintenance of their traditional cultural practices.

The first step in any inquiry is to define key terms. “Ethnography,” as applied in California, has meant various things at different times. From the late nineteenth century through the 1960s, many anthropologists thought that the ethnographer’s role was to document the “memory culture” of elders who could recall from personal experience, or from hearing in their youth the recollections of their own elders, what life was like in that long-ago time before foreigners arrived to despoil the land and disrupt Native cultures. Working feverishly in the decades after ca. 1900, such anthropologists as A. L. Kroeber, S. A. Barrett, E. W. Gifford, and their students, together with the gifted naturalist and medical doctor C. H. Merriam and the eccentric but brilliant John Peabody Harrington, pursued what came to be known as “salvage ethnography.” The goal was to collect as much information as possible about the “ethnographic present”—the immutable, traditional life ways of pre-contact societies. However, this ideal proved to be unattainable, partly because Indians in the 1920s-1940s were seldom able to recall very much about the pre-contact era, but mostly because the anthropologists were laboring under a misconception, namely that native cultures of that era had been static and immune to change. As Robert Heizer observed nearly 40 years ago:

What I am suggesting is that what is generally taken to be the record of aboriginal, pristine, pre-contact California Indian ethnography is not that at all, but rather the record of native culture which is a modified or acculturated version of how things were before 1770. The ethnographic record for California, in short, contains within it the evidence of historical events and influences.... The challenge...is to begin a reassessment of the comfortably established picture of languages, territories, and tribal cultures which we now accept for California before the time of whites [Heizer 1975:9-10].

This perceptive characterization by Heizer seems accurate. Thus, California “ethnography,” while preserving the invaluable testimony of knowledgeable Indians, is actually a form of ethnohistory or, more precisely, a collection of ethnohistorical accounts representing myriad

cultural events and changes that varied both locally and over time, depending on the cultural affiliation, age, sex, and life experience of the Native person being interviewed.

Beyond the countless ethnographic studies of particular subjects (such as basket making, fishing, architecture, and ceremonial activities) pertaining to one or more of the Sierra Me-wuk communities, many overviews of traditional Me-wuk culture have been published. Some of these are secondary, albeit useful sources (e.g., Conrotto 1973; Levy 1978), while others are based partly or entirely on primary research (e.g., Barrett and Gifford 1933; Davis-King 2003; Davis-King and Marvin 1994:3.8-3.18; Davis-King et al. 1992; Eidsness and Milliken 2004; Kroeber 1925:442-461; Powers 1873, 1877, 1976; Theodoratus 1976, 1986; Thornton et al. 2002). Chapters 5 and 6 of this report share with these sources a broad coverage of Me-wuk culture, but differ in that they focus—whenever permitted by the limited information—on the Native peoples of the Tuolumne River country in and near the area where Don Pedro Reservoir is now located.

5.2 Language

Miwok dialect communities and languages were limited to several areas of central California but nonetheless were but small tiles within a much larger and more complex linguistic mosaic. “California was the Babel of ancient America. The Indians of California accounted for about 20 percent of the nearly 500 separate languages spoken in America north of Mexico in A.D. 1492” (Moratto 1984:530). Most of the 85-90 languages of aboriginal California can be assigned to larger families, super-families, or higher-level groupings such as Hokan and Athabaskan (Na-Dene). Significantly, a few of the native languages or language families in California are isolates (e.g., Yukian and Chumash), not clearly related genetically to any other known languages. One of the better known of the large-scale categories is the Penutian Phylum, whose divisions once were spread from western British Columbia (the Tsimshianic languages) to the southern San Joaquin Valley (Buena Vista Yokuts) (Foster 1996; Shipley 1978). The name “Penutian”

...was created by Dixon and Kroeber (1913) to label the phylum-level relationship that they believed to exist among the Costanoan, Miwok, Maiduan, Yokuts, and Wintuan language families (Golla 2002). ...[Later,] Sapir (1920..., 1921...) extended the Penutian relationship (and the name) to include a number of small language families in the Northwest, from Takelma and Klamath-Modoc in southern Oregon to Tsimshianic on the northern coast of British Columbia [Golla 2011:128].

Penutian is represented in California by Klamath-Modoc (a subgroup of Plateau Penutian) and the Maiduan, Wintuan, and Yok-Utian families, the latter consisting of Yokuts and the Utian (Miwok and Costanoan) languages (Callaghan 1967; Golla 2011:129). Miwok, in turn, consists of a Western Miwok branch (Coast Miwok and Lake Miwok) and an Eastern branch including the Bay, Plains, and Sierra Miwok languages (Golla 2011:156-162; Kelly 1978; Levy 1978; Shipley 1978).

The focus in this report is on Sierra Miwok, and particularly on its central division. The Northern, Central, and Southern Sierra Miwok occupied “a single language area within which

three well-differentiated dialects, or emergent languages, were spoken” (Golla 2011:160). Within this speech continuum there was some degree of mutual intelligibility (Callaghan 1987:5). Local differences within Sierra Miwok are mainly lexical and phonetic, and all of the varieties are “similar enough in morphosyntactic structure to be easily describable in a single grammatical model” (Freeland 1951, in Golla 2011:160). The three geographic divisions were not named by their speakers and apparently had no sociopolitical correlates (Golla 2011:160).

Sierra Miwok is well documented linguistically. As early as the mid-nineteenth century, Adam Johnston (in ca. 1850) recorded vocabularies of the “Tuolumne” Central Miwok (Johnston 1854). The journalist Stephen Powers in 1877 collected a Miwok vocabulary in Calaveras County and commented on the mutual intelligibility of speakers residing near the Stanislaus and Tuolumne rivers. Three decades later, Samuel Barrett (1908:362-368) began to gather Miwok vocabularies, while A. L. Kroeber (1911) prepared comparative notes on Central and Northern Sierra and Plains Miwok ethnography. Early in the new century, C. H. Merriam took notes on Northern, Central, and Southern Sierra Miwok and recorded vocabularies for each of these (see Golla 2011:Ap.A: V21a, c, d, e). J. P. Harrington later acquired some Northern Sierra Miwok material (Mills 1985:21-24), and Lucy Freeland compiled texts and other data for use in her *Language of the Sierra Miwok* (1951) and *Central Sierra Miwok Dictionary with Texts* (Freeland and Broadbent 1960). Catherine Callaghan devoted several decades of her life to Miwok linguistic research, some results of which were her *Lake Miwok Dictionary* (1965), *Plains Miwok Dictionary* (1984), and *Northern Sierra Miwok Dictionary* (1987). Sylvia Broadbent, too, invested many years of linguistic study in the Sierra Nevada and in 1964 produce *The Southern Sierra Miwok Language*, including grammar, texts, and dictionary. Finally, Victor Golla offers extensive discussions of native languages, including of all of the Miwok groups, in his *California Indian Languages* (2011)—easily the most comprehensive work ever written on the subject.

5.3 Miwok “Tribes,” Divisions, Names, Synonyms, and Variants

Anthropologists are in general agreement, but differ in details, about the origin of “Miwok” as a designation for the people and their language(s). Three examples illustrate this: (1) “Miwok” was not originally a tribal name, but rather is the native word for “people,” being the plural of *miwü*, “person” (Kroeber 1925:443). (2) “Me-Wuk is the pluralized word to denote the people of the Central Sierra region (singular: me-wa or mu-wah; information given by Me-Wuk leader William Fuller to Merriam [n.d., 1898-1938])” (Davis-King 2003:5). And (3) “The name ‘Miwok’...or ‘Miwuk’..., from the Sierra Miwok *miwwik* ‘people, Indians’ was applied by Powers only to the Plains and Sierra Miwok people and language (1877:346-347)” (Golla 2011:162). Diverse names assigned to the Miwok during the past 175 years are presented in Table 5-1. These range from “Koni” through “Miook” to “Wal’li.” Some of the terms refer not to tribal groups or their territories but rather to linguistic divisions, principal villages, or the names of community leaders.

Prior to the mid-nineteenth century, the eastern division of Miwok consisted of four closely related but territorially discrete groups—namely the Plains, Northern Sierra, Central Sierra, and Southern Sierra Miwok—of which all but the first held watersheds in the foothills and mountains, collectively from the Cosumnes River on the north to the Fresno on the south (Barrett 1908a:335; Kroeber 1925:442). Although Merriam (1907) thought that the Eastern Miwok once

Table 5-1. Miwok synonymy.

Name	Comments	References
<i>Ahwahneechee</i>	The residents of Ahwahnee (various spellings), one of the principal settlements in Yosemite Valley; more generally, the Indians of Yosemite Valley [which, at various times, might have included Paiute as well as Southern Sierra Miwok, and possibly other groups].	Bingaman (1966); cf. Bates (1996), Bibby (1994), Bunnell (1911), Clark (1904).
<i>Ah-wah-nee'-chee</i>	Alternate spelling of <i>Ahwahneechee</i> .	Bunnell (1911); Clark (1904).
<i>Ahwanichi</i>	Alternate spelling of <i>Ahwahneechee</i> . The people who lived in <i>Awahni</i> (Yosemite).	Bates (1996).
<i>A-wal-a-che</i> (and variant spellings)	A Southern Sierra Miwok group; signatory of Treaty M at Camp Fremont in 1851.	Heizer (1972:70); Merriam (1907:346).
<i>Amador</i>	Northern Sierra Miwok.	Barrett (1908:Map 3).
<i>A-pang-as-se</i> (and variants)	“Tribe that met the Treaty Commissioners on the Little Mariposa River 19 March 1851. Said to be a village on the Tuolumne River.” A Southern Sierra Miwok group; signatory of Treaty M at Camp Fremont in 1851.	Merriam n.d.b; in Davis-King (2003:Table 2); Heizer (1972:70); Merriam (1977:141).
<i>Ap'-la-che</i> (and variants)	A Southern Sierra Miwok group; Treaty M signatory in 1851.	Heizer (1972:70); Merriam (1907:346).
<i>Awahnichi</i>	Equivalent to <i>Ahwanichi</i> ; Indians of Yosemite Valley (<i>Awahnee</i>).	Bates and Lee (1990); Hull (2009:60, 79 ff.).
<i>Chokoyem</i>	Western (Coast) Miwok tribelet located in the vicinity of Sonoma, north of San Pablo Bay.	Golla (2011:157).
<i>Co-to-pla-ne-mis</i>	A Central Sierra Miwok group; Treaty E signatory in 1851.	Heizer (1972:44); Merriam (1907:345).
<i>Eastern Miwok</i>	Miwok living from Contra Costa County eastward into the Sierra Nevada and southward to Madera County; includes Bay (Saclan), Plains, and Northern, Central, and Southern Sierra Miwok.	Levy (1978:398); Golla (2011:156).
<i>Hawshaw</i>	Said to be the name of a tribe in the Tuolumne River region. The name of an old chief of the <i>Aplaches</i> .	Merriam (n.d.b); in Davis-King (2003:Table 2).
<i>Hetch'-hetch weah</i>	People who lived at Hetch Hetchy.	Merriam (n.d.b); in Davis-King (2003:Table 2).
<i>Interior Miwok</i>	Same as Eastern Miwok.	Kroeber (1925:442).
<i>Koni</i>	A name of Maidu origin applied to the Northern Sierra Miwok and commonly used by Miwok in Amador County; comparable to Barrett's Amador dialect.	Powers (1877:349); Kroeber 1906:660; Barrett (1906:353).
<i>La-pap-poos</i>	Central Sierra Miwok band on the Tuolumne River.	Johnston (1854); Latham (1856); Merriam (n.d.b), in Davis-King (2003:Table 2).
<i>Mariposa</i>	Equivalent to Southern Sierra Miwok.	Barrett (1908:Map 3).
<i>Meewa</i>	Powers inconsistently spelled tribal names.	Powers (1873:323).
<i>Meewie</i>	Powers inconsistently spelled tribal names.	Powers (1873:323).
<i>Meewoc(s)</i>	Notwithstanding the variant spelling, this appears to be the first published use of the name “Miwok.”	Powers (1873:323).
<i>Mewah</i>	Equivalent to Central Sierra Miwok.	Merriam (n.d.b, n.d.c, 1907).

Name	Comments	References
<i>Mewahs</i>	A nineteenth century term used with reference to any or all of the Eastern Miwok tribes.	“Ind. Aff. Rep. 1856, 244, 1857, 1857,” cited in Hodge (1907-1910: 913).
<i>Me'-wan</i>	The family or “stock” of Miwok languages (i.e., Miwokan).	Merriam (1907).
<i>Mew'-ko</i>	Plains Miwok; Valley people.	Merriam (1907:338).
<i>Me'-wok</i>	Sierra Miwok.	Merriam (1907).
<i>Me'-woos</i>	A group living in the Fresno River vicinity.	Clark (1904:5).
<i>Me'wuk</i>	A language family consisting of the “Me'-wuk” and “Mew-ko” subfamilies. When used as a subfamily name, “Me'-wuk” refers to the Sierra Miwok.	Merriam (1907).
<i>Me-Wuk</i>	The name preferred by many Central Sierra Miwok.	Davis-King (2003:5).
<i>Miook</i>	This unusual term was never used widely; possibly derived from one of Powers' (1873, 1877) several names for the Miwok.	Kingsley (1883-1885: 175).
<i>Mi'-wa</i>	Powers inconsistently spelled tribal names.	Powers (1877).
<i>Mi'-wi</i>	Powers inconsistently spelled tribal names.	Powers (1877).
<i>Miwok</i>	Originally, Sierra and Plains Miwok only. The most common term employed by anthropologists and others with reference to all (Western and Eastern) Miwok ever since the publication of Kroeber's (1925) <i>Handbook of the Indians of California</i> .	Powers (1877:346-347); accepted by Barrett (1908); Kroeber (1925).
<i>Miwokan</i>	The linguistic subfamily of Utian, including the Sierra, Plains, Bay, Lake, and Coast Miwok languages and dialects, but excluding Costanoan.	Shipley (1978:84).
<i>Miwuk</i>	Sierra Miwok.	Merriam (1907).
<i>Mi-Wuk</i>	The name preferred by many Northern Sierra Miwok.	Davis-King (2003:5).
<i>Mokelumnan</i>	Sierra, Plains, and Coast Miwok; a term referring to what is today called the Miwokan subfamily of Utian languages.	Latham (1856:81); Adopted by Powell (1891:92-93).
<i>Moquelumnan</i>	See “Mokelumnan.”	Kroeber (1906).
<i>Mutsun</i>	Family of languages, including Sierra, Plains, and Coast Miwok in addition to Costanoan; named after a Costanoan tribelet; equivalent to the modern term “Utian.”	Gatschet (1877:159); Powell (1877:439-613).
<i>Muwa</i>	Equivalent to Miwok; one of the terms coined and applied inconsistently by Merriam.	Merriam (1904).
<i>Noot'-choos</i>	One of the [Southern Sierra Miwok?] groups living in the Chowchilla River valley. [Alternate spelling of <i>Nuchu</i> or <i>Nut'-chu</i> .]	Clark (1904:5).
<i>Nuchu</i>	A Miwok division on the South Fork of the Merced River.	Hodge (1907-1910:II:90).
<i>Nutchu</i>	Same as <i>Nuchu</i> .	Hull (2009).
<i>Nut'-chu</i>	A division of Southern Sierra Miwok; equivalent to <i>Nuchu</i> .	Powers (1877).
<i>Oleyomi</i>	One of two Lake Miwok tribelets, located in Pope Valley and Coyote Valley, immediately south of the <i>Tuleyomi</i> .	Golla (2011:157).
<i>Penutian</i>	A linguistic stock including the Wintuan, Maiduan, Yokutsan, and Utian (Miwokan and Costanoan) languages of California as well as languages in the Pacific Northwest (of which Klamath/Modoc extend into northern California).	Dixon and Kroeber (1913, 1919).
<i>Po-ho-nee'-chees</i>	Lived near the headwaters of Bridal Veil Creek in summer and on the South Fork of the Merced River in winter.	Clark (1904:5); Kroeber (1925).

Name	Comments	References
<i>Pohonichi</i>	The southernmost of the Southern Sierra Miwok; possibly a term of Yokuts origin; a more economical spelling of <i>Po-ho-nee'-chees</i> .	Powers (1877); Barrett (1908:342-343); Hull (2009).
<i>Potoyante</i> or <i>Po-to-yun-te</i>	A Southern Sierra Miwok group; Treaty M signatory in 1851 at Camp Fremont.	Heizer (1972:69); Merriam 1907:345).
<i>Si-ang-ah-se</i>	Mewah band on the south side of the Tuolumne River four miles below Pleasant Valley and La Grange... .	Merriam (n.d.b); <i>in</i> Davis-King (2003: Table 2).
<i>Tamal-ko</i>	The westernmost division of Coast Miwok, living near Bodega Bay and Tomales Bay.	Gibbs (1853b:421) <i>in</i> Golla (2011:156).
<i>Tcho-ko-yem</i>	See <i>Chokoyem</i> , above.	Gibbs (1853a) <i>in</i> Golla (2011:156).
<i>Tu'-le-yo'-me</i> or <i>Tuleyome</i>	"...the northernmost of the Mewan tribes"; i.e., the Lake Miwok of the Clear Lake area.	Merriam (1955:175-187).
<i>Tuleyomi</i>	One of two Lake Miwok tribelets, on Cache Creek, immediately south of Clear Lake and north of the <i>Oleyomi</i> .	Golla (2011:157).
<i>Tuolumne</i>	Central Sierra Miwok.	Barrett (1908:Map 3).
<i>Tu-ol-um-ne</i>	"Name used in loose and improper sense for Mewuk bands" on the Tuolumne River	Merriam (n.d.b); <i>in</i> Davis-King (2003: Table 2).
<i>Utian</i>	The division of Penutian consisting of the Miwokan and Costanoan languages.	Callaghan (1967); Shipley (1978:82).
<i>Wal'li</i>	An "extensive tribe" on the Stanislaus and Tuolumne rivers (Powers 1877); the term possibly means "toward the earth" or low or down (Barrett 1908:342), but see the perhaps more credible explanation in Davis-King (2003:32, Footnote 1) pertinent to the Indian potato (cf. Taylor 1932:6).	Powers 1877:349-350); Merriam (n.d.b); cf. Davis-King (2003:32) and Taylor (1932:6).
<i>We'chil-la</i>	Unidentified band on reservation between Stanislaus and Tuolumne rivers in 1851; named after chief We-chil-la.	Merriam (n.d.b); <i>in</i> Davis-King (2003: Table 2).
<i>Western Miwok</i>	Miwok of Marin, Sonoma, and Lake counties, namely the Western Coast Miwok, Eastern Coast Miwok, and Lake (Northern Coast) Miwok.	Barrett (1908:333-335); Kelly (1978:414); Golla (2011:156).
<i>Yohe'meti</i>	"From Southern Sierra Miwok, ...'they are killers', derived from <i>yoo-hu-</i> 'to kill', evidently a name given to the Indians of the [Yosemite] valley by those outside it" (Broadbent; cf. Beeler 1955). Possibly a reference to Miwok living in the Yosemite area, or, alternatively, a Miwok designation for Paiute occupants of Yosemite. It is likely that the term was used by the Southern Sierra Miwok for some time before the mid-nineteenth century.	Gudde (1998:431); see also Bates (1996:9).
<i>Yohemetuk</i>	"Miwok residents west of Yosemite sometimes referred to the native residents of Yosemite as <i>yohemite</i> or <i>yohemetuk</i> ."	Bates (1996:9).
<i>Yosemite[s]</i>	The Mariposa Battalion's name for the Indians being pursued in Yosemite during the Mariposa Indian War of 1850-1851; this vague term could refer to Paiute or Miwok people, or both.	Eccleston (1851) <i>in</i> Crampton (1957:47, 48, others).
<i>Yosemite</i>	Along with Pohonichi, this is a subdialect of Southern Sierra Miwok. The Indian people of Yosemite Valley, including Mewuk, Paiute, and possibly Spanish-speaking refugees from missions.	Bunnell (1990:65); Clark (1904:2); Kroeber (1906:659-660); Barrett (1908: 353-354); Hull (2009).
<i>Yosse-meti</i>	Alternate spelling of <i>yosemite</i> .	Gudde (1998:431).

claimed not only the mountains and foothills but also the adjacent plains all the way to the San Joaquin River, A. L. Kroeber, after reviewing the available evidence, concluded that “the whole valley east of the San Joaquin and south of the Calaveras was Yokuts, and that the Miwok habitat on the plains was confined to the region north of the Calaveras” (Kroeber 1908:375).

Based upon C. Hart Merriam’s notes, the territory of the “Middle Me-wuk” (i.e., Central Sierra Miwok) extended: on the north from a little south of San Andreas, Calaveras Creek, and Sheep Ranch; southward to the Tuolumne River; and from near Jenny Lind to La Grange on the east; and downslope nearly to the elevation of Knights Ferry on the west (Talbot 1974:14-15).

Communities of the Central group occupied the Stanislaus and Tuolumne rivers country, above the eastern margin of the Great Central Valley, in what are now Calaveras and Tuolumne counties (Barrett 1908a:Map 3; Kroeber 1925:442). All of the upland Miwok adjusted their land-use and settlement patterns according to elevation and season: “The Miwok lived permanently as far up into the Sierra as the heavy winter snows permitted; in summer they moved higher; and no other people held residence between them and the crest” (Kroeber 1925:443).

Samuel A. Barrett delimits this territory more precisely:

The boundary between the Amador [Northern Sierra Miwok] and Tuolumne [Central Sierra Miwok] dialectic areas extends from the eastern Miwok inter-stock boundary [i.e., the border between the Miwok and the Washo], at a point in the mountains just north of the Calaveras grove of big trees, along the mountains to the north of the southern head waters of the Calaveras River, passing about half way between El Dorado and Sheep Ranch, and thence on toward the southwest until it intersects the western inter-stock boundary probably at a point about southwest of Harmon Peak... .

The Tuolumne dialectic area is separated from that of the Mariposa Dialect [i.e., Southern Sierra Miwok] by a boundary line beginning at or near Mt. Lyell, and following quite strictly, as nearly as could be ascertained, the water shed between the Tuolumne and Merced rivers, thus passing north of Yosemite Valley.... The western extremity of this inter-dialectic boundary could not be definitively determined, but all indications point to the range separating the drainages of the Tuolumne and Merced rivers in this western extremity as well as throughout the remainder of the line. The Tuolumne dialect area is adjoined ...on the east by Washo and Shoshone [i.e., Western Mono] territory, ...and on the west by the territory of the Yokuts [Barrett 1908a:355-356]

5.4 Population and Demography

Powers’ (1877) estimate of 705,000 for the total population of California Indians, while based on the potentials of environmental resources, assumed that there were 6,000 miles of salmon streams in the state. Because the actual length of such streams is closer to 2,000 miles, Powers’ calculations should be adjusted downward accordingly to yield a population total of roughly 235,000 (Baumhoff 1963:158). Later, Merriam (1905) advanced 260,000 as the pre-contact population of the state, and Kroeber variously estimated totals of 100,000 to 150,000, ultimately

settling on 133,000 (1925). These numbers seemed reasonable in light of what was then known of early travelers' accounts, mission records, and population figures given by individual ethnographers. However, Merriam and Kroeber did not have the benefit of subsequent research (discussed below). Kroeber's figure is only about 43 percent of the 310,000 estimated by Cook (1976b:42-43; 1978) and 38 percent of the 350,000 calculated by Baumhoff (1963).

In the Sierra Nevada, the distribution, number, and density of Native people were strongly influenced by environment and culture. Population densities were highest and large villages most frequent at elevations below 3,300-4,100 ft; farther upslope, settlements were occupied mostly during the warm season. Populations thus tended to be most dense in the foothill zone to the west and relatively sparse along the Sierra crest and Great Basin rim to the east. As Moratto observed nearly two decades ago, any estimate of pre-A.D. 1800 Indian populations in the Sierra Nevada must be framed by caveats:

Population levels fluctuated over time in response to paleoenvironmental changes (Moratto et al. 1978, 1988); different methods of estimation (e.g., reliance on historical accounts, ethnographic recollections, or ecologic models) yield divergent results (cf. Baumhoff 1963; Cook 1976b; Kroeber 1925; Merriam 1905); and even such "accurate" historical documents as U.S. War Department and Bureau of Indian Affairs records from the 1850s may not be reliable indicators of earlier population levels. As S.F. Cook (1955a:70) has noted,

The depletion of population in the San Joaquin Valley [including the adjacent Sierra] between 1800 and 1850 was far greater than has been appreciated. ...Warfare, massacre, forced conversion, starvation and exposure all took a tremendous toll of life, but the sweeping epidemics of the 1830s were even more devastating [see Cook 1955b]. Together, these forces destroyed in the aggregate fully 75 percent of the aboriginal population.

Taking into account a wide range of information from early Spanish, Mexican, and other sources, Cook (1955a) estimated aboriginal populations of 7,600 for the Kaweah River drainage, 3,500 for the Merced, 9,100 for the Kings, 19,000 for the Mariposa area, Chowchilla, Fresno, and upper San Joaquin Rivers, and 4,140 for the "foothill strip," including lands of the Central and Northern Miwok. This yields a subtotal of 43,350 people in the southwestern Sierra Nevada. In the northwestern Sierra, populations of 1,050 for the Mountain Maidu and 7,400 for the combined Hill Maidu (Konkow) and Nisenan are estimated (Cook 1976b), giving a subtotal of 8,450. Adding roughly 500 for the Northern Paiute, 1,500 for the Washoe, 1,000 for the Owens Valley Paiute, and 500 for the Kawaiisu (Kroeber 1925) yields 3,500 as a subtotal for the eastern Sierra. Taken together, these estimates total 55,300.

This total, however, may be substantially lower than the actual native population of the Sierra Nevada prior to ca. 1830. Some of the estimates may fall short of the mark because of the reliance on post-epidemic observations. Even so, several historical accounts refer to large populations: James D. Savage, who was involved with numerous Sierran tribes before the gold rush, estimated in 1851 that 50,000-55,000 Native

Americans lived in the area between the Tuolumne and the Kern Rivers; O. M. Wozencraft, a U.S. Indian commissioner, in 1852 set the Native population of the area between the Yuba and the Mokelumne Rivers at 40,000, noting that old residents said the number had been twice as large in 1848; and Indian agent Adam Johnson in 1853 estimated that Sierran and Central Valley Indians totaled 80,000 [a number reckoned only two decades after the great epidemic of 1830-1833 had devastated Central Valley populations (Cook 1955b)] (Cook 1955a). Although Cook characterized these accounts as “broad generalizations based largely on subjective impressions and applying to the years preceding 1847” (1955a:33), they do suggest that the ethnographic population estimates are likely too low [Anderson and Moratto 1996:191].

Moratto, in Anderson and Moratto (1996:191), estimated that the Native American population of the entire Sierra Nevada might have been 90,000-100,000 during the early 1800s.

The aboriginal population of the Eastern Miwok (including Plains and Sierra) was thought by Kroeber to have been about 9,000, allowing “more than 2,000 to each of the four divisions. But all specific data are wanting” (1925:445). If one allows less than 2,000 for the Northern division and more than that number for the Southern, a total of 6,000 Sierra Miwok probably would not be far from what Kroeber had in mind. Relying mainly on primary historical sources, Sherburne Cook figured that the mid-nineteenth-century populations of the Stanislaus-Tuolumne (Central Sierra Miwok) and Cosumnes/Mokelumne/Calaveras (Northern Sierra Miwok) areas were approximately 2,000 and 1,000, respectively, and that the corresponding number for the Merced-Mariposa-Chowchilla (Southern Sierra Miwok) area was 2,500. These values total 5,500 for the Sierra Miwok. With respect to aboriginal populations, Cook (1955a) determined that roughly 4,135 people had occupied the “Miwok Foothill Area” from the Cosumnes River to the Tuolumne. No specific estimate was provided for the Southern Sierra Miwok, although the values given for the Merced and Mariposa-San Joaquin study areas (3,500 and 19,000, respectively) suggest that several thousand should be allocated to this division. Thus, according to Cook (1955a), the aboriginal population of the Sierra Miwok would have been roughly 6,000-7,000.

Subsequently, Baumhoff argued that Cook had “greatly underestimated” the aboriginal population losses, “due indirectly to contact, especially losses through disease,” among the Central and Southern Sierra Miwok and Western Mono (1963:217).

Mortality in the Central Valley from the 1833 epidemic, Cook estimated (1955b) must have been about 75 per cent. It must have been almost as high in the foothill region, so the population figures, being derived from post-1833 data, should have been increased by at least a factor of 3 to approximate the situation as of 1800. Accordingly, I recalculate the figures as follows: the Central Miwok had 1,470 persons in 1850 (Cook 1955a, p. 69), giving them an aboriginal total of 4,410; there were 1,922 Southern Miwok in 1850 (*ibid*, pp. 48, 53), giving them 5,766 people in 1850 [Baumhoff 1963:217].

Baumhoff did not venture a population estimate for the Northern Sierra Miwok. He did, however, compare “actual” populations (i.e., his recalculations of Cook’s 1955a values) with “predicted populations,” based upon his analysis of natural resources and determination of

carrying capacity for various California tribes, and found that the predicted and actual populations were 8,547 and 4,410, respectively, for the Central Sierra Miwok, and 8,503 and 5,766 for the Southern Sierra Miwok (Baumhoff 1963:220). Northern Miwok populations were not estimated.

These are interesting numbers. Just as Baumhoff justified increasing Cook's estimates to reflect dramatic population losses during the Mission era (Cook 1976a; Jackson 1996), so too should we now consider the Native population collapse in Pre-Mission Alta California (Preston 1996) and how that might have affected later estimates of aboriginal numbers. It is plausible that the sixteenth-century population of Sierra Miwok was close to the carrying capacity determined by Baumhoff, and exotic diseases for which the Native people had little or no immunity swept through large regions of California, particularly in areas of high population density, and devastated populations well before the Mission era. Assuming that the upper population limit for the Central and Southern Sierra Miwok was near 8,000 each, and allowing a somewhat lower number—say, 6,000—for the Northern Sierra Miwok, then it is conceivable that the total Sierra Miwok population peaked at approximately 22,000 around ca. A.D. 1600, fell to perhaps 15,000 in 1800, collapsed to 6,000-7,000 by 1835, and further declined to roughly 4,500 by A.D. 1852. Population counts during the twentieth century, while more accurate than the estimates for earlier periods, are still imperfect. As Davis-King has observed,

The 1906 Kelsey Report (Office of Indian Affairs [OIA] 1906) listed 128 non-reservation Indians in Tuolumne County, most of whom were listed as Central Sierra Me-Wuk, and 130 Calaveras County Indians who were only distinguished as being of Miwok Stock. Kelsey clearly omitted head counts for several prominent areas, including the areas south of Jamestown towards Quartz and Algerine, Soulsbyville, the Tuolumne River, a number of areas north and east of Columbia, and the more mountainous terrain east of the settled communities... .

Five years later the United States Office of Indian Affairs (1911) supplied updated census figures listing 227 Indians in eleven camps throughout Tuolumne County. Again, several areas were missed in the count. By June, 1918, the Tuolumne Rancheria had been established, and 299 Indians were counted by the Farmer in Charge for the Tuolumne "Reservation" (OIA 1918). Included in the 1918 count were Native Americans who lived at Chicken Ranch or who did not live on tribal land at all, such as Tom and Susie Williams of Chicken Ranch, or the Plummer family of Columbia. Not included in the county were Indians living in Calaveras, Stanislaus, San Joaquin, or other counties whose affiliation and enrollment were with Tuolumne [Davis-King 2003:10].

The Native American population of California climbed from a nadir of 15,377 in 1900 to 91,018 in 1970; however, many of those counted in the 1970 census were descendants of Indians from outside of California (Cook 1976:57, 1978:98). By the time of the 2010 enumeration, the total population of Native Americans and Alaska Natives living in California had risen to 362,801—an 8.8 percent increase since 2000 when the total was 333,346 (U.S. Census 2013); but, once again, these sums include many native individuals who were not of California Indian descent. The entire population of Tuolumne County according to the 2010 census was 55,375, of whom 2.2 percent, or approximately 1,218 individuals, claimed Native American or Alaska Native

ancestry (U.S. Census 2012). Towards the end of the twentieth century, there were 169 people living within the Tuolumne Rancheria and 445 living “adjacent” (CIAP 1996:139). By 2003, there were “more than 400 enrolled tribal members” at the Rancheria (Davis-King 2013:31).

5.5 Social Organization

The organization of Eastern Me-wuk society reflected two major considerations: totemic affiliation and patrilineal descent. With respect to the former, society was divided into two categories, and every individual from birth onward belonged to one or the other of these divisions. Kroeber (1925:446) observed that the “organization of society on the plan of two totemically contrasted halves, which was first discovered in California among the Miwok, extends south from them to the Yokuts and western Mono.”

The two “moieties”—a water side and land side—were totemic, patrilineally inherited, and exogamous. The system was more prominent among the Southern and Central than the Northern Sierra Me-wuk. All living things and much else belonged to one side or the other. As examples, the bear, fox, eagle, blue jay, sugar pine, tobacco, stars, night, and fire were assigned to the land side, while associates of the water side included deer, beaver, meadowlark, quail, salamander, ant, shells and shell money, Jimsonweed, clouds, rain, lakes, and rocks (Kroeber 1925:453-455). In addition to their function in exogamy, the moieties “compete with each other in games and they assist each other at funerals, mourning anniversaries, adolescence observances, and the like” (Kroeber 1925:457).

Personal names of the Central Sierra Me-wuk contain an implied or actual reference to an object associated with the same moiety as the named individual (Gifford 1916b:147).

Personal names of people in the water moiety frequently referred to deer, salmon, water, and valley quail. Personal names of people belonging to land moiety lineages frequently referred to bear, farewell-to-spring, and chicken hawk (Gifford 1916b) [Levy 1978:411].

Beyond moieties, Miwok society is organized into *nena* or male lineages, “which formerly was an independent autonomous political unit” (Gifford 1926:389).

The word *nena* has a twofold meaning. It means not only a male lineage or patrilineal joint family, but it also means the ancestral home in which the lineage is supposed to have arisen. The lineage name is always a place name. ...The *nena* had its head chief who was, so to speak, the patriarch of the lineage. The lineage was a land-owning group, the limited real estate of which was held by it being used in common by all members of the lineage [Gifford 1926:389].

Each *nena* is exogamous and belongs to one of the patrilineal exogamous moieties called respectively Land and Water [Gifford 1926:389].

Chieftainship was hereditary, the chief typically being a “master of ceremonies” (Powers 1976:352). Although chieftainship was inherited patrilineally, the status and role of a chief could be held by a man or woman.

In the central division there were head chiefs, *toko hayapo*, whose authority was recognized over considerable districts; *echuto hayapo*, chiefs of villages; and *euchi* or *liwape* (*liwa*, “speak”), who were either the heads of subsidiary villages or speakers and messengers for the more important chiefs. A born chieftainess, and the wife of a chief, were both called *mayenu*. ...It is evident that the concepts of rank were fairly developed [Kroeber 1925:452-453].

Davis-King (2003) reports that each *nena* was led by a “royal person,” *hiaypo*, who was of a royal family, and that the Northern, Central, and Southern Me-wuk tribes each had one head *hiaypo*.

[T]here may have been one *hiaypo* for all three of the tribal groups as well, and there is a suggestion that the Central Serra Me-Wuk *hiaypo* might function as the principal *hiaypo* for all. For example, the *San Andreas Independent* published two articles in 1857 about the death of the old chief “Hasuche.” ...[The first of these articles] emphasizes the idea that there may have been one principal chief. The 24 January 1857 edition gave an obituary for Hasuche, who died on the Mokelumne River in the winter of 1851-1852 at Frenchman’s Store [also known as Frenchman’s Bar or French Bar].

HASUCHE head chief of all tribes between the Cosumnes and the Merced, age about 45, six feet tall. Well educated (at Mission Santa Clara) Spoke Spanish, English, and Indian, but dignity made him speak English through an interpreter. Five chiefs under him were Pack-no, Antonio, Polo, Alcalde Charley, and Panchito... Early traders knew him—Savage, Weber, Isbell, James Ward—all at Webers Old Dry Diggings (Eldorado County).

Individual *nenas* and villages had leaders, but these were subordinate to the main *hiaypo* [Davis-King 2003:66-67].

With regard to mate selection, a Miwok man sometimes would marry his mother’s brother’s daughter, that is, his matrilineal cross-cousin but never his patrilineal cross-cousin. However, the preference was to marry a more distant relative or an unrelated person in the opposite moiety (Kroeber 1925:457-458). Further regarding marriage,

Barrett (in October, 1906) interviewed William Fuller... about marriage patterns, particularly related to totemism. Fuller said that marriage was always with a cross-totem and that this rule must always be followed, that is, marriage was totemically exogamous. People never married in their own totem, and children were always named into the totem on their father’s side (Barrett 1908b). As Gifford (1916a:293) observed, the division of all nature into two categories...was distinctive among the Central Sierra Me-Wuk: the land or *tunuka* group and the water or *kikua* group. Gifford also noted that the bear was the chief animal associated with the land moiety, and the deer with the water. Fuller said that there was a sort of fraternity among the people of each group, no matter where they were or at how great a distance. Thus a *tunuka* from Sonora could visit a *tunuka* in Yosemite, and expect that they knew they were somehow related [Davis-King 2003:66].

5.6 Land Use and Settlement

Like all native peoples with homelands on the western slope of the Sierra Nevada, the Me-wuk adapted their land-use and settlement patterns in response to the seasons and attendant changes in resource availability.

The almost limitless and varied supply of vegetable foods naturally attracted the Indians from the lower altitudes to the higher mountains during the summer months. Game was also abundant. Many species of animals and birds, such as deer, elk, and quail, wintered in the plains and foot-hills, but moved to higher mountains during the heat of summer. Fish were also abundant in the streams at this season. All these circumstances, combined with the excessive summer heat of the lower foot-hill region, tended to induce the Indians to move to the higher altitudes wherever possible [Barrett 1908:336].

During the late fall, winter, and early spring, communities of several to 20 or more families would occupy substantial dwellings at a semi-permanent, named village to which the same population would return each fall. Typically, such villages were situated in the foothills at elevations below about 3,300 ft, below the snow line, and would include not only houses but also granaries for food storage, mortars and sometimes milling slicks on bedrock outcrops, sun shades over the mortars, and a men's sweathouse. A reliable stream of water to meet domestic needs was adjacent, a menstrual hut was not far away, and one or more trails would connect the village to neighboring settlements, hunting and gathering locales, and fishing places. If a chief lived in the community, the village likely would also have a special house for him/her, usually larger than a normal dwelling, and possibly a ceremonial lodge/dance house. Cemeteries occurred within or very near villages of long duration.

With the arrival of spring and its abundant resources, small parties of women, men, or both would fan out from the village to harvest medicinal and food plants as they matured, or to hunt, trap, fish, or replenish supplies of toolstone and other materials. Sometimes this required camping for brief periods away from the village. Unlike winter villages, such ephemeral task-based camps might have temporary brush shelters but rarely any buildings of substance.

A major population shift took place each year during the late spring or very early summer, when hot temperatures, vanishing streams, dying annual vegetation, and departing game animals conspired to stimulate an upward movement by Indians. Following the spring as it advanced into the higher mountains was not an overnight trek, but a steady, systematic transition from one environmental zone to the next, with many stops along the way to procure local resources. Particular campsites were visited repeatedly over the years, generally were equipped with bedrock mills, and often were named after a prominent natural feature or some past event that had occurred there. Moving upwards, the population tended to disperse so that scattered summer camps in the mountains replaced the single aggregation of the foothill winter village. During the brief summer in the upper altitudes, the Indians traded for commodities from the western Great Basin as well as hunted large and small game and gathered a variety of fruits and vegetables as they ripened. Chilly weather in the high country in late summer was a cue for people to begin their descent and to reconvene at the main village in time to harvest acorns and otherwise lay in stores for the coming winter.

An implication of this pattern of seasonal movement is that one should expect to find not only winter-use, semi-permanent villages and task-specific campsites in the area of Don Pedro Reservoir, but also trail-side camps at mid-slope elevations and warm-season settlements in the high country that reflect the activities of the same population at different times of the year. In other words, the land-use and settlement activities of the Project area's Native residents also extended far upslope from the limits of what is now the reservoir to include the mountains (e.g., near Groveland) and high Sierra (e.g., Tuolumne Meadows).

Within the broad patterns of seasonal land use, settlements were located according to such variables as terrain, biotic diversity and richness, availability of water, and bedrock suitable for milling foodstuffs. The siting of individual camps or villages also reflected such considerations as view, aspect, insolation, shelter from winds, slope, drainage, vegetation cover, access to trails, perceived flood or fire hazards and perhaps defense, as well as the intended site function, number of residents, anticipated duration of use, and proximity to other settlements (Anderson and Moratto 1996:191).

The number of inhabitants at a given location ranged from one or two (e.g., a couple of men at a hunting camp) to a few hundred in the larger winter villages. Intermediate in size were seasonal and special-purpose encampments. In late prehistoric and protohistoric times, the Me-wuk were organized into "village communities," each consisting of a named principal settlement under a chief or headperson and a number of smaller, tributary hamlets (Kroeber 1962b; Merriam 1967). The central villages of these communities were often situated near major streams in favorable settings within the Upper Sonoran or lower Transition life zone. These villages also were often associated with a particular *nená* and held special status as the ancestral home of that lineage.

Turning to the location of recorded Central Sierra Me-wuk villages, Kroeber (1925:Plate 37) shows the distribution of Me-wuk (and Maidu) settlements. The map scale is too coarse (>21 miles per inch) to allow for the precise determination of settlement location; nonetheless, Plate 37 is informative. Kroeber's placement of numbered "villages" along or near the Tuolumne River is summarized in Table 5-2.

Of the villages mapped by Kroeber in 1925, only two—*Siksike-no* and *Sopka-su*—are identified in the immediate vicinity of what is now Don Pedro Reservoir, an information gap probably resulting from the abandonment of settlements along that reach of the Tuolumne River during the Gold Rush, five or more decades before ethnographers began to document in detail Me-wuk settlement names and locations.

Long before the Bureau of American Ethnology issued Kroeber's *Handbook of the Indians of California* in 1925, Clinton Hart Merriam—working largely independently of the Berkeley anthropologists (Kroeber, Gifford, Barrett, and others)—had compiled extensive field notes on the Me-wuk (Merriam n.d.a, n.d.b, n.d.c), some of which were later published posthumously by the University of California, Berkeley (Merriam 1955, 1966, 1967, 1977; Merriam and Talbot

Table 5-2. Ethnographic settlements near the Tuolumne River (after Kroeber 1925:Plate 37).

Number	Village Name	Location/Comments
58	<i>Singawii-n</i>	Apparently near the head of the North Fork of Dry Creek, roughly 11 miles west of La Grange.
74	<i>Hochhoch-meti</i>	On the south side of the river, some 7-8 miles downstream from Don Pedro Dam.
75	<i>Siksike-no</i>	Just west of the river near the Woods Creek confluence, not far from Chinese Camp.
76	<i>Sopka-su</i>	A mile or two southwest of Woods Creek, and about the same distance up the creek from <i>Siksike-no</i> .
77	<i>Pasi-nu</i>	On the north side of the river, roughly 12-13 air miles upstream from Don Pedro Dam.
78	<i>Pangasema-nu</i>	On the west bank of the North Fork Tuolumne River just above its confluence with the main stem.
79	<i>Suka-nola</i>	Approximately 3-4 miles north of <i>Pangasema-nu</i> and 5-6 miles southeast of Sonora as depicted on Kroeber's (1925) Plate 37.
80	<i>Sukwela</i>	Slightly west of the North Fork Tuolumne River, about 8-9 miles east of Sonora.
81	<i>Telese-no</i>	Northeast of Sonora.
83	<i>Olawiye</i>	A short distance east of the North Fork, approximately 7-8 air miles up from its confluence with the river's main stem.
84	<i>Kulamu</i>	On the west side of the Clavey River, aka Clavey Fork of the Tuolumne River, 4-5 air miles north of the Clavey's mouth.
85	<i>Hechhechi</i>	In Hetch Hechey Valley, some 37-38 air miles east-northeast of Don Pedro Dam.
86	<i>Pigliku</i>	Miwok pronunciation of "Big Creek" (Kroeber 1925:445); on Big Creek, south of the river, east of Groveland and 12-13 air miles northeast of Don Pedro Dam.
87	<i>Sala</i>	Immediately south of <i>Pigliku</i> .

1974). Merriam's notes on "Middle Mewah" (Central Sierra Me-wuk) tribal and village names are relevant to this study, although, as Davis-King (2003:34, 37) cautions, Merriam's inventories are far from complete and probably reflect the geographically-limited knowledge of his two Native American consultants in the area. Merriam's notes on Middle Mewah tribal and village names are summarized by Davis-King (2003) in her Tables 2 and 3, respectively. Information for the Tuolumne River area, distilled from her Table 3, appears below in Table 5-3.

Merriam's inventory does not shed much light on the Native people or their settlements in the Don Pedro study area. Only *Ko-yo-che* is identified in the general vicinity, and that location seems to have been downstream, "four miles below Pleasant Valley and La Grange," or roughly 7 miles southwest of Don Pedro Dam. This leaves Kroeber's (1925:445) *Siksike-no* and *Sopka-su* on lower Woods Creek as the only named Me-wuk villages for which names have been recorded in, or very close to, the Project area.

Table 5-3. "Middle Mewah" villages in the Tuolumne River Country as recorded by Merriam (n.d.b, n.d.c), from Davis-King (2003:Table 3)

Village Name	Comments
<i>Hetch'-hetch-e</i>	Village in Hetch Hetchy valley on Tuolumne River. [Corresponding to the <i>Hechhechi</i> of Kroeber (1925:445)].

Village Name	Comments
<i>Ko-yo-che</i>	(Salt people) Former Mewah village in foothills on south side of Tuolumne River, 1 ½ mile from <i>Si-ang-ah-se</i> . [Davis-King (2003:35) recounts that Merriam (n.d.b) identified <i>Si-ang-ah-se</i> as a “Mewah band on south side of Tuolumne River four miles below Pleasant Valley and La Grange, near where Stanislaus, Tuolumne, Merced, and Mariposa counties meet.” Chief’s name Was <i>Ty-poxe</i> . Merriam wrote that Typoxe was the great chief of the Siyante tribe, called by Powers Merced Chimteya.]
<i>Pahng’-ah-hung’-che</i>	Mewah village at or near Garrote [Second Garrote?], a few miles east of Big Oak Flat, Tuolumne County. [Davis-King (2003:36) notes that Merriam put this village in Southern Sierra Mewuk territory.]
<i>A-pang-as-se</i>	A village on the Tuolumne River? [See Table 5-1].
<i>Tap-pin-ah-go</i>	Mewah village two miles northeast of Groveland on Big Creek, Tuolumne County. [Davis-King (2003:36) observed that “This is likely to be the village Kroeber (1925) called ‘Piglaku’ { <i>Pigliku</i> }, given the location. Piglaku was said to be the Me-Wuk pronunciation of Big Creek. It is also interesting that Merriam considered it to be Mewah, despite its proximity to the heart of Tuolumne County, as the people there did indeed speak a Southern Sierra Mewuk dialect, and traced their descent to southern Mewuk leaders.] Hudson [n.d.] may have called this village <i>Topinagugim</i> .” However, as Dr. Roselynn Lwenya of the Buena Vista Rancheria has pointed out that “The statement that the people of Piglaku spoke Southern Sierra Miwuk dialect and trace their descent to Southern Mewuk leaders is problematic. A large portion of the citizens of the Tuolumne Band of Me-Wuk, including many of the informants for this study, trace lin[e]age to Sophia Thompson who was the last Captain at Piglaku; and they consider that they speak central dialect. Piglaku was on Big Creek in what is now known as Groveland, at the site of the Pine Mountain Lake subdivision. According to tribal oral history, Merriam would be wrong, and his mistake should not continue to be perpetuated in this study” (Lwenya, personal communication to HDR, August 4, 2014).

6.0 ETHNOGRAPHY – PART 2

As noted in the introduction to Chapter 5, the aim of that chapter and this is to describe Me-wuk cultural traditions as a basis for evaluating possible TCPs within the Don Pedro Project area. While Chapter 5 considers Native language, territory, demography, social organization, land use, and settlement patterns, the present chapter takes up subsistence, “material culture,” medicine and curing, cosmology, and ritual and ceremony. Special attention is given in Chapter 6 to the subsistence and medicine—especially the plant and animal resources used as food, herbal cures, and basketry material—because the Me-wuk continue to use many of these same resources today as essential for the maintenance of their traditional cultural practices.

6.1 Subsistence

6.1.1 Uses of Plant Resources

Traditional Me-wuk subsistence practices and diet varied according to season, elevation, and environmental setting. In general, foods were most abundant during the warm seasons. A number of dietary staples were garnered when available and then stored, sometimes many months, for later processing and consumption. The main subsistence activities were harvesting acorns and other nuts and seeds, gathering a wide array of food plants, fishing (mainly for salmon), trapping, and hunting small and larger game animals. The pre-contact Me-wuk were not agriculturalists as such, although they did plant tobacco and certainly engaged in “proto-agricultural” activities; that is, they managed natural resources to increase yields and achieve other beneficial results (Anderson 2005; Anderson and Moratto 1996; Bean and Lawton 1973; Lightfoot and Parrish 2009).

The Sierra Me-wuk depended primarily on acorns (Powers 1976:351). Acorn eating was “probably the most characteristic feature of the domestic economy of the California Indians” (Gifford 1936:87). Acorns came “pre-packaged,” were relatively easy to pick from the oak tree or as mast, and were suitable for long-term storage. Acorn was a highly nutritious food, supplying (depending on species) 5.5-18.0 percent fats, 55.5-69.0 percent carbohydrates, 3.9-6.3 percent protein, and approximately 5980 kilocalories per kilogram (Baumhoff 1963; Mayer 1976; Merriam 1918; Wolf 1945). The acorn industry of the Me-wuk involved four steps: collecting, storing, processing, and cooking and eating (Mayer 1976; Ortiz 1991). Acorns of the valley oak (*Quercus lobata*), blue oak (*Q. douglasii*), interior live oak (*Q. wislizenii*), and black oak (*Q. kelloggii*) were the kinds most commonly gathered by the Me-wuk (Mayer 1976:5). The former two of these produce a nut crop annually, while the latter two are biennial producers (Jepson 1925:271-277; Pavlik et al. 1991). Black oak acorns were preferred not only because they were relatively easy to hull and kept well but also for their good taste (Barrett and Gifford 1933; Ortiz 1991).

Acorns were stored in a *tca'kka*, an elevated outdoor granary (Barrett and Gifford 1933:207-208; Clark 1904:38-44). A cylinder-shaped granary of willow wickerwork, thatched, was built on posts or a tree with “a couple of forks a few feet off the ground” (Powers 1976:351). Kroeber (1925:447) says that granaries were fashioned of posts, twigs, and grass, and were thatched (see also Bates 1966:18-19; Bingaman 1966:Facing p. 9; Godfrey 1941:9; Kroeber 1925:Plate 37).

Elizabeth Grinnell (1893:559) observed one such granary in Yosemite Valley and estimated its capacity at approximately 50 bushels (see also Ortiz 1991:44 [photo, ca. 1880-1890]). It was desirable to gather and store each fall enough to last two years, “so if a bad year came the people would not suffer” (Merriam 1905:596). “[T]he quantity of stored food that could have been carried over the winter would have been a critical factor in determining population size” (Baumhoff 1963:161). Acorns were hulled, roasted on hot stones, gathered into baskets, and carried to bedrock mills to be pounded into meal. When the grinding was done, the meal was placed into a large basket, water was added to make a batter, and this was placed into a leaching basin shaped in the sand (Grinnell 1893:559). Barrett and Gifford (1933:144-145) report that:

The pulverized root of *Peltiphyllum peltatum* [no English common name; *senseteko* in Central Me-wuk]...was sometimes mixed with acorn meal to whiten it. The green leaves of Spanish clover (*Lotus americanus*)... were pounded with acorns that were too oily, to absorb some of the oil. ...A third plant which was at times pulverized and mixed with acorn meal intended for “bread” making was the root of either a pond lily or a cattail.

The crux of acorn processing is the removal of its tannic acid. The knowledge of leaching was universal among the native peoples of the Pacific Coast (Gifford 1936). Many scholars have recorded details of acorn processing (Barrett and Gifford; Gifford 1936; Grinnell 1893; Heizer and Elsasser 1980; Holmes 1902; Kroeber 1925; Merriam 1955; Ortiz 1991; Powers 1976). The Sierra Me-wuk used both baskets and shallow basins of sand for leaching (Gifford 1936). Merriam (1955) observed that tannic acid was leached from black oak acorn meal in “filters”—shallow basins 1.2 to 1.4 meters (4.0 to 4.5 feet) in diameter. A gravel base was overlain by sand; an upper layer consisted of wet pine needles, willow twigs and leaves or wet gunnysack cloth; and warm water was poured on the acorns (cold water used on blue oak acorn meal). Fir boughs were employed to spread the flow of water evenly. One of the Central the Me-Wuk elders from Tuolumne interviewed for the present study listed seven steps in acorn preparation: (1) make a bed of cedar poles (“lattice style”); place over the pole lattice (2) pine needles, (3) chaparral leaves, (4) wet gunny sacks, and (5) flour sacks, in that order; (6) spread the acorn meal over the flour sacks; (7) overlay the meal with cedar boughs; and then begin the leaching process (Tom Carsoner, personal communication to HDR, July 29, 2014).

Merriam (1955:67-68) also describes the process of cooking acorn at Cherokee, Tuolumne County. The acorn was cooked as mush by stone boiling in small to large baskets (cf. Gifford 1936; Grinnell 1893), and the mush was then made into loaves called *oo-la'* resembling turtles by immersing the warm mush into the cold water of a creek (Merriam 1955:62). The technique for making loaves of acorn bread is described by Grinnell (1893:229).

Barrett and Gifford (1933:137-193) summarize the great variety of vegetal foods, fish, meat of game birds and animals, and insects consumed by the Sierra Me-wuk. Some of these are summarized in Tables 6-1 and 6-2. Similarly, Magwood (1977) commented that the country around what is now Twain Harte abounded with deer, bear, and many small animals, and that “edible plants of all sorts” grew in the area. The Me-wuk “collected wild onions, mushrooms, roots, and various other greens” (Magwood 1977:570). This is relevant to the present study because it shows the continuity of traditional economic practices (hunting and gathering) by

Indians—who had been encamped on the Abbott Ranch in the nineteenth century and later drifted gradually to “the small reservation at Cherokee above Tuolumne” (Magwood 1977:570).

Listed in Table 6-1 are numerous species of plants that supplied quantities of small, edible seeds. The Me-wuk employed such techniques as pulling up the entire plant and drying it, using a seed beater and collecting basket, or thrashing with a stick to harvest the seeds. Then the seeds were variously winnowed, parched, pulverized in a mortar, and consumed either dry or in the form of mush. Some kinds of seeds could be dried and stored for later use, but others would not keep. In addition to the species of seed-producing plants enumerated in Table 6-1, Barrett and Gifford (1933:155) name more than a dozen other kinds used by the Me-wuk but not identified as to species. Similarly, the bulbs and corms of a wide variety of plants were gathered with the aid of a digging stick and then roasted in the ashes of a fire that had died down or baked/steamed in an earth oven. The Me-wuk recognized each variety by name (see Table 6-1), though casual observers over the decades have tended to refer to all kinds of bulbs and corms used by the Indians as “wild potatoes” or “Indian potatoes.”

“Indian potatoes” is a general term covering several species, the bulbs of which were eaten raw or roasted by the Indians. Included among these “potatoes” are the bulbs of: Blue Dicks or Wild Hyacinth (*Dichelostemma pulchella*); Wally Basket or Ithuriel’s Spear and Pretty Face (*Triteleia* spp.); and Harvest Brodiaea (*Brodiaea elegans*) [Niehaus 1974:200-202]. Barrett and Gifford (1933:155) recorded that there were names of 28 kinds of “wild potatoes,” but only 12 of these were identified. The number of greens consumed by the Me-wuk is quite remarkable. Barrett and Gifford (1933:158) reported 37 species, of which 21 were identified, and observed that the range of plants eaten as greens “outnumbered those used in the modern dietary.” Many of these plants are listed in Table 6-1. Me-wuk names for the plants used as greens, but not identified as to genus and species, are recorded by Barrett and Gifford (1933:161). Some of these plants were boiled or steamed, others were eaten raw, and several in the former category could be dried and stored for use months later (Table 6-1).

6.1.2 Uses of Animal Resources

Beyond gathering acorns, pine nuts, and a host of other plants to be eaten or used as raw materials (Table 6-1; Anderson 1988; Lightfoot and Parrish 2009), the Me-wuk fished and hunted for both small and larger game animals (Table 6-2). Fishing has long been a significant activity for the Me-wuk (see Clark 1904). Fish belong to the water moiety (see Chapter 5). Bates (1984:18-21) describes dip nets, seines, fish traps, spears/harpoons, and poisoning techniques for taking fish. Chinook salmon were especially important as a food resource, but mountain whitefish and rainbow trout were also taken. Fish were caught with bare hands, by spearing, with dip nets or seines, in cone-shaped basketry fish traps, by hook and line, or with poison (Bates 1984:18-21; Clark 1904:37-38). Among the poisons used were soaproot bulbs, vinegar weed, manroot, and California laurel (Bates 1984:22). Fish were broiled whole, or occasionally dried for later consumption (Bates 1984: 22). Salmon eggs, too, were eaten fresh or dried and later reconstituted (Bates 1984:22).

Table 6-1. Plants used by the Sierra Me-wuk as food and raw materials.

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Alum Root (<i>Heuchera micrantha</i>)	<i>Tcuyuma</i> ; <i>Chuyuma</i>	Greens boiled or steamed and eaten. After steaming, the greens could be dried and stored.	Barrett and Gifford (1933:159).
Anise or Wild Caraway (<i>Carum kelloggii</i>)	<i>Sakasu</i>	Roots eaten.	Barrett and Gifford (1933:157); Clark (1904:48).
Balsam Root (<i>Balsamorhiza sagittata</i>)	<i>Ho'tcotca</i> ; <i>Ho'chocha</i>	Seeds cracked, winnowed, and eaten.	Barrett and Gifford (1933:152).
Bay		See California Laurel.	
Big-leaf Maple (<i>Acer macrophyllum</i>)	<i>Si-ye</i>	Leaves used to wrap foods for cooking in earth oven. Shoots served as material for making baskets.	McCarthy et al. (n.d.: 14-15).
Big Tree (<i>Sequoia gigantea</i>)	<i>Pusine</i>	Bark sometimes used to cover conical houses.	Barrett and Gifford (1933:199).
Black Oak (<i>Quercus kelloggii</i>)	<i>Tele:li</i>	Acorn (<i>nüppa</i>) eaten. This was the preferred type of acorn. Oak wood used as posts and beams for Me-wuk houses and for other purposes,	Barrett and Gifford (1933:142); Clark (1904); Lightfoot and Parrish (2009:319); Mayer (1976); McCarthy et al (n.d.:18-21); Me-wuk elders, notes; Ortiz (1991).
Black Walnut (<i>Juglans hindsii</i>)		A native tree. Nuts eaten. Shells used to make dice (gaming pieces).	Me-wuk elders, notes; Peterson and Peterson (1975).
Blue Dicks (<i>Dichelostemma pulchella</i>)	<i>Walla</i>	Bulbs prepared and as "Indian Potatoes." Baked/steamed in earth oven; then eaten.	McCarthy et al. (n.d.:1-4-105); Niehaus (1974:200-202).
Blue Elderberry (<i>Sambucus glauca</i>)	<i>Añta'iyu</i> ; <i>'Ang tay:u</i>	Berries cooked and eaten; large stock dried for winter consumption. Wood used to make split-stick clappers, flutes, and tobacco pipes. See also Elderberry.	Barrett and Gifford (1933:163); Clark (1904:46); Lightfoot and Parrish (2009:317).
Blue Iris (<i>Iris</i> spp.)		Fibers from leaves used to make strong string.	McCarthy et al. (n.d.:108-109).
Blue Oak (<i>Quercus douglasii</i>)	<i>Wilisu</i>	Acorn (<i>nüppa</i>) eaten. Blue oaks were a substitute food when black oaks failed to produce. Blue oaks are bitter and it is hard to leach out all the tannic acid from their acorns.	Barrett and Gifford (1933:142); Lightfoot and Parrish (2009:318); Mayer (1976); Me-wuk elders, notes.
Bracken Fern (<i>Pteridium aquilinum</i>)	<i>Ku-pa-koo</i>	Rhizome, stained black, was used as a material to make designs on basketry.	Bates (1980:13); McCarthy et al. (n.d.:66-67).
Broad-Leaved Lupine (<i>Lupinus latifolius</i>)	<i>Wataksa</i> or <i>Tci'utciuwa</i>	Leaves and flowers steamed and eaten or, after steaming, dried and stored for winter use.	Barrett and Gifford (1933:159).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Brodiaea (<i>Brodiaea elegans</i>)	<i>Tene;</i> <i>Yumu:tu;</i> <i>Walla</i>	One of many varieties of “Indian potatoes.” Bulbs dug up, eaten raw, roasted, or baked/steamed in an earth oven.	Barrett and Gifford (1933:156); Clark (1904:48); Lightfoot and Parrish (2009:308); McCarthy et al. (n.d.:104-105).
Buckeye		See California Buckeye.	
Buena Mujer (<i>Mentzelia</i> sp.)	<i>Matcu’;</i> <i>Mat.chu’</i>	Seeds pulverized and eaten as pinole.	Barrett and Gifford (1933:155).
Bunch Grass (<i>Muehlenbergia rigens</i>)		Stalks bundled and used as foundation for coiled basketry.	Bates (1980:7).
California Blackberry (<i>Rubus vitifolius</i>)	<i>Lututuya;</i> <i>Lakutiya</i>	Berries eaten fresh.	Barrett and Gifford (1933:162); Lightfoot and Parrish (2009: 316).
California Buckeye (<i>Aesculus californica</i>)	<i>Siwü</i> or <i>Siwu</i>	Emergency food; used when acorn crop failed. Nuts must be leached well before they become edible. Mashed buckeye nuts were used to stupefy fish. Buckeye wood made good fire drills.	Aginsky (1943); Barrett and Gifford (1933:148-149, 190); Lightfoot and Parrish (2009:308); McCarthy et al. (n.d.:6-7).
California Buttercup (<i>Ranunculus californicus</i>)	<i>Takalu</i>	Seeds gathered, winnowed, dried, and stored; then parched, pulverized, and eaten.	Barrett and Gifford (1933:155).
California Honeysuckle (<i>Lonicera hispidula</i>)		Used as warp material for basket weaving.	Bates (1980:10).
California Laurel or Pepperwood or Bay or Myrtle (<i>Umbellularia californica</i>)	<i>Loko,</i> <i>La-ka-lak</i>	Fruits roasted in ashes and eaten; leaves used as a seasoning in cooking; also used raw as a fish poison. Fresh branches of bay leaves would keep flies away from field-dressed deer or prevent insects from invading stored acorns, nuts, and seeds. Leaves crushed or rubbed on skin to repel mosquitos.	Barrett and Gifford (1933:163); Bates (1984); Lightfoot and Parrish (2009: 315-316); McCarthy et al. (n.d.:4-5); Me-wuk elders, notes.
California Nutmeg (<i>Torreya californica</i>)		Nuts edible after being leached and roasted. Charcoal from burned nuts used in tattooing.	McCarthy et al. (n.d.:16-17).
California Wild Grape (<i>Vitis californica</i>)	The vine: <i>Papela</i> or <i>Tolmesu</i> , also attested as <i>Ka-la-pa-su</i> ; the grape: <i>Kimis</i> .	Ripe berries eaten raw. Vines used as withes to bind elements of granaries, framework for houses, and other structures. Leaved used to wrap foods to be baked in an earth oven.	Barrett and Gifford 1933:162, 198; Lightfoot and Parrish (2009:316-317); McCarthy et al. (n.d.:38-39). Me-wuk elders, notes.
Camas (<i>Camassia quamash</i>)		Bulbs baked in an earth oven and eaten.	Clark (1904:48); Godfrey (1941:11); McCarthy et al. (n.d.:106-107).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Canarygrasses (<i>Phalaris</i> spp.)		Seeds appear in archaeological contexts in the Sierra Nevada foothills; possibly a food resource in ethnographic times.	Lightfoot and Parrish (2009:308); Rosenthal (2006); Wohlgemuth (2004).
Canyon Live Oak (<i>Quercus chrysolepis</i>)	<i>Sa-ko-pah</i> ; <i>Sako pa</i>	A good producer of edible acorns.	McCarthy et al. (n.d.:18-21).
Cattail (<i>Typha</i> spp.)		Root pulverized and mixed with acorn meal intended for making bread; roots and tender stems edible. Leaves woven into mats to cover house floors or door openings, or for use as bedding. The cylindrical inflorescence is highly absorbant and, long ago, was broken up and used in baby diapers.	Barrett and Gifford (1933:145); Lightfoot and Parrish (2009:308); McCarthy et al. (n.d.:68-69); Me-wuk elders, notes.
Cedar		See Incense Cedar.	
Chile Tarweed (<i>Madia sativa</i>)		Seeds used as food.	Barrett and Gifford (1933:154).
Chokecherry (<i>Prunus demissa</i>)	<i>Pisakene</i> ; <i>Te-pe-nah</i>	Mature fruit eaten raw (immature berries are toxic and must be cooked before consumed); good for the voice.	Barrett and Gifford (1933:162); McCarthy et al. (n.d.:28-29).
Clarkia (<i>Clarkia elegans</i>)	<i>Sokowila</i>	Seeds dried, parched, and pulverized in a mortar; eaten with acorn mush.	Barrett and Gifford (1933:152).
Clover (<i>Trifolium</i> sp.)	<i>Pumusayu</i> ; <i>Co-ca-chee</i>	Eaten raw or steamed; or dried for later use. Wilted leaves mixed in water to make a drink.	Barrett and Gifford (1933: 61, 160); Lightfoot and Parrish (2009:309); McCarthy et al. (n.d.:116-118); Me-wuk elders, notes.
Columbine (<i>Aquilegia truncata</i>)	<i>Tcuyuma</i> ; <i>Chüiyüma</i>	Boiled and eaten in the early spring.	Barrett and Gifford (1933:159).
Common Mullein or “Mule Ears” (<i>Verbascum thapsus</i>)		Large leaves were used to wrap food, which was then placed in the campfire to cook.	Me-wuk elders, notes.
Corn Lily (<i>Veratrum californicum</i>)	<i>Sulumta</i>	Bulbs roasted in ashes, peeled, and eaten; not stored.	Barrett and Gifford (1933:158).
Cow Clover (<i>Trifolium involucreatum</i>)	<i>Saksamö</i> ; <i>Saksamu</i>	Leaves and flowers eaten raw; never cooked. Leaves used to make a sour drink.	Barrett and Gifford (1933:160); Lightfoot and Parrish (2009:309).
Coyote Mint		Traditionally harvested in the Kanaka Creek area; eaten.	Me-wuk elders. Notes.
Curlydock (<i>Rumex crispus</i>)		Non-native plant, introduced from Europe. Leaves (and seeds?) dried and mixed with tobacco for smoking.	McCarthy et al. (n.d.:70-71); Me-wuk elders, notes.
Currant		See Golden Currant and Sierra Currant.	
Deer Grass (<i>Muhlenbergia rigens</i>)		Spikelets used as foundation material for coiled baskets.	McCarthy et al. (n.d.:72-73).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Dense-Flowered Evening Primrose (<i>Boisduvalia densiflora</i>)	<i>Winiwayu</i>	Seeds parched, pulverized, and eaten dry, or stored for later use.	Barrett and Gifford (1933:152).
Dogbane or Indian Hemp (<i>Apocynum</i> spp.)		Fibers used to make string, cordage, ropes, nets, snares, fishing line, etc.	Lightfoot and Parrish (2009:309-310); McCarthy et al. (n.d.:42-43).
Elderberry (<i>Sambucus nigra</i>)	<i>Añta'iyu;</i> <i>'Angtay:u;</i>	Ripe (blue) berries eaten fresh or cooked; also dried for winter use. Canes used to make flutes, pipes, and clapper sticks. See also Blue Elderberry.	McCarthy et al. (n.d.:32-33).
Dogwood		See Mountain Dogwood.	
Eulophus (<i>Eulophus bolanderi</i>)	<i>Olasí</i>	Bulbs stone-boiled in baskets, peeled and eaten. Also, when the acorn supply was depleted, Eulophus bulbs were sun-dried, pulverized in a mortar, and cooked in a basket to make <i>siwüla</i> . If mashed and dried, the bulbs could be preserved and stored.	Barrett and Gifford (1933:157-158).
Farewell to Spring (<i>Clarkia</i> spp.)		Plants harvested; seeds dried and pulverized; eaten as pinole.	Lightfoot and Parrish (2009:308).
Farewell to Spring (<i>Godetia biloba</i>)	<i>Witala</i>	Seeds gathered, winnowed, parched, pulverized, and eaten.	Barrett and Gifford (1933:154).
Farewell to Spring (<i>Godetia viminea</i>)	<i>Nuwati</i> or <i>No'wasi</i>	Seeds were winnowed and stored; pulverized, but eaten dry and uncooked.	Barrett and Gifford (1933:154).
Fitch's Spikeweed (<i>Centromadia fitchii</i>)		Seeds eaten in the form of mush.	Barrett and Gifford (1933:152).
Fungus (tree fungus)		Eaten.	Aginsky (1943).
Golden Brodiaea (<i>Brodiaea ixioides</i>)	<i>Siliwü</i>	"Indian potato." Bulbs eaten.	Barrett and Gifford (1933:156); Lightfoot and Parrish (2009:308).
Golden Currant (<i>Ribes aureum</i>)	<i>Hemekine</i>	Fruit eaten fresh or cooked; sometimes dried and stored for later.	McCarthy et al. (n.d.:30-31).
Gooseberry (<i>Ribes roezlii</i>)	<i>Kilili</i>	Berries winnowed and pulverized in a mortar to remove spines, then eaten raw or cooked.	Barrett and Gifford (1933:162); Lightfoot and Parrish (2009:322); McCarthy et al. (n.d.:36-37).
Goosefoot		See White Goosefoot.	
Grass Nuts (<i>Brodiaea</i> sp.)	<i>Wata'</i>	"Indian potato." Bulbs eaten.	Barrett and Gifford (1933:154); Lightfoot and Parrish (2009:308).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Gray Pine (<i>Pinus sabiniana</i>)	<i>Sak:u; El:ati, Ellati</i> (green cones and soft-shelled nuts)	Pine nuts and pith of cones eaten; needles used for thatch, bedding, and floor covering; bark for house covering; twigs and rootlets used as sewing material for coiled baskets. Cones and nuts harvested green in the springtime or ripe (brown) in the fall. Scales of mature cones were drilled and strung between spacers of seeds or beads for necklaces. Also, the new shoots (“candles”) on young trees were cut off, split, and used as very strong ties.	Bates (1980); Barrett and Gifford (1933:149-150, 199); Clark (1904:44); Lightfoot and Parrish (2009:318); McCarthy et al. (n.d.:22); Merriam (1967); Me-wuk elders, notes.
Green Dock (<i>Rumex conglomeratus</i>)	<i>Sapazü; Sapasü</i>	Leaves cooked and eaten as greens; seeds not used.	Barrett and Gifford (1933:160).
Gum-Weed (<i>Madia dissitiflora</i>)	<i>Etce'</i>	Highly valued seeds; winnowed and stored; parched with coals, re-winnowed, and pulverized in a mortar; oily meal eaten.	Barrett and Gifford (1933:154).
Harvest Brodiaea (<i>Brodiaea coronaria</i>)	<i>Walla; Wal'a</i>	“Indian potato.” Dug by men and women; transported to cooking place; steamed in an earth oven; eaten without salt.	Barrett and Gifford (1933:156); Niehaus 1974:200-202); Godfrey (1941:11); Lightfoot and Parrish (2009:308); Me-wuk elders, notes.
Hazelnut (<i>Corylus rostrata</i>)	<i>Mü'la; Sul-luk-koo</i>	Nuts used to a limited extent as food. Shoots important for use as warps in basketry.	Aginsky (1943); Barrett and Gifford (1933:153); Bates (1980:10); Lightfoot and Parrish (2009:316); McCarthy et al. (n.d.:40-41).
Horseweed (<i>Erigeron mexicana</i>)	<i>Mututa</i>	Leaves and tender tops pulverized in bedrock mortar; not cooked; eaten; flavor like onions.	Barrett and Gifford (1933:159).
Incense Cedar (<i>Calocedrus decurrens</i>)	<i>Mo-no-go or Chapa:ha</i>	Slabs of bark used to form conical houses in the mountains. Boughs or bark placed on sweathouse fire to change color of flames. Boughs also used as bedding and floor covering in houses, and to spread the water evenly over acorn meal being leached,	Lightfoot and Parrish (2009:317); McCarthy et al. (n.d.:8-9); Me-wuk elders, notes.
Indian Hemp		See Dogbane.	
Indian Potatoes		A generic term referring to the bulbs, roots, corms, or tubers of many different plant species; usually baked, steamed, or roasted; occasionally stone-boiled in baskets. Also oven-baked and dried for winter use.	Barrett and Gifford (1933:141); Lightfoot and Parrish (2009:308); Niehaus (1974:200-202).
Interior Live Oak (<i>Quercus wislizenii</i>)	<i>Sakasa; Sa:kasa; Sa:sa</i>	Acorn (<i>niüppa</i>) eaten.	Lightfoot and Parrish (2009:320); Mayer (1976).
Iris		See Blue Iris.	
Ithuriel's Spear (<i>Triteleia</i> spp.)		Bulbs prepared and eaten as “Indian Potatoes.” Sometimes called Grass-nut.	Lightfoot and Parrish (2009:310); Niehaus (1974: 20-202).

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Jimson Weed (<i>Datura meteloides</i>)	<i>Mo:nu ya</i>	Not eaten. Spiritually potent. A small amount of a Jimson Weed decoction in the mouth was sprayed on dance regalia to give it power.	Me-wuk elders, notes.
Larkspur (<i>Delphinium</i> sp.)	<i>Witilima;</i> <i>Witi:lima</i>	Boiled in March, when young; eaten.	Barrett and Gifford (1933:159).
Lupine (<i>Lupinus latifolius</i>)	<i>Hiole;</i> <i>Wah-tuk-sah</i>	To leach small quantities of acorn, sometimes a layer of Lupine leaves was placed in a coarse-weave basket. The acorn meal was then placed on these leaves and leached as if in a regular leaching basin. Lupine was eaten as greens, sometimes moistened with manzanita cider, and the seeds also were eaten. Lupine was also dried and stored for winter use.	Barrett and Gifford (1933:146); Clark (1904:48); Godfrey (1941:11); McCarthy et al. (n.d.:44-45); Me-wuk elders, notes.
Madrone (<i>Arbutus menziesii</i>)	<i>Lo-to</i>	Berries are edible, but are dry and lack flavor. Madrone wood is hard and, when dry (seasoned), burns hot; makes good coals.	McCarthy et al. (n.d.:12-13).
Manroot		Used as a poison to capture fish.	Bates (1984).
Manzanita (<i>A. tomentosa</i>)	<i>E'ye</i>	Berries eaten fresh or crushed and made into unfermented cider (<i>sake'ma</i>). Wood is very hard, burns with little smoke, and produces very hot coals. Wood also used to make digging sticks and “horns” for dance regalia.	Barrett and Gifford (1933:151, 161-162); Clark (1904:45); Lightfoot and Parrish (2009:318); Merriam (1955:678); Me-wuk elders, notes.
Manzanita (<i>A. manzanita</i>)	<i>Mo'kosu</i>	Berries of poorest quality; eaten fresh or crushed and made into unfermented cider (<i>sake'ma</i>). Wood is very hard, burns with little smoke, and produces very hot coals. Wood also used to make digging sticks and “horns” for dance regalia.	Barrett and Gifford (1933:151, 161-162); Clark (1904:45); Lightfoot and Parrish (2009:318).
“Manzanita” (<i>Arbutus menziesii</i>)	<i>Moko'lkine</i>	Berries eaten fresh or made into cider.	Barrett and Gifford (1933:161).
Mariposa Lily		See White Mariposa Lily and Yellow Mariposa Lily.	
Mariposa Manzanita (<i>Arctostaphylos viscida</i>)	<i>E'ye</i>	Berries eaten fresh or crushed and made into unfermented cider (<i>sake'ma</i>). Wood is very hard, burns with little smoke, and produces very hot coals. Wood also used to make digging sticks and “horns” for hunting decoys and dance regalia.	Barrett and Gifford (1933:151, 161-162); Clark (1904); Lightfoot and Parrish (2009:318); Merriam (1955:68); McCarthy et al. (n.d.:46-47); Me-wuk elders, notes.

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Milkweed (<i>Asclepias</i> spp.); (e.g., Narrow-leaved Milkweed, Purple Milkweed, and Showy Milkweed)	<i>Tamuka</i> ; <i>Istawii</i> ; <i>Pop:o</i> ; <i>Su:kanu</i> ;	Boiled; sometimes added to manzanita cider to thicken it. Collected in early winter, stems were peeled and shredded to yield strong fibers used to make cords, fishnets, bowstrings, and fishing lines.	Barrett and Gifford (1933:157); Lightfoot and Parrish (2009:310); McCarthy et al. (n.d.:76-77).
Miner's Lettuce (<i>Claytonia perfoliata</i>)	<i>Sestu</i>	Stems, leaves, and blossoms eaten raw. Seeds possibly eaten as well. A popular salad green.	Barrett and Gifford (1933:160); Godfrey (1941:11); Lightfoot and Parrish (2009:311); McCarthy et al. (n.d.:118-119).
Mock Orange (<i>Philadelphus lewisii</i>)		Shoots were made into arrow shafts.	McCarthy et al. (n.d.:48-49).
Monkey Flower (<i>Mimulus guttatus</i>)	<i>Puksa</i>	Leaves boiled and eaten; flowers pulled and sipped for nectar.	Barrett and Gifford (1933:160); Lightfoot and Parrish (2009:311).
[Black] Morel Mushroom (<i>Morchella elata</i>)		"Good to eat."	Me-wuk elders, notes.
Mountain Dogwood (<i>Cornus</i> spp.)	<i>Wel-le-neh</i> ; <i>Wel:ene</i>	Shoots used in basket making; small, straight branches selected for arrow shafts.	McCarthy et al. (n.d.:10-11); Me-wuk elders, notes.
Mountain Mahogany		Wood used to make fishing spear shafts.	Barrett and Gifford (1933:189).
Mule's Ears (<i>Wyethia mollis</i>)	<i>Notopayu</i> ; <i>Noto:payu</i>	Young shoots eaten raw after peeling off outer coating.	Barrett and Gifford (1933:161).
Mullein		See Wolly Mullein.	
Mushrooms (genus and species not identified)	<i>Helli</i> , <i>Atita</i> , <i>Kippisü</i> , <i>Sunokulu</i>	Many species, most unidentified. Gathered in April and May by both men and women. Shredded, dried, boiled and eaten with salt, or ground in a mortar and cooked as soup. Traditionally gathered along Deer Creek, Kanaka Creek, and in many other places.	Barrett and Gifford (1933:141, 164-165); Godfrey (1941:11); Magwood (1977:50); McCarthy et al. (n.d.:122-123); Me-wuk elders, notes.
Musk-plant (<i>Mimulus moschatus</i>)	<i>Pokosa</i> ; <i>Yusunu</i>	Young plant boiled and eaten; not stored.	Barrett and Gifford (1933:160).
Native Barley (<i>Hordeum</i> sp.)		Seeds recovered archaeologically; possibly consumed in ethnographic times.	Lightfoot and Parrish (2009:311); Wohlgemuth (2004).
Nine-bark (<i>Physocarpus capitatus</i>)	<i>Hemekine</i>	Fruits eaten raw.	Barrett and Gifford (1933:162).
Oak		See Black Oak, Blue Oak, Canyon Oak, Interior Live Oak, and Valley Oak,	
Onion		See Wild Onion	

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Ookow (<i>Brodiaea pulchella</i>)	<i>Siliwü</i>	“Indian potato.” Bulbs steamed in earth oven and eaten.	Barrett and Gifford (1933:156).
Oyster Mushrooms (<i>Pleurotus ostreatus</i>)		Traditionally gathered in the Kanaka Creek vicinity; eaten.	Me-wuk elders, notes.
Painted Cup (<i>Castilleja</i> sp.)	<i>Ponko</i>	Seeds dried and stored for winter; parched, pounded, eaten dry.	Barrett and Gifford (1933:153).
Parry’s Manzanita (<i>Arctostaphylos parryana</i>)	<i>Mo:ko shu</i>	Berries eaten fresh or crushed and made into unfermented cider (<i>sake’ma</i>). Wood is very hard, burns with little smoke, and produces very hot coals. Wood also used to make digging sticks and “horns” for dance regalia.	Barrett and Gifford (1933:151, 161-162); Clark (1904:45); Lightfoot and Parrish (2009:318); McCarthy et al. (n.d.:46-47); Merriam (1955:678); Me-wuk elders, notes.
<i>Pine</i>		See Gray Pine, Ponderosa Pine, and Sugar Pine.	
Ponderosa Pine, Yellow Pine (<i>Pinus ponderosa</i>)	<i>Was:a;</i> <i>Wa’ssa;</i> <i>Wah-sah</i>	Gum chewed, particularly by young people. Heavy smudge of pine needles applied to wound of person bitten by a black spider [likely a black widow (<i>Latrodectus mactans</i>)]. Nuts are small; were taken from cones allowed to dry in the sun, and eaten. Bark sometimes used to cover conical houses.	Barrett and Gifford (1933:149-150, 199); Lightfoot and Parrish (2009:321); McCarthy et al. (n.d.:23).
Pond Lily		Root pulverized and mixed with acorn meal intended for making bread.	Barrett and Gifford (1933:145).
Puff Ball (mushroom) (<i>Lycoperdon sculptum</i>)	<i>Potokele</i> or <i>Patapsi</i>	Gathered during the summer and fall. Dried in the sun for two or three days, pulverized in a mortar, stone-boiled, and eaten with acorn soup.	Barrett and Gifford (1933:163-164).
Purple Nightshade (<i>Solanum xanthii</i>)	<i>Watana</i>	Fruits eaten raw.	Barrett and Gifford (1933:162); Lightfoot and Parrish (2009:311).
Redbud (<i>Cercis occidentalis</i>)	<i>Lu’li;</i> <i>Lu li;</i> <i>Tapat:abu</i>	Used as weft material for basket weaving. Shoots gathered in the spring and peeled make white designs; those gathered in the fall (with the bark retained) make red designa.	Bates (1980:12); McCarthy et al. (n.d.:52-53).
Red Maids (<i>Calandrinia caulescens</i>)	<i>Ko’tca;</i> <i>Ko cha</i>	Black, oily, rich seeds were pulverized and eaten; highly prized.	Barrett and Gifford (1933:152); Lightfoot and Parrish (2009:311).
Ripgut Grass (<i>Bromus rigidus</i>)	<i>Su’llu;</i> <i>Sul:ü</i>	Seeds pulverized and eaten as pinole.	Barrett and Gifford (1933:152).

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Rose Lupine (<i>Lupinus densiflorus</i>)	<i>Tulmi'ssa</i> ; <i>Tulmis:a</i>	Leaves and flowers stripped from stalk, steamed in earth oven, and eaten with acorn soup (nüppa).	Barrett and Gifford (1933:159).
Saint John's Wort (<i>Hypericum formosum</i>)	<i>A'iisa</i>	Eaten fresh, or dried, ground into flour, and used like acorn meal.	Barrett and Gifford (1933:158).
Saxifrage (<i>Peltiphyllum peltatum</i>)	<i>Senseteko</i>	Sometimes added to acorn meal to whiten it.	Barrett and Gifford (1933:144).
Sedge (<i>Carex</i> sp.)	<i>Kissi</i> ; <i>Kis:i</i>	Floor of dance house where spectators sat was covered with pine needles or sedge. Wet sedge leaves used to wrap fish to keep them fresh from stream to settlement. Sedge roots harvested in the late summer or fall used as wefts for basket weaving.	Barrett and Gifford (1933:201); Bates (1980:12); McCarthy et al. (n.d.:88-89); Me-wuk elders, notes.
Sheep Sorrel (<i>Rumex acetosella</i>)	<i>U'uyuma</i>	Leaves pulverized, moistened with water, and eaten with salt; sour favor, like vinegar.	Barrett and Gifford (1933:160).
Sierra Currant (<i>Ribes nevadense</i>)	<i>Hemekine</i>	Fruit consumed raw or made into jam; sometimes dried for later use,	Barrett and Gifford (1933:162); McCarthy et al. (n.d.):
Sierra Juniper (<i>Juniperus occidentalis</i>)	<i>Setekine</i>	Nuts eaten when thoroughly ripe.	Barrett and Gifford (1933:151).
Sierra Plum (<i>Prunus subcordata</i>)	<i>Yotoña</i> ; <i>Yaht-tung-gah</i>	Fruit gathered and eaten raw.	Barrett and Gifford (1933:162); Clark (1904:46); McCarthy et al. (n.d.:50-51).
Skunkweed (<i>Navarretia</i> sp.)	<i>Hanu</i>	Seeds gathered, dried, stored, parched, pulverized and eaten.	Barrett and Gifford (1933:155).
Smokebrush (<i>Ceanothus cuneatus</i>)		Used for warp rods in basketry.	Bates (1980:12).
Soaproot (<i>Chlorogalum pomeridianum</i>)	<i>Palawe</i> ; <i>So'pa</i> (the latter term derived from Spanish?)	Small bulbs were baked and eaten, or dried and stored for winter use. Bulbs also used for soap, shampoo, glue, and as a poison for capturing fish. Fibers were fashioned into whisk brushes.	Barrett and Gifford (1933:155); Bates (1984); Lightfoot and Parrish (2009:212); Powers 1976: 352); McCarthy et al. (n.d.:114-115); Me-wuk elders, notes.
Sourberry (<i>Rhus aromatica</i>)	<i>Tah-mah</i>	Shoots used as basketry warps, especially in baby baskets. Berries eaten.	Bates (1980:12); McCarthy et al. (n.d.:56-57).
Spanish Clover (<i>Lotus americanus</i>)	<i>Pulluluku</i> ; <i>Pul:uluku</i>	Pounded together with acorn to absorb excess oil.	Barrett and Gifford (1933:144).
Spearmint (<i>Mentha spicata</i>)	<i>Sisimela</i>	Dried spearmint leaves placed in living and storage areas to repel rodents.	McCarthy et al. (n.d.:78-79).
Squaw-Root (<i>Carum gairdneri</i>)	<i>Tuñi</i> or <i>Seketi</i>	Boiled and eaten like a potato.	Barrett and Gifford (1933:157).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Strawberry (<i>Fragaria virginiana</i>)		Berries eaten fresh.	McCarthy et al. (n.d.:90-91).
Sugar Pine (<i>Pinus lambertiana</i>)	<i>Sang:aku;</i> <i>Sung-ah-go;</i> <i>Hi'ñatci</i>	Nuts prized as food. Brown cones harvested from tree just when turning ripe. Nuts eaten whole or pulverized into pine nut butter (<i>lopa</i>), prepared especially for feasts (<i>kote</i>).	Barrett and Gifford (1933:149-151); Lightfoot and Parrish (2009: 321); McCarthy et al. (n.d.:24-25); Merriam (1967); Me-wuk elders, notes.
Summer's Darling (<i>Godetia amoena</i>)	<i>Sipsibe</i>	Seeds were parched, pulverized, and eaten dry.	Barrett and Gifford (1933:152).
Sweet Cicely (<i>Osmorrhiza nuda</i>)	<i>Tcuyuma;</i> <i>Chuyuma</i>	Leaves boiled and eaten.	Barrett and Gifford (1933:160).
Tarweed (<i>Madia elegans</i>)	<i>Yo'wa</i>	Seeds harvested, stored, winnowed, sifted, and pulverized in a bedrock mortar; the meal was eaten dry.	Barrett and Gifford (1933:154); Lightfoot and Parrish (2009: 312); McCarthy et al. (n.d.:92-93).
Thimbleberry (<i>Rubus parviflorus</i>)		Berries eaten fresh.	McCarthy et al. (n.d.:94-95).
Thistle (<i>Carduus californicus</i>)	<i>Sawala</i>	Stems strewn on ground around sleeping places to keep away rattlesnakes, king snakes, and a kind of large lizard.	Barrett and Gifford 1933:198).
Tibinagua (<i>Eriogonum nudum</i>)	<i>Sapiü'la</i> or <i>Sapasu</i>	Eaten raw; sour flavor.	Barrett and Gifford (1933:159).
Tomcat Clover (<i>Trifolium tridentatum</i>)	<i>Wilamü</i>	Leaves, stems, and buds eaten raw or steamed. Dried in the sun on a bed of <i>Wyethia helenioides</i> leaves for winter use.	Barrett and Gifford (1933:160-161); Lightfoot and Parrish 2009: 309).
Toyon (<i>Heteromeles arbutifolia</i>)	<i>Koso;</i> <i>Ko'so</i>	Berries prepared by preliminary boiling followed by baking for two to three days in an earth oven. Alternatively, they were stored in a basket for two months and then parched with coals and eaten. A naturally curved Toyon branch was the preferred wood for making bow staves.	Barrett and Gifford (1933:163); Lightfoot and Parrish (2009:322); Me-wuk elders, notes.
Tree Clover (<i>Trifolium ciliatum</i>)	<i>Olisa</i>	Eaten raw or steamed. The steamed clover could be preserved as <i>patciko</i> for later use.	Barrett and Gifford (1933:160; Lightfoot and Parrish 2009:309).
Tree fungus (species not identified)	<i>Elmayu</i>	Red-edged yellow tree fungus that, grows shelf-like on black and water oaks, was eaten only after it was boiled, squeezed, and salted.	Barrett and Gifford (1933:164).
Tule (<i>Scirpus lacustris</i>)		Used as thatch on pole frames of dwellings and sun shades; made into woven mats to cover and serve as doors of houses; mats also used for sleeping. Tule roots pounded into flour and eaten; seeds also consumed. In the Valley, tules were lashed together to create a boat (<i>tuke balsa</i>).	Barrett and Gifford 1933:198-199); Lightfoot and Parrish (2009: 311); McCarthy et al. (n.d.:98-99).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Turkey Mullein (<i>Eremocarpus setigerus</i>)		Leaves mashed and placed at the head of a pool in a stream; fish would be stupified.	Lightfoot and Parrish (2009:311).
Twiggy Water Dropwort (<i>Enanthe</i> sp.)	<i>Komani</i>	Stems eaten raw.	Barrett and Gifford (1933:160).
Upright Evening Primrose (<i>Boisduvalia stricta</i>)	<i>Winiwayu</i>	Seeds parched and pulverized; meal eaten dry.	Barrett and Gifford (1933:152).
Valley Oak (<i>Quercus lobata</i>)	<i>Wil:ishu</i>	Acorn (<i>niippa</i>) was eaten, but mostly in times of great need. Valley oak acorns are hard to process and high in tannin.	Barrett and Gifford (1933:142); Lightfoot and Parrish (2009:320); Mayer (1976); Me-wuk elders, notes.
Valley Tassels (<i>Orthocarpus attenuatus</i>)		Seeds gathered, parched, pulverized, and eaten dry.	Barrett and Gifford (1933:155).
Vinegar Root		Used as a poison for taking fish.	Bates (1984)
Watercress (<i>Nasturtium officinale</i>)	<i>Wák-ta-sah;</i> <i>Wak-ta-sa</i>	Exotic plant from Eurasia; in historic times, gathered and eaten fresh. Also steamed or used as a flavoring in other foods. Traditionally harvested in the Kanaka Creek locality.	McCarthy et al. (n.d.:120-121); Me-wuk elders, notes.
Western Larkspur (<i>Delphinium hesperium</i>)	<i>Kowe</i>	Leaves and flowers boiled and eaten	Barrett and Gifford (1933:159).
White Brodiaea (<i>Triteleia hyacinthina</i>)	<i>Wusii-mayü</i>	Bulbs dug up and then steamed in an earth oven together with other varieties of “Indian potatoes.”	Barrett and Gifford (1933:156); Lightfoot and Parrish (2009:308); McCarthy et al. (n.d.:104-105).
White Goosefoot (<i>Chenopodium album</i>)	<i>Somala</i>	Greens boiled and eaten; sometimes dried and stored for later use.	Barrett and Gifford (1933:159); Lightfoot and Parrish 2009:310).
White Marioposa Lily (<i>Calochortus venustus</i>)	<i>Tcikimtc;</i> <i>Chikimchi</i>	A variety of “Indian potato.” Bulbs dug up, then roasted in the ashes of a fire that had died down or cooked in an earth oven.	Barrett and Gifford (1933:155, 157); Lightfoot and Parrish (2009:310); McCarthy et al. (n.d.:110-111).
White Oak or Oregon Oak (<i>Quercus garryana</i>)	<i>Le:ka</i>	Acorns are edible, but the crop is infrequent (once per 2-5 years).	Pavlik et al. (1991).
Wild Cherry		See Chokecherry.	
Wild Cucumber		Vines used to cover a deer hunter to provide camouflage.	Barrett and Gifford (1933:180).
Wild Grape		See California Wild Grape.	
Wild Hyacinth		See Blue Dicks.	
Wild Oats	<i>Aweni</i>	Exotic; introduced by the Spanish. Me-wuk name is borrowed from the Spanish <i>avena</i> . Seeds were parched or milled into flour and baked as biscuits.	Barrett and Gifford (1933:152); Lightfoot and Parrish (2009:311).

Species	Me-wuk Name	Traditional Use(s)	Reference(s)
Wild Onion (<i>Allium</i> spp.)	<i>Kesla</i>	Eaten raw; also steamed, mashed, and eaten with salt. Traditionally gathered at Hunter Creek, Kanaka Creek, near Knights Ferry, and at other locales.	Lightfoot and Parrish (2009:311); Magwood (1977:50); Me-wuk elders, notes.
Wild Pea (<i>Lathyrus vestitus</i>)	<i>Lulumati</i>	Eaten as greens; seeds eaten raw.	Barrett and Gifford (1933:159).
Wild Strawberry (<i>Fragaria</i> sp.)		Berries eaten raw when ripe.	Anderson (2005); Lightfoot and Parrish (2009: 311).
Wild Sunflower (<i>Helianthus</i> sp.)		Seeds harvested, dried; could be stored for long periods; pulverized in a mortar in preparation for eating.	Lightfoot and Parrish (2009:311).
Willow Mushroom	<i>Hele</i>	Edible.	Me-wuk elders, notes.
Willows (<i>Salix</i> spp.) (e.g., Gray Willow, Dusky Willow, Red Willow, etc.)	<i>Lima;</i> <i>Sakalu</i>	Shoots scraped into rods and warps for making baskets and cradleboards. Poles used to frame houses and form fish weirs. Shredded willow bark had various uses as an absorbent. Dead or dying willow trees also hosted edible mushrooms.	Bates (1980); Lightfoot and Parrish (2009:322-323); McCarthy et al. (n.d.:60-61); Me-wuk elders, notes.
Wooly Mullein (<i>Verbascum Thapsus</i>)		Traditionally, the leaves were soaked and used to wrap foods for baking in an earth oven.	McCarthy et al. (n.d.:82-83).
Yellow Mariposa Lily (<i>Calochortus luteus</i>)	<i>Tcikimtc;</i> <i>Chikimchi;</i> <i>Susa</i>	Bulbs prepared and eaten like those of the White Mariposa Lily.	Barrett and Gifford (1933:157); Lightfoot and Parrish (2009:310).

Table 6-2. Animals used by the Sierra Me-wuk.

Species	Me-Wuk Name	Traditional Use	Reference(s)
Acorn Woodpecker (<i>Melanerpes formicivorus</i>)	<i>Hom:omolwila</i> or <i>Homorno</i>	Hunted; feathers used in regalia.	Me-wuk elders, notes.
Antelope or Pronghorn (<i>Antilocapra americana</i>)	<i>Halus;</i> <i>So:koyu</i>	Hunted on plains of San Joaquin Valley. Ten to 15 men comprised a hunting party. Deer masks worn by hunters. Antelope neast eaten; hides tanned; horns used as storage containers.	Barrett and Gifford (1933:181-182); Levy (1978); Lightfoot and Parrish (2009:336).
Band-tailed Pigeon (<i>Columba fasciata</i>)	<i>Luñuti;</i> <i>Lung:u:ti</i>	Caught in snares set at intervals within a pigeon fence built around a spring near scrub oaks, or shot with arrows fired from a brush blind.	Barrett and Gifford (1933:184-185).
Beaver (<i>Castor canadensis</i>)	<i>He'nnit;</i> <i>'Ech:eshu</i>	After burning tules around a beaver pond, hunters dug out the animal from its house and clubbed it or dispatched it with bow and arrow. Meat eaten.	Barrett and Gifford (1933:182).
Bee		Honey from wild honeybees eaten. Bees would be gathered and taken to different locations, then released. Bees were watched for direction of flight to determine the location of the hive.	Merriam (1967); Me-wuk elders, notes.
Black Bear (<i>Ursus americanus</i>)	<i>Usuma-ti;</i> <i>Ushu:mati</i>	Parties of a dozen or more men hunted bears for food. Tanned skins with fur to served as blankets. Chief used bear hides for bed and seat in large dwelling house.	Barrett and Gifford 1933:182, 200); Me-wuk elders, notes.
California Quail or Valley Quail (<i>Callipepla californica</i>)	<i>Heke'ke;</i> <i>Hek:e:ke</i>	Taken mainly by means of a brush fence with snares set at intervals. Meat eaten. Plumes used ornamentally on baskets and clothing.	Barrett and Gifford (1933:183). Lightfoot and Parrish (2009:333).
Chinook Salmon (<i>Oncorhynchus tshawytscha</i>)	<i>Kosimo;</i> <i>Ko:somu</i>	Taken with the aid of weirs, fish pens, spears, and leisters in foothill streams. Nutritious, highly desirable food fish. Salmon eggs also eaten. The Me-wuk speared salmon on the Tuolumne River, especially in the riffles near La Grange, and on the Stanislaus River at Knights Ferry. Taken with two-pronged harpoon (<i>Gula'a</i> or <i>Tco'llo</i>). Salmon was eaten fresh or smoked over manzanita or (historically) apple wood fires to which incense cedar boughs sometimes were added to impart flavor.	Bates (1984); Barrett and Gifford (1933:189); Lightfoot and Parrish (2009:326); Me-wuk elders, notes.
Cottontail Rabbit (<i>Sylvilagus</i> spp.)	<i>To'ssebe;</i> <i>Tos:ewe</i>	Communal drives netted multiple rabbits. Meat eaten.	Barrett and Gifford (1933:182).
Coyote (<i>Canis latrans</i> or <i>C. ochropus</i>)	<i>Aseli;</i> <i>Ashe:li</i>	Rolled-up skin used as a pillow. Coyotes are messengers; they may be coming with bad news or good.	Barrett and Gifford 1933:200); Me-wuk elders, notes.
Crayfish (Family Astacidae)		Caught "down in the river;" eaten.	Me-wuk elders, notes.
Cricket	<i>Ko:cha</i>	Eaten.	Kroeber (1925)
Dog	<i>Chuku:</i>	Watchdogs warned of strangers or large animals approaching a	Me-wuk elders, personal

Species	Me-Wuk Name	Traditional Use	Reference(s)
		settlement, especially at night; caught squirrels and rabbits; served as village scavengers; helped to track and hunt bears.	communications (1990s).
Ducks (Family Anatidae)	<i>Hatata;</i> <i>Hatha:tha</i>	Taken with snares and nets; meat consumed; feathers used in baskets.	Barrett and Gifford (1933:238); Lightfoot and Parrish (2009:330).
Earthworms		Cooked with water; eaten.	Clark (1904:46); Kroeber (1925).
Elk (<i>Cervus canadensis</i>)	<i>Haka'ia;</i> <i>Hak:a:ya</i>	Hunted in the lower foothills. Deer mask worn by hunters.	Barrett and Gifford (1933:181-182).
Fish (general)		Taken in traps, weirs, nets, by spear or leister, or with poisons such as soaproot, turkey mullein, or buckeyes.	Bates (1984); Clark (1904); Me-wuk elders, notes.
Fly larvae (<i>Ephydra bians</i>)	<i>Ka-cha-vee</i>	Pupae obtained as a trade item from Mono Lake. The pupae were scooped up, thoroughly dried, and stored to be eaten later.	Clark (1904:46); Godfrey (1941:10); Kroeber (1925); Merriam (1955).
Freshwater Mussel or Western Pearlshell (<i>Margaritifera margaritifera</i>)	<i>Soponoyu</i>	Gathered from stream bottoms. Skewered and stuck in the sand, surrounded with dry brush, and cooked by setting fire to the brush. Eaten immediately.	Barrett and Gifford (1933:192); Kroeber (1925)
Frog (No species indicated)	<i>Watuk-se-i;</i> <i>Wakatsa'yi</i>	Gigged for food. Certain wetlands were visited regularly by frog hunters.	Me-wuk elders, notes.
Golden Eagle (<i>Aquila chrysaetos</i>)	<i>Wip:aya:ku</i>	Feathers used in regalia, and bones made into whistles, but eagle meat was never eaten by the Me-wuk.	Lightfoot and Parrish (2009:332).
Grasshopper	<i>Ko'tco;</i> <i>Kocho</i>	Driven into a pit trap, usually in June; roasted by parching or cooked in an earth oven. Could be stored to be eaten later.	Barrett and Gifford (1933:190); Clark (1904:46); Lightfoot and Parrish (2009:324).
Gray Fox (<i>Urocyon cinereoargenteus</i>)	<i>Hu:te'me</i>	Shot with arrows. Skins used as quivers. Meat may have been consumed.	Lightfoot and Parrish (2009:335).
Gray Squirrel (<i>Sciurus griseus</i>)	<i>Ma-we;</i> <i>Me:we</i>	Shot with a bow and arrow. Eaten.	Barrett and Gifford (1933:183); Me-wuk elders, notes.
Grizzly Bear (<i>Ursus arctos</i>)	<i>U-ma-ti;</i> <i>Hopa'mu</i>	Parties of 12 or more hunters systematically pursued and killed bears. Grizzly bear meat was eaten by the Sierra Me-wuk but not by their Plains kin.	Barrett and Gifford (1933:182); Me-wuk elders, notes.
Ground Squirrel (<i>Otospermophilus beecheyi</i>)	<i>U-puksu;</i> <i>Tak:aw:a</i>	Caught by dogs or shot with bow and arrow. Meat less desirable than that of the gray squirrel.	Barrett and Gifford (1933:183); Me-wuk elders, notes.
Jackrabbit (<i>Lepus californicus</i>)	<i>Epláli;</i> <i>'Epla:li</i>	Rabbits were driven into large nets; in the mountains, they were killed with bow and arrow or by clubbing.	Barrett and Gifford (1933:182); Powers (1976:551).
Hairy Caterpillar (species unidentified)	<i>Lu-lu-ma</i> or <i>Lu'luami</i>	Women used to collect a kind of butterfly pupae found hanging on manzanita bushes. Singing by women (probably tremolo singing) caused the pupae to vibrate. They were gathered, fried, and eaten. Barrett and Gifford (1933) suggest that these were perhaps Army	Barrett and Gifford (1933:191-192); Me-wuk elders, notes.

Species	Me-Wuk Name	Traditional Use	Reference(s)
		Worm pupae, and that they were steamed or boiled and eaten with salt.	
Mountain Quail (<i>Oreortyx pictus</i>)	<i>Kuyaya;</i> <i>Kuy:ak:a;</i> <i>U'yakka</i>	Snares were set at intervals in a quail fence of brush, or the birds were caught in a net stretched across a hillside near a spring.	Barrett and Gifford (1933:183-184); Lightfoot and Parrish (2009:333).
Mountain Whitefish (<i>Prosoplum williamsoni</i>)		An important food in the mountains. Taken with a spear of mountain mahogany tipped with an obsidian point.	Barrett and Gifford (1933:189); Bates (1984).
Mule Deer (<i>Odocoileus hemionus</i>)	<i>Üwü'ya;</i> <i>'Uwu:ya</i>	All parts of the deer were used; muscle meat, liver, and tripe were eaten. Deer skins (<i>talka</i>) used as sleeping pads and blankets. Meat was cooked in various ways or cut into strips and sun-dried for storage and later use. Sinews used in sewing, hafting, and as backing on bows. Deer and venison are known by the same Me-wuk name. Before hunting deer, Me-wuk men would bathe in angelica to eliminate human scent.	Bates (1978); Barrett and Gifford 1933:178-181, 200); Clark (1904: 31-37); Kroeber (1925); Lightfoot and Parrish (2009:335-336); Merriam (1967); Me-wuk elders, notes.
Nuttall's Woodpecker (<i>Picoides nuttallii</i>)	<i>Pa-la-ta-da</i>		Me-wuk elders, notes.
Owl	<i>Tu-ku-li;</i> <i>Shuk:umi;</i> <i>Tho:ko:ko</i>	Owls are messengers; they may carry news of a death. Me-wuk did not eat the Great Horned Owl, but its feathers were used in dance costumes.	Lightfoot and Parrish (2009:333); Me-wuk elders, notes.
Pacific Lamprey or Eel (<i>Lampetra pacifica</i>)		Captured in an ordinary fish net; eaten.	Barrett and Gifford (1933:190); Kroeber (1925); Lightfoot and Parrish (2009:325-326).
Pandora Moth (<i>Coloradia pandora</i>)	<i>Tikku</i>	Caterpillars were gathered by Mono Lake Paiute, whose name for them was <i>Piaggi</i> or <i>Peaggi</i> . The caterpillars were parched, dried, and traded to the Me-wuk who consumed them.	Godfrey (1941:11-12).
Pink Salmon (<i>Oncorhynchus gorbuscha</i>)	<i>Ko:somu</i>	One of the food fishes preferred by the Me-wul and Yokuts; speared in riffles along the Stanislaus and Tuolumne rivers.	Me-wuk elders, notes; Yokuts elder, notes.
Pronghorn		[See Antelope]	
Rainbow Trout (<i>Oncorhynchus mykiss</i>)	<i>La-pesi-yu;</i> <i>Tolpeta</i>	Caught with weirs, nets, bone hooks and lines, and poison, especially in the mountains; prepared roasted, steamed, dried, or pounded into meal for soups or cakes.	Barrett and Gifford (1933:189); Bates (1984); Lightfoot and Parrish (2009:329); Me-wuk elders, notes.
Red-headed Woodpecker		See Acorn Woodpecker.	
Red-shafted Flicker (Yellowhammer) (<i>Colaptes cafer</i>)	<i>Tew-yu;</i> <i>Tiw:ayu</i>	Caught in snares baited with an acorn. Feathers used in ceremonial regalia.	Barrett and Gifford (1933:185); Me-wuk elders, notes.

Species	Me-Wuk Name	Traditional Use	Reference(s)
Salmon (various species)	<i>Ko-so-mo</i>	Good eating; most important food fish. Speared; smoked.	Me-wuk elders, notes.
Spotted Woodpecker		See Nuttall's Woodpecker.	
Striped Skunk (<i>Mephitis mephitis</i>)	<i>His:iku</i>	Meat not eaten. Dead skunks sometimes hung from trees to mark trails in the High Sierra.	Powers (1975:551).
Tule Elk (<i>Cervus nannodes</i>)		Foothill groups hunted elk on the plains bordering the Central Valley.	Barrett and Gifford (1933:181-181); Levy (1978:402).
Valley Quail	<i>Hek:e:ke</i>	[See California quail.]	
Waterfowl		Ducks were trapped or netted; geese attracted to a fire at night were clubbed.	Barrett and Gifford (1933:186-187).
“White Salmon” (probably the Sacramento Minnowpike [<i>Ptychocheilus grandis</i>])	<i>Toinoyo</i>	Taken with two-pronged harpoon (<i>Gula'a</i> or <i>Tco'llo</i>).	Barrett and Gifford (1933:189); Me-wuk Elders, notes.
White Sturgeon (<i>Acipenser transmontanus</i>)		Caught intentionally or inadvertently while angling in the Tuolumne and Stanislaus rivers.	Lightfoot and Parrish (2009:327); Me-wuk elders, notes.
Woodpeckers (species not identified)	<i>Palat:ata</i>	Hunters ascended trees at night and took them from their holes.	Barrett and Gifford (1933:186).
Wood Rat (<i>Neotoma</i> spp.)	<i>Pus:i:na</i>	Rats were trapped, often under granaries, when a heavy stone slab was precariously held up by a Figure-4 trigger baited with an acorn.	Barrett and Gifford (1933:183).
Yellowjacket	<i>Me'lñayu;</i> <i>Melngayu</i>	Underground hives smoked; comb dug up; larvae eaten.	Barrett and Gifford (1933:192); Clark (1904:46); Godfrey (1941); Kroeber (1925); Merriam (1955).

On the Stanislaus River, salmon (kosimo, C) went up as far as Baker's bridge, where there is a waterfall. On the Tuolumne River they went at least as high as La Grange, as did the white salmon (toinoyo, C). Salmon were caught in the late spring. They worked the sand out of the way with their tails when spawning in shallow water. In such positions they were speared. ...A fire built beside the river served as a lure to make spearing easy at night [Barrett and Gifford 1933:189-190].

Deer hunting by the Me-wuk involved careful preparation, including purification in the sweat house, disguising the human scent with angelica or wormwood (mugwort), and use of deer headdresses and or decoys. All parts of the deer were used: venison meat (including heart, liver, and certain other organs) were eaten; bones were fashioned into needles, awls, daggers, hair pins, and gaming pieces; antlers became stone-knapping tools; sinews were used as thread, for lashing, and as a reinforcement for bow backs; hooves were made into glue or served as dance rattles; and the brains were a basic ingredient in the compound used for tanning deer and other hides (Barrett and Gifford 1933; Kroeber 1925; Levy 1978). Deer tripe and blood were cooked in an oven hole dug below hot ashes, lined with wet earth or clay, and covered with coals (Merriam 1955:68-69).

In addition to hunting deer, the Me-wuk sometimes ventured westward into Yokuts territory to pursue large ungulates. Groups of 12-15 hunters from the foothills would occasionally visit the plains of the Central Valley to take antelope or tule elk (Barrett and Gifford 1933:182; Levy 1978:402). When hunting antelope, some of the men would position themselves on different sides of a herd and then drive the animals within range of the others hunters. "Often three or four antelope were cut out in this fashion" (Barrett and Gifford 1933:182). Antelope and elk were also stalked with a deer mask, *suki'ppu*, and dispatched with bows and arrows (Barrett and Gifford 1933:180-181). Other large animals—notably both black and grizzly bears—were hunted and eaten by the Me-wuk, except that the Plains Me-wuk did not consume grizzly bear meat. Smaller, but nonetheless important, prey were hares, rabbits, beaver, squirrels, rats, a wide variety of birds, insects, and mollusks (Barrett and Gifford 1933:182-192; Table 6-2).

6.2 Material Culture

6.2.1 Buildings and Structures

Ethnographic Sierra Me-wuk dwellings were of many types, depending on the elevation, available materials, desired function, and intended duration of use.

For houses, the Miwok construct very rude affairs of poles and brushwood, which they cover with earth in the winter; in summer, ...they move into mere brushwood shelters. Higher up in the mountains they make a summer lodge of puncheons, in the shape of a sharp cone, with one side open, and a bivouac fire in front of it [Powers 1976:350].

Kroeber provides similar information, saying that the living house, *kocha* or *uchu*, often earth-covered, was "smaller and ruder than the dance house." Lean-to shelters of bark were used in the mountains during summer, and may have been the permanent house in some localities (Kroeber 1925:447).

Barrett and Gifford (1933) provide information about seven types of dwellings, though they are careful to say that it is difficult to know “the exact scope of terms applied to houses, especially since purely aboriginal structures are completely lacking and intermediate types are common” (1933:198). Briefly, the house types include:

- (1) *Umu'tca*: a conical bark house, sometimes with an inner layer of pine needles and an outer layer of earth heaped against its lower parts;
- (2) *Ko'dja*: a semi-subterranean earth-covered dwelling;
- (3) *U'tcu*: a modern board house;
- (4) *Mole*: a simple conical framework of poles covered with a thatch of brush, grass, or tule, bound on, in overlapping courses, with grapevine withes, to make a sun shelter; some such shelters were more or less rectangular in form with flat tops;
- (5) *Tcaama*: a portable conical house with tule mat covering and tule mat door;
- (6) *Sitcma*: very small conical hut, covered with bark or tule, occupied by an aged person or a menstruating girl;
- (7) [No name given]: a large earth-covered semi-subterranean dwelling, in which a dozen people could live; similar in construction but smaller than an assembly house; entered by a ladder through the roof; in the center was a shallow depression for the fire; nearby an earth oven (Barrett and Gifford 1933:198-200).

Another kind of Me-wuk building was the *hang*i or *ha'ñi*, a large, semi-subterranean dance house (also called a ceremonial house, assembly house, or round house). This was up to 18 meters (60 feet) in diameter and supported by four center posts or two rows of posts. Its door faced east (Kroeber 1925:447). It was never used as a dwelling, or even as a dormitory for men, except sometimes when a ceremony was being held in the village (Barrett and Gifford 1933:200). Merriam describes a Miwok dance house as follows:

The ceremonial house, called *hang'-e* by the Mewuk, is a circular structure of variable size but usually about 40 ft. in diameter. It consists of a single chamber formed by an enclosing wall of vertical boards or slabs 5 or 6 ft. high, with a high conical roof supported from the inside by 4 tall posts, arranged in the form of a square, which serve to define an open central area, thus dividing the interior into an inner and outer space. During the ceremonies and dances the performers occupy the smaller inner space, called *kal-loo'-tah*, the spectators the larger outer space, called *et-chat'*. The fireplace is near the center of the floor, and over it, in the peak of the conical roof, is a circular hole for the escape of the smoke. The door fronts north or northeast [Merriam 1955:50].

Formerly the ceremonial house was partly underground and its roof was domed and covered with earth. In the Mewuk territory this type is now [in 1906] rare [Merriam 1955:50].

Also, temporary ceremonial structures of circular or rectangular form were constructed of brush (Barrett and Gifford 1933:198, 206-207).

Yet another type of structure was the *tcapu'ya*, the sweat house, sweat lodge, or sudatory. The sweat house was much smaller, but built on the same plan as a dance house (Kroeber 1925). The dome-shaped sudatory was made of poles, wicker-work, and thatch heavily covered with earth (Powers 1976:360). The *tcapu'ya* was not a lounging place for men, but was used only for ritual cleansing prior to hunting or for curative purposes (Barrett and Gifford 1933:205).

Photos and/or drawings of various kinds of Me-wuk buildings have been published by Bates (1966:11-15, 17, 21; 1982:Figs. 3, 4, 7); Bean (1992:312); Burrows (2000:Figs. 3, 6, 7, 17); Clark (1904:34); Conrotto (1973:47-49, 84); Davis-King (2003:Figs. 2, 3); Gifford (1955:260); Godfrey (1941:18); Heizer and Elsasser (1980:Figs. 14, 16); Hull (2009:75, 101); Levy (1978:208-209); Marvin and Brejla (2010:12, upper); Merriam (1955:Plates 43, 44, 46); Moratto (1984:285, 291); Powers (1976:Fig. 37). Barrett and Gifford (1933:Fig. 28) provide plans of a dance house as do Brown (1933 in Bates 1982:Fig. 7); King (1968:132-133, 135); Kroeber (1925:Fig. 39); and Merriam (1966:125).

Finally, in addition to building sweat houses and many kinds of dwellings and assembly houses, the Me-wuk constructed acorn granaries, grinding booths over bedrock mills, and hunting blinds from which to shoot birds and mammals (Barrett and Gifford 1933:198).

6.2.2 Technology

A review of Me-wuk arts, crafts, industries, and technology is beyond the scope of this chapter. Reliable overviews of these topics include those by Barrett and Gifford (1933), Kroeber (1925), Levy (1978), Merriam (1967), and Powers (1976). More detailed coverage is also available for such specific topics as basketry (Bates and Lee 1990; Merriam 1955), bows and arrows (Bates 1978; Hudson n.d.; Powers 1976:352), food-processing implements (Heizer and Elsasser 1980; Lightfoot and Parrish 2009), and manufacture of other items (Barrett and Gifford 1933; Lightfoot and Parrish 2009; Riddell 1969).

6.2.3 Material Procurement and Conveyance

Beyond the discussions of lithic resources in Chapter 2 and vegetal and faunal resources above (e.g., see Tables 6-1 and 6-2), a detailed examination of material procurement and conveyance is also beyond the scope of this report. Nonetheless, it should be made explicit that trade and other forms of conveyance were exceedingly important to precontact peoples throughout California, including the Sierra Me-wuk. Hughes (1994, 2011), recognizing that the terms “trade” and “exchange” are laden with assumptions, proposed “conveyance” as a neutral word for the cultural processes by which raw materials and finished products moved from source to destination in the aboriginal Far West. Moratto (2011) has applied this concept to California’s native cultures, and specifically to the contexts and mechanisms in and by which conveyance took place. The Sierra Me-wuk participated in traditional interaction spheres (see Bennyhoff and Hughes 1987) that facilitated warm-season trade between parties of Me-wuk and Paiute in the High Sierra and year-round commerce between the Sierra Me-wuk and Valley Yokuts to the

west. More detailed information regarding trade and other forms of material conveyance in California are presented by Barrett and Gifford (1933), Bennyhoff and Hughes (1987), Bettinger (1982), Davis (1961), Ericson (1982), Heizer (1978), Hughes (1994, 2011), Jackson and Ericson (1994), Kroeber (1925), Moratto (2011), Sample (1950), and Singer and Ericson (1977).

6.3 Cosmology

Several compilations of Me-wuk folklore and mythology have been published, notably: S. A. Barrett's (1919) study of Southern Sierra Me-wuk myths (including stories recounting how Yosemite Valley and other landmarks in Yosemite came to be; Gifford and Block's (1930) *California Indian Nights*, an anthology that presents seven Sierra Me-wuk myths together with dozens of others from throughout the state; and C. Hart Merriam's (1910) *Dawn of the World*, an essential mythology of the Eastern and Western Miwok.

By way of introducing "Mewan" mythology, Merriam observes that the stories: "abound in magic, and many of them suggest a moral;" tell of the activities of the First People; and explain the origins of natural phenomena (1910:17). Some of the basic features of these myths are:

- the existence of First People who, before the creation of Indians, were transformed into animals, trees, rocks, stars, and other entities in the natural world;
- the preexistence of Coyote-man, the Creator;
- the existence of: the Falcon (*Wek'-wek*), grandson and companion of Coyote-man; the Condor (*Mol'-luk*), father of Falcon; and the Lizard (*Pe-ta'-le*), who assisted Coyote-man in the creation of Indians;
- the possession of supernatural powers by Coyote-man and other divinities;
- the prevalence of universal darkness which, after persisting for a very long time, was partly overcome by heat/light or fire;
- the conception of a dome-shaped sky resting on the earth and perforated in four places on the sides, corresponding to the cardinal points;
- the existence of Rock Giants who dwelt in caves and carried off and devoured people; and
- The creation of real people, the ancestors of Indians, by the transformation of feathers, sticks, or clay [Merriam 1910:18-19].

The Sierra Me-wuk call the ancient myths "*oo'-ten-ne* or *oot'-ne*, meaning the history of the FIRST PEOPLE. ...In this connection it may be significant that the name of Bower Cave, the home of *Too'-le* and *He-le'-jah*, two great chiefs of the FIRST PEOPLE, is *Oo'-tin*" [Merriam 1910:31].

It is a traditional belief of the Central Sierra Me-wuk that they originated at Bower Cave (Me-wuk elder, personal communication, 2002).

One of the Me-Wuk consultants, Tom Carsoner, in 2013 recounted the traditional story about how the Sierra Nevada came to be:

Sak-iti is the lizard, and *O-le-chu* the coyote. A long long time ago, the earth used to be flat; and all the animals were giants back then. Coyote and *Sak-iti* were the ones who created the mountains that we have here in the Sierra. And so when the earth was flat, coyote used to run around and chase *Sak-iti*. So one day, coyote comes trotting down the trail, looking around, sniffing the ground; and over on the rock is *Sak-iti* going up and down [doing lizard push-ups]. So *O-le-chu* gets hungry, and he starts chasing *Sak-iti*; and *Sak-iti* runs into a crack. Coyote starts digging him up, and *Sak-iti* runs out of the other end of the crack, and dives into another crack. *O-le-chu* sees him, and *Sak-iti* looks back; he [coyote] chases him again, and starts digging, and digging, and digging, on up to the north and then back south; and that's how our mountains got created.

6.4 Ritual and Ceremony

6.4.1 Cults

The Me-wuk participated in numerous dances and ceremonies. E. W. Gifford, for example, describe at length no fewer than 25 different sacred ceremonies and dances, four commemorative ceremonies and dances, and five “profane” (common, secular) dances among the Central Sierra Me-wuk (1955:261-306). A comparable range of dances and ceremonies is reported for the Southern Sierra Me-wuk (Bates 1982; Gifford 1982). Many of the sacred dances relate to the Kuksu Cult.

[T]he Kuksu cult of the Sacramento Valley, with its long variety of rituals, impersonation of spirits, distinctive costumes, and the accompaniment of the large semisubterranean dance house. The complement is the absence among the Miwok of the Yokuts jimsonweed cult [Kroeber 1925:446].

Bates (1982), Gifford (1955, 1982), and Kroeber (1925) have all summarized the Kuksu religion among the Miwok, including ceremonies, dances, and spirit impersonation. “Thus there is the *Kuksuyu*, an exceptionally sacred performance,” analogous to the *Hesi* of the Patwin and Maidu and the *Guksu* of the Pomo (Kroeber 1925:449).

In this *Kuksuyu* appear at least three personages: *Kuksuyu* himself; *Osa-be*, or “woman”; and *Mochilo*, who is perhaps the Miwok representative of the Sacramento Valley *Moki*, and whose impersonator is known as *mochil-be*. In addition, there is the *Mochilasi* dance, held without the drum, in which *Mochilo* appears impersonated by a *sotokbe*, and accompanied by the *Osa-be*. At some point in the *Mochilasi*, as in most Miwok dances, women participate; but they do not appear in the *Kuksuyu* [Kroeber 1925:449].

Kroeber also mentions a number of other Miwok dances or ceremonies: the *Lileusi*, *Uchupelu*, *Kalea*, *Tamula*, *Temayusu*, *Sule tumum laksü*, *Sulesko*, *Uzumati*, *Mamasu*, *Tula*, *Henepasi*, *Yahuha*, *Alina*, *Hekeke*, *Wehena*, *Olochina*, *Helika*, *Helekasi*, *Helikna*, and *Pota* (1925:449-452). These and others are described by Gifford (1955, 1982).

6.4.2 Death and Mortuary Practices

Mortuary practices among the Me-wuk have changed over time. In late prehistory, after ca. A.D. 1400, high-status individuals who had died were usually cremated whereas lower-status decedents were more often interred, typically in a flexed or semi-flexed position (King 1976; Moratto 1972). As time passed, cremation became more common. During the historic period, however, coffin burials became the norm.

A century ago, among the Middle Mewuk of Tuolumne River,

[w]hen a person dies, *Oo'leus* the heart-spirit remains in the dead body for four days. During these four days everyone is quiet and the children are not allowed to run about or make a noise. On the morning of the fourth day the people sprinkle ashes on the ground over the buried basket of burnt bones—or over the grave if the corpse were buried instead of burned. On that day the heart spirit leaves the body in the invisible form of *Hinnan Soos* the Wind Spirit, or *Soo-les'-ko* the Ghost, and proceeds westward. That night it may come back in *Soo-koo'-me* the Owl, or in some other animal... . Some Ghosts are good, others bad. At last they all go to the ocean and cross over on a long pole to the Roundhouse of the dead, where they remain [Merriam 1910:218].

Cremation was the normal but perhaps not the only practice for treatment of the dead (Kroeber 1925:452).

Although cremation very generally prevailed among the Miwok there never was a time when it was universal. Captain John states that long before they had ever seen any Europeans, the Indians high up in the mountains buried their dead, though his people about Chinese Camp always burned [Powers 1976:356].

Powers (1976:349) further reports that all of a person's possessions “are burned with him on the funeral pyre.”

In December, 1873, Giuseppe Rosasco purchased on Don Pedro Road a 160-acre cattle ranch that extended to the Tuolumne River at Red Mountain Bar, approximately five miles south of the Crimea House (Rosasco 2009:15). Somewhere in the vicinity of the ranch, on a date unspecified, he witnessed a Me-wuk funeral. As reported by his grandson more than a century later,

...the dead body regaled in all his earthly wealth was placed on a large pyre of wood, accompanied by the appropriate chants. The fire was lighted and as it burned down chants were carried on around the fire. When the wood and body had been consumed by flames the squaws would rush in with little sticks to which sharp obsidian chips were affixed and slash their foreheads in a ceremonial shedding of their blood on the ashes of the dead, all to the accompaniment of more ceremonial dances and chants [Rosasco 2009:3-4].

In addition to the funeral rites immediately following a person's death, the Me-wuk held a "cry" or mourning ceremony, usually in the Fall, to commemorate those who had died since the time of the previous cry.

The annual mourning ceremony included dancing as well as wailing, culminated in a burning of property, and ended with a ritualistic washing of the mourners by people of the opposite totemic moiety. Rude clay figures were made and burned for people of rank [Kroeber 1925:453].

Powers claims there is no dance for the dead, "but an annual mourning (*nut'-yu*) instead" (Powers 1976:355). However, on the next page he reports that:

On the lower Tuolumne, after dancing the frightful death-dance around the fresh-made grave into which the body has just been lowered, they go out of mourning by removing the pitch [from the widow's hair] until the annual mourning ceremony comes round, when they renew it. On the latter occasion they make out of clothing and blankets manikins to represent the deceased, which they carry around the graves with shrieks of sorrow [Powers 1976:356].

Merriam describes in some detail mourning or ceremonies in October, 1906 at Railroad Flat, Calaveras County, and October, 1907 at Bald Rock Rancheria in Tuolumne County. During the first of these, two nights were devoted to the *Yum'-meh* or *Nah'-choo-wah* "cry" ceremony; the following morning to the *Mo-lah-gum'-sip* washing ceremony; the third night to the *Kal-la-ah* (fandango or Acorn Dance); and the fourth night to the *Wok'-ke-la* or War Dance (Merriam 1955:49). At Bald Rock the *Yum'-meh* was held on the first night, followed by the *Mo-lah-gum'-sip* ceremony at daylight the next morning. "It was originally intended to continue the *Yum'-meh* the second night, but for some reason this was given up" (Merriam 1955:61).

An event recorded by Powers might have signaled a shift in mortuary practices prior to 1871 or 1872:

Occasionally there arises a great orator or prophet, who wields a wide influence, and exerts it to introduce reforms which seem to him desirable. Old Sam, of Jackson, Calaveras County, was such a one. Sometimes he would set out on a speaking tour, traveling many miles in all directions, and discoursing with much fervor and eloquence nearly all night long, according to accounts. Shortly before I passed he had introduced two reforms... . One was that the widows no longer tarred their heads in mourning, but painted their faces, which would be less lasting in its loathsome effects. The other was that instead of holding an annual "cry" in memory of the dead, they should dance and chant dirges [Powers 1976:352-353].

Possibly, such changes were hastened by acculturative pressures being applied to the Me-wuk by the larger, non-Native society during the late nineteenth century.

6.5 Medicine and Curing

According to Merriam (1955:69-70), the Tuolumne Me-wuk had three kinds of doctors: *Koi'-ah-pe*, the “witch doctors;” *Too'-yu-goo*, the dance doctors; and *Wen-neh'-hoo-ne*, the medicine doctors. The functions and practices of each are described. Powers notes that both men and women could be shamans. “Scarification and prolonged sucking with the mouth are their staple methods,” and medicinal herbs and poultices were used in curing; sorcery also was practiced (Powers 1976: 354).

Levy (1978:412) indicates that the Me-wuk recognized a variety of shamans: (1) the spirit doctor or sucking shaman who gained their power both from instruction by older practitioners and from contacts with the supernatural domain as a result of dreaming, vision quests, and *Datura*-induced trances; (2) herb doctors, who cured by administering medicinal plants; (3) deer doctors, who could locate deer and foretell hunting outcomes; (4) rattlesnake shamans, who performed rattlesnake ceremonies; (5) bear shamans, who had bears as guardian spirits and who performed at public ceremonies; and (6) weather shamans who controlled the weather and could cause rainfall or the wind to arise.

In addition to shamans and herb doctors, elders typically were knowledgeable about medicinal plants (*huki-ku*) and their applications. Barrett and Gifford (1933) discuss 67 identified species of plants, plus 15 other kinds of plants known by their Me-wuk names but not identified as to species, that were used medicinally. Some of these plants are listed in Table 6-3. To judge from the intended purpose of these medicines, the Indians were concerned with treating wounds, cuts and abrasions, colds and coughs, fevers, rheumatic (probably including arthritic) pain, tooth ache, stomach problems, diarrhea, sore eyes, and afflictions of the skin. The herbal cures for measles, smallpox, tuberculosis, and venereal diseases may have been historical additions to the pharmacopeia. It is interesting that no fewer than six botanically identified plants—*Daucus pusillus*, *Euphorbia ocellata*, *Euphorbia serpyllifolia*, *Sanicula bipinnata*, *Sanicula bipinnatifida*, and *Sanicula menziesii*—along with three others for which Me-wuk names are given—*Husiku Hekapusuna*, *Tasina*, and *Wakaliñu husi'ku*—were used to treat snake bite, not to mention the several kinds of plants that had the spiritual power to ward off rattlesnakes or prevent bites.

Traditional medicines are still used by the Me-wuk today, either as a first resort or in conjunction with Western medications. One Native consultant from Chicken Ranch recalled that his grandmother gathered medicinal “tea” plants near the river and boiled them up to make *pok-u-chu*. “It tasted terrible, but was good for many ailments: poison oak [rash], earache, colds, etc. Only when the Native medicines were ineffective did the people turn to commercial Watkins preparations.” A number of Elders from Tuolumne—including a woman whose mother and aunts were doctors who cured with herbs, feathers, and songs—identified plants that were used by themselves and their relatives to treat colds and coughs, wounds, swellings, blood poisoning, eczema, poison oak rash, headaches, bee stings, and other ailments (see Table 6-3).

Table 6-3. Medicinal plants used by the Sierra Me-wuk (partial listing).

Species	Me-Wuk Name	Traditional Use	Reference(s)
Angelica (<i>Angelica</i> sp.)		The root was chewed as a headache cure and a remedy for colds as well as to bring luck to a hand-game player. Angelica can be used to purify a ceremonial place or a home. It was chewed and rubbed on the body as a snake repellant. Additionally, steam produced by boiling Angelica is inhaled to treat respiratory problems	Barrett and Gifford (1933:166); McCarthy et al. (n.d.:64-65); Me-wuk elders, notes.
Balsam Root (<i>Balsamorhiza sagittata</i>)	<i>Ho'tcotca</i>	Root ground, boiled, cooled, and drunk to alleviate headache, rheumatism, and other pain.	Barrett and Gifford (1933:167).
Black Nightshade (<i>Solanum nigrum</i>)	<i>Ma'nmantca</i> (S. Me-wuk)	A decoction served as a wash for sore eyes.	Barrett and Gifford (1933:173).
Blue Iris (<i>Iris missouriensis</i>)		Iris root used to relieve toothache.	McCarthy et al. (n.d.:108-109).
Buena Mujer (<i>Mentzelia</i> sp.)	<i>Matcu'</i>	Pulverized seeds mixed with water, or preferably fox or wildcat grease, and applied as a poultice.	Barrett and Gifford (1933:171).
California Barberry (<i>Berberis pinnata</i>)	<i>Holo'metu</i>	Decoction made from the root was drunk for heartburn, ague, consumption, and rheumatism. Pieces of root were chewed to ward off such conditions. Root was also used to help heal cuts and abrasions.	Barrett and Gifford (1933:168).
California Buckeye (<i>Aesculus californica</i>)	<i>Siwu</i>	Tea made of Buckeye leaves was sipped for lung congestion. Crushed seeds used a poultice for hemorrhoids.	McCarthy et al. (n.d.:6-7).
California Everlasting or "Buckwheat and Honey" (<i>Gnaphalium californicum</i>)	<i>Hu'semelaiyu</i>	Used to make a salve for skin problems such as eczema. Also, a poultice of leaves would draw out blood poisoning or reduce swelling.	Barrett and Gifford (1933:170); Me-wuk elders, notes.
California Laurel or Pepperwood or Bay or Myrtle (<i>Umbellularia californica</i>)	<i>Loko</i> ; <i>La-ka-lak</i>	Eating the parched nuts was a cure for indigestion. A bay leaf in the nostril was said to relieve headache. Leaves and twigs bound on the forehead did the same. Leaves steeped, and the steam inhaled to treat congestion.	Brubaker (1926:79); Barrett and Gifford (1933:174); Lightfoot and Parrish (2009:315-316); McCarthy et al. (n.d.:4-5).
California Wild Rose (<i>Rosa californica</i>)	<i>Mah-moo-dah</i> ; <i>Ma-mu-da</i>	Rose hips eaten fresh or brewed into tea to relieve aches and pains and as a general tonic.	McCarthy et al. (n.d.:54-55).
Cascara (<i>Rhamnus rubra</i>)	<i>Lo'o</i> (N. Me-wuk)	Decoction of bark drunk as a cathartic.	Barrett and Gifford (1933:172).
Chokecherry (<i>Prunus demissa</i>)	<i>Pisakene</i> ; <i>Te-pe-nah</i>	Fruits eaten to treat rheumatism, arthritis, gout, and high blood pressure. Inside of bark is peeled and steeped into a tea to reduce hoarseness.	McCarthy et al. (n.d.:28-29).
Common Mullein or "Mule Ears" (<i>Verbascum thapsus</i>)		Gathered largest leaves (from near the base of the plant; steep leaves in warm-to-hot but not boiling water; make poultice; wrap around injured leg [or, presumably, arm]; swelling would be reduced.	Me-wuk elders, notes.

Species	Me-Wuk Name	Traditional Use	Reference(s)
Curly Dock (<i>Rumex crispus</i>)		Dried leaves (and seeds?) were mixed with Indian tobacco.	McCarthy et al. (n.d.:70-71).
Dandelions (<i>Taraxacum</i> spp.)		Boiled and prepared as a tea; a traditional remedy for kidney problems.	Lightfoot and Parrish (2009: 309).
Dutchman's Pipe (<i>Aristolochia californica</i>)	Okise	The plant was steeped, and the decoction was drunk to cure colds.	Barrett and Gifford (1933: 167).
Elderberry (<i>Sambucus glauca</i> or <i>S. nigra</i>)	'Angtay:u	Fresh leaves made into a poultice to treat insect stings.	McCarthy et al. (n.d.:32-33).
Giant Hyssop (<i>Agastache urticifolia</i>)	Lokotokayi	Boiled and drunk for measles. A decoction of the leaves was also drunk for rheumatism.	Barrett and Gifford (1933:166).
Golden Fleece (<i>Ericameria arborescens</i>)		Roots (1) brewed into tea that is sipped to relieve arthritis or (2) made into a poultice that is applied to joints sore from arthritis.	McCarthy et al. (n.d.:34-35).
Gray Pine (<i>Pinus sabiniana</i>)		Charcoal of this pine was applied medicinally to sores and abrasions.	Barrett and Gifford (1933:149); Lightfoot and Parrish (2009:321).
Greenleaf Manzanita (<i>Arctostaphylos patula</i>)		Leaves were mixed with black moss to make a poultice for sores that would not heal.	Lightfoot and Parrish (2009: 317).
Horehound (<i>Marrubium vulgare</i>)		A cold and cough medicine; formerly gathered at Mountain Ranch; very bitter, "but it's what works" to stop coughing. It is also a mild laxative, and a poultice of horehound and sumac berries is used to treat skin diseases.	McCarthy et al. (n.d.:74-75); Me-wuk elders, notes.
Horsetail Rush (<i>Equisetum arvense</i>)		Rush tea drunk as a treatment for kidney problems; also used as a blood medicine or tonic in the spring.	McCarthy et al. (n.d.:86-87).
Jimson Weed or Tolache or Tolguacha (<i>Datura meteloides</i>)	Monayu	"Strong medicine." Leaves mashed and formed into a poultice to treat sores and painful injuries. Shamans would sometimes drink a decoction of the plant or eat some of the root, which would result in visions and could give them supernatural powers.	Barrett and Gifford (1933: 169); Kroeber (1925); Lightfoot and Parrish (2009: 312); Me-wuk elders, notes.
Kitkitdizze or Mountain Misery (<i>Chamaebatia foliolosa</i>)	Kitkiti'su	Tea made of leaves used to treat rheumatism and skin eruptions. Leaves also used as an ingredient in medicines for treating venereal diseases.	Barrett and Gifford (1933:168).
Manzanita (<i>Arctostaphylos</i> sp.)		Leaves chewed to relieve stomach ache and cramps.	Barrett and Gifford (1933:162).
Milkweed (<i>Asclepias speciosa</i>)	Sukennu	A decoction of the root was taken to cure venereal diseases. The milk was also applied to warts.	Barrett and Gifford (1933:168).
Mint (<i>Mentha arvensis</i> , <i>M. spicata</i>)	Sisimela	Mint tea imbibed for colds, headaches, stomach distress, diarrhea, and other problems. Spearmint (<i>M. spicata</i>) oil rubbed on joints to relieve arthritis pain.	McCarthy et al. (n.d.:78-79).

Species	Me-Wuk Name	Traditional Use	Reference(s)
Monkeyflower (<i>Mimulus guttatus</i>)		Root made into a tea to treat diarrhea.	Barrett and Gifford (1933:171); Lightfoot and Parrish (2009:309).
Mountain Dogwood (<i>Cornus nuttallii</i>)		Bark was used as a remedy for fevers.	Brubaker (1926:79); Lightfoot and Parrish (2009:318).
Mountain Pennyroyal (<i>Monardella odoratissima</i>)	<i>Hukume</i>	Decoction of stems and flower heads drunk for colds and fevers as well as to relieve toothaches, eye infections, and menstrual cramps; also could be used to abort a fetus.	Barrett and Gifford (1933:171); Me-wuk elders, notes.
Mugwort or Wormwood (<i>Artemisia</i> spp.)	<i>Kitci'ñu</i> ; <i>Kachino</i>	Mixed with willow bark, moss from a willow tree, and mud to treat bee stings; would draw out the poison. Used by the Sierra Me-wuk to treat headaches and rheumatic pain. Also, the plant was used spiritually to keep away ghosts and prevent personal injury. Corpse handlers rubbed themselves with <i>Kitci'ñu</i> to avoid being haunted by the deceased. Leaves added to sweathouse fire to color the flames. Prior to hunting, men would cleanse themselves with wormwood to mask their human scent.	Barrett and Gifford (1933:167); Lightfoot and Parrish (2009:315); McCarthy et al. (n.d.:100-101); Me-wuk elders, notes.
Mule's Ears (<i>Wyethia mollis</i> or <i>W. helenoides</i>)	<i>Hu'ssupu</i>	Poisonous; never taken internally. A decoction of the leaves was used as a bath for fever patients; caused a profuse perspiration. Roots mashed and used as a poultice on burns, sores, and rheumatism.	Barrett and Gifford (1933:174); McCarthy et al. (n.d.:80-81).
Nettle (<i>Urtica dioica</i>)	<i>So-so-li-yu</i>	Treatment for rheumatism; root steeped in hot water and painful joint bathed in this decoction.	McCarthy et al. (n.d.:84-85).
Nightshades (<i>Solanum</i> spp.)		Black nightshade (<i>S. nigrum</i>) was made into an eyewash for sore eyes.	Barrett and Gifford (1933:173).
Purple Milkweed (<i>Asclepias cordifolia</i>)		Root used as a medicine.	Barrett and Gifford (1933:167).
Rattlesnake Weed (<i>Daucus pusillus</i>)	<i>Yotcitayu</i>	Chewed and placed on a snake bite. Perhaps this use was after a Spanish example.	Barrett and Gifford (1933:169).
Rattlesnake Weed (<i>Euphorbia ocellata</i>)	<i>Pe'sippesa</i>	Leaves mashed and rubbed into snakebite; milky juice prevented swelling. Decoction drunk as a blood purifier.	Barrett and Gifford (1933:169).
Sage	<i>Huku'me</i>	Necklace of sage worn to protect the wearer from disease.	Merriam (1955:68).
Sierra Sweet Bay (<i>Myrica hartwegii</i>)		"Tea brewed from the aromatic leaves is used to treat kidney and bladder problems and is also effective for treating ulcers and psoriasis; additionally, it may be valuable for management of diabetes. Taken several times a day, the tea is said to shrink cysts and tumors."	McCarthy et al. (n.d.:58).
Sourberry or Skunkbrush (<i>Rhus aromatica</i>)	<i>Tah-mah</i>	Sour berries crushed; water, and sometimes acorn, added to make a drink believed to cure a variety of ailments. Berry juice, mixed with honey, taken to cure ulcers as well as for mosquito bites.	Lightfoot and Parrish (2009:322); McCarthy et al. (n.d.:56-57).
Spearmint (<i>Mentha spicata</i>)	<i>Sisimela</i>	A hot tea of boiled leaves was drunk to alleviate stomach problems and diarrhea.	Barrett and Gifford (1933:171).

Species	Me-Wuk Name	Traditional Use	Reference(s)
Sugar Pine (<i>Pinus lambertiana</i>)	<i>Sung-ah-go;</i> <i>Sang:aku</i>	Sap used as a blood coagulant.	McCarthy et al. (n.d.:24-25).
Tarweed (<i>Madia elegans</i>)		Leaves boiled until sticky; then applied as a poultice on persistent sores.	McCarthy et al. (n.d.:92-93).
Tobacco (<i>Nicotiana</i> spp.)	<i>Kahu</i>	Plants sometimes tended; leaves dried and crushed for smoking. Tobacco had spiritual power and was smoked or applied as a poultice for healing purposes. Tobacco was also mixed with lime and used as an emetic to induce vomiting.	Barrett and Gifford (1933:193-195); Kroeber (1925); Lightfoot and Parrish (2009:315); McCarthy et al. (n.d.:96-97).
Valley Oak (<i>Quercus lobata</i>)		Outer bark (<i>masakuta</i>) was pulverized to treat sores; also, tea made from bark was drunk for bad coughs.	Barrett and Gifford (1933:172); Lightfoot and Parrish (2009:315).
Vinegar Weed or Camphor Weed (<i>Trichostema lanceolatum</i>)	<i>Tcuku'tcu</i>	Decoction of leaves and flowers drunk for colds, malaria, headache, ague, general debility, and stricture of the bladder. Leaves chewed to alleviate toothache.	Barrett and Gifford (1933:173).
Water Plantain (<i>Alisma plantago-aquaticum</i>)		Heals poison oak rash.	Me-wuk elders, notes.
Willows (<i>Salix</i> spp.)		Fresh bark chewed to cure headaches. Bee stings treated with willow bark, moss from the willow tree, mugwort, and mud all mixed together; "a real good medicine."	Me-wuk elders, notes.
Wolly Mullein (<i>Verbascum Thapsus</i>)		Dry leaves or pounded roots smoked to alleviate asthma symptoms. Flowers brewed as tea to combat insomnia. Leaves boiled, and the resultant tea used as a soak for hemorrhoids or poultice for bruises.	McCarthy et al. (n.d.:82-83).
Wormwood		See Mugwort.	
Yarrow (<i>Achillea millefolium</i>)	<i>Kamya</i> or <i>Kam'-i-ya</i>	Leaves and flowers steeped, and the infusion was drunk for lung ailments, bad colds or the flu. Also used as an eye wash. Mashed leaves were bound to a wound to stop bleeding.	Barrett and Gifford (1933:166); McCarthy et al. (n.d.:102-103); Me-wuk elders, notes.
Yerba Santa or Mountain Balm (<i>Eriodictyon californicum</i>)	<i>Pa'ssalu</i>	Many uses. Leaves and flowers steeped and made into tea to treat coughs, colds, stomach ache; leaves chewed for same purposes; leaves warmed and used as plasters on aching or sore spots. Leaves smoked like cigarettes to relieve coughs and colds. Mashed leaves applied to wounds and fractured bones to reduce swelling. Buds picked and eaten when fresh, or dried for later use as tea.	Barrett and Gifford (1933:169); Lightfoot and Parrish (2009:323); McCarthy et al. (n.d.:62-63).

7.0 STUDY METHODS

As mentioned in Chapter 1, the Districts' *Study Plan CR-2* requires the TCP study to include seven "steps" or tasks: (1) Obtain the State Historic Preservation Officer's (SHPO's) concurrence on the Area of Potential Effects (APE); (2) archival research; (3) tribal consultation and identification of resources; (4) archaeological site visit; (5) National Register of Historic Places (NRHP) evaluation of cultural properties; (6) identification and assessment of potential Project effects on NHRP-eligible properties; and (7) reporting the study goals, methods, and findings [TID/MID 2011a:6-9]. The first of these—the SHPO's concurrence with the defined APE—was completed on January 9, 2012 (Appendix D), before the TCP study began, and the corresponding APE maps are appended to the TCP Study Plan (TID/MID 2011a:Attachment A).¹¹ The methods employed in the performance of the remaining six tasks are described in this chapter.

Early in the process (after the first step was completed and just as the second was beginning), the Districts selected a consultant to perform the required TCP study. In order to facilitate Tribal consultation, and as required by the TCP Study Plan approved by FERC, the Districts sought to retain the services of a qualified, professional anthropologist who meets the standards for ethnography as defined in Appendix II of *National Register Bulletin* No. 38. The Districts invited the affected Tribes and other interested cultural/Tribal stakeholders to comment on potential candidates prior to retaining an anthropologist to conduct the study. Following a brief comment period in which no comments were received from the Tribes, the Districts contracted with Dr. Michael Moratto in early 2012. Dr. Moratto is a Principal Archaeologist and Cultural Resource Specialist with Applied EarthWorks, Inc., and has more than 45 years of experience in cultural studies throughout California, including work directly with various Tribes in the central Sierra Nevada since 1967. The Districts held an initial study meeting on April 18, 2012, to introduce Dr. Moratto and to provide an overview of the implementation of the Native American Traditional Cultural Properties Study. All affected Tribes and stakeholders with an interest in cultural resources were invited to the meeting. A representative of FERC and one tribal representative, Reba Fuller of the Tuolumne Band of Me-Wuk Indians, attended the meeting.

7.1 Background Research

Beginning in July, 2010, prior to commencement of the present TCP study, the Districts conducted a records search at the Central California Information Center (CCIC) of the California Historical Resources Information System (CHRIS) at California State University, Stanislaus (CSUS) in Turlock. The search included all lands within the Project APE plus a 0.25-mi buffer beyond the APE boundary to allow for flexibility in Project planning.

The records search included reviews of cultural resources records and site location maps, historic General Land Office (GLO) plats, NRHP, California Register of Historic[al] Resources, Office of Historic Preservation Historic Property Directory, *California State*

¹¹ Following 2012 fieldwork related to cultural resources relicensing studies, the APE was expanded to incorporate several small areas where Project-related O&M activities occur that could potentially affect historic properties, but which were not originally included in the APE. The APE, as referenced throughout this report and shown in Figure 1-2, reflect the expanded APE. SHPO review and concurrence of the expanded APE will be requested with the submission of the present TCP Study report.

Historic Landmarks (CDPR 1996), *California Inventory of Historic Resources* (CDPR 1976), historic topographic maps, and the Caltrans Bridge Inventory [TID/MID 2011a:3].

The records search at the CCIC did not identify any TCPs or Indian Trust Assets (ITAs) within the FERC Project boundary (TID/MID 2011a:3). Additionally, the Districts contacted the California Native American Heritage Commission (NAHC) in 2010 to obtain a listing of tribal groups to be contacted regarding the Project (TID/MID 2011a:3). The subsequent consultation with Native Americans is discussed in Section 7.2.

The TCP Study Plan identifies 13 venues where archival/library research is recommended, plus “other appropriate Tribal, private, state, or federal repositories identified during the research” (TID/MID 2011a:6). In the course of the present study, Æ’s Principal Anthropologist and Historian (i.e., M. Moratto and R. Baloian) investigated more than 20 sources of information, including all but four of those named in the TCP Study Plan and ten that did not appear in the plan. Only the Turlock Museum and Archives, Modesto Museum and Archives, Southern Tuolumne County Historical Society, and Archives of Hetch Hetchy Water and Power were omitted because more than sufficient data had been acquired at the other archives (e.g., at the Bancroft Library of the University of California, Berkeley, and the California State Library’s California History Room and Government Documents Section in Sacramento).

Three broad goals guided the study: first, to develop a regional context for understanding and interpreting Me-wuk cultural traditions; second, to compile sufficient information to prepare overviews of local history, ethnohistory, and ethnography; and, third, to identify cultural resources that might qualify as TCPs and that could be assessed more fully during later interviews with knowledgeable Tribal members. Accordingly, we endeavored to learn of any traditional settlements, ceremonial or ritual sites, gathering areas where food and medicinal plants were harvested, fishing places, hunting grounds, aboriginal trails and trading stations, cultural landscape features, cemeteries, sacred sites, and locations of important ethnohistorical events within and near the Project area.

Among the institutions visited and/or resources consulted by Æ were these:

- Applied EarthWorks, Inc., library, Fresno
- Bancroft Library, University of California, Berkeley
- Bancroft Library, Online Archive of California
- California State Library, California History Room and Government Documents Section, Sacramento
- Carlo M. De Ferrari Archive of Tuolumne County, County of Tuolumne, Sonora
- Davis-King & Associates library of Sierra Nevada history and anthropology, Standard
- Don Pedro Recreation Agency headquarters at Don Pedro Dam, La Grange
- Fresno County Library, California History and Genealogy Room, Fresno
- George and Mary Foster Anthropology Library, University of California, Berkeley
- HDR Engineering, Inc. files of documents related to cultural resources in the Project area

- Henry Madden Library, California State University, Fresno
- Modesto Irrigation District Headquarters, Modesto
- Michael J. Moratto's library of California anthropology, Westlake Village
- San Francisco State University, NAGPRA Compliance Office, San Francisco
- San Francisco State University, Paul Romberg Tiburon Center (curation facility), Tiburon
- San Francisco State University, Adán Treganza Anthropology Museum, San Francisco
- Tuolumne County Museum and History Center, Sonora
- Tuolumne County Central Public Library, Sonora
- Tuolumne Me-Wuk Rancheria, Cultural Center, Tuolumne
- Turlock Irrigation District Headquarters, Turlock
- Many web sites (cited in the text)

The results of this background research appear in the present TCP Study report, mainly in Chapters 4 (Ethnohistory), 5 (Ethnography: Part 1) and 6 (Ethnography: Part 2). Research for the ethnohistory chapter involved collecting materials from several repositories. On December 17 and 18, 2012, Æ visited the Bancroft Library at the University of California, Berkeley. Prior to the visit, the library's various collections were searched online for relevant sources via the Online Archive of California at www.oac.cdlib.org. Materials were drawn from four collections: (1) the C. Hart Merriam Papers, Volume 1: Papers Relating to Work with California Indians, 1850-1874; (2) the A. L. Kroeber Papers; (3) Ethnological Documents of the Department and Museum of Anthropology, 1875-1958, which includes the files of such anthropologists as S. A. Barrett, E. W. Gifford, A. Tozzer, and R. B. Dixon; and (4) the Correspondences of E. W. Gifford. Additionally, most of the published articles on the Sierra Me-wuk and California Indians used in preparing Chapter 4 were obtained through the George and Mary Foster Anthropology Library, a related website at www.lib.berkeley.edu/ANTH/info/info.html.

On December 19 and 20, 2012, Æ visited the California State Library in Sacramento. The library's California History Room contains an extensive map collection. In addition, the room has an excellent, though only partially completed, indexed collection of books, materials, and papers related to California Indians. Selected reports were also obtained from the library's Government Publications Collection. On various occasions, Æ also accessed the Henry Madden Library at California State University, Fresno to review books and articles from the main stacks and the Special Collections Research Center. Research also included visits to the California History and Genealogy Room at the Main Branch of the Fresno County Library, which houses collections of local histories from each of California's 58 counties.

In December 2012, Æ traveled to the headquarters of the Turlock Irrigation District and the Modesto Irrigation District, and was assisted there by Steve Boyd and Regina Cox, respectively. Æ's in-house library provided several relevant materials, including Herbert Lang's (1882) *A History of Tuolumne County California*, while Michael J. Moratto made available Jeanne Muñoz's (1980) *Ethnohistory of the New Melones Project Area: Selected Topics*, and Alice Hall's particularly relevant (1978) M.A. thesis, *Ethnohistorical Studies of the Central Sierra*

Miwok: 1800–1900 as well as numerous ethnographic documents pertaining to the central Sierra Nevada.

In addition to the online sources already noted, several other sites provided valuable information for the ethnohistory. In this regard, ancestry.com contains valuable data reproduced from public records or, as with census records, viewable from images of the actual document. Information from this source: (1) can provide personal data (e.g., birth date, marital status, country of origin, etc.) about specific individuals; and (2) can be used to describe community demography. Finally, HDR provided Æ with the results of an extensive records search at the CCIC in Turlock and a separate search of cultural-resource files at the Mother Lode Field Office of the Bureau of Land Management in El Dorado Hills. While much of the CCIC and BLM material pertains to archaeological sites, some of the data are relevant to the present study and have been incorporated into this report.

7.2 Tribal Consultation and Identification of Resources

The TCP Study Plan (TID/MID 2011a:6) specifies that, following the background research, “the next step in identifying potential TCPs will involve extensive Tribal consultation.” This consultation is to be consistent with Section 106 of the NHPA and with *National Register Bulletin* 38, “Guidelines for Evaluating and Documenting Traditional Cultural Properties” (Parker and King 1998). Moreover, the TCP Study Plan requires that a Field Authorization be obtained from the BLM’s Mother Lode Field Office prior to visiting any sites on BLM land (TID/MID 2011a:6). In accordance with the plan, the Project’s ethnographer will

contact the appropriate Tribe(s) and interested Tribal and cultural stakeholders to arrange for interviews at a time and location acceptable to those Tribal interviewees. Tribal interviewees and the ethnographer may need to visit the APE together to accurately define potential TCPs. If necessary, the Districts will arrange for an initial introductory meeting between the Districts, Tribal representatives, and the ethnographer [TID/MID 2011a:7].

The Districts hosted such a “kick-off” meeting on April 18, 2012 at the headquarters of the Modesto Irrigation District in Modesto. On March 25, 2012, HDR Engineering, Inc. (HDR), consultant to the Districts, on behalf of the Districts, issued a written invitation to the meeting to 19 Native Americans, representing a total of nine Tribal organizations, as well as to representatives of MID, TID, FERC, BLM, the Project’s ethnographer, and HDR personnel. The invited Native Americans included those named on the “Tribal Contact List” provided to the Districts by the NAHC and reproduced as Table 4.0-1 in the TCP Study Plan (TID/MID 2011a:4) as well as other tribal representatives subsequently identified by HDR.

- Buena Vista Rancheria
- California Valley Miwok Tribe
- Central Sierra Me-Wuk Cultural & Historic
- Chicken Ranch Rancheria of Me-Wuk
- Mono Nation

- North Fork Mono Tribe
- Picayune Rancheria of the Chukchansi Indians
- Southern Sierra Miwuk Nation
- Tuolumne Band of Me-Wuk Indians (TID/MID 2011a:4).

Although the meeting was noticed timely, only one Native American was able to participate. In addition, the Chairperson of the California Valley Miwok Tribe wrote to HDR, Inc. on 27 March 2012 to defer to the Tuolumne Band of Me-Wuk Indians and to ask that her Tribe not be contacted further with respect to the Don Pedro Project. Minutes of the 18 April 2012 kickoff meeting were recorded by Mackey (2012) and distributed to the invitees by HDR Engineering, Inc. (HDR). In addition, HDR has maintained a detailed log of all correspondence, calls, and other contacts with Native Americans since the inception of the Project (HDR 2010-2013). Dr. Moratto has done the same since 25 March 2012. His Native American Consultation Log is included as Appendix A of this report but is classified as “Confidential and Restricted: for FERC and District Use Only”.

Following the kickoff meeting, Moratto consulted extensively with Native Americans during a period of more than 18 months by way of face-to-face meetings, telephone calls, letters, e-mail exchanges, individual and group interviews, and field visits with elders to gathering places and archaeological sites within the Project area (see Appendix A). The BLM Mother Lode Field Office issued a Fieldwork Authorization to Moratto on 9 June 2013, prior to the scheduled visits to archaeological sites on BLM land. Interested Tribal members also had the opportunity to review and comment on draft iterations of this report before it was finalized. The Native American consultation included:

- Individual and group consultations with Tuolumne Me-Wuk and Me-Wuk/Yokuts elders at the Tuolumne Rancheria tribal hall and cultural center, July 25, 2012; five people interviewed.
- Individual consultation with a Tuolumne Me-Wuk elder, as well as her Tuolumne Me-Wuk liaison, at her home at the Tuolumne Rancheria, July 25, 2012; two people interviewed.
- Consultation with Me-Wuk elders from Chicken Ranch Rancheria and Tuolumne Rancheria, held on July 26, 2012 at the Chicken Ranch Rancheria tribal offices in Jamestown; two people interviewed.
- Group consultation with Tuolumne Me-Wuk elders at the Tuolumne Rancheria tribal hall and cultural center, September 10, 2012; four people interviewed.
- Individual consultation by telephone with a Southern Sierra Miwuk elder from the Mariposa vicinity, September 28, 2012; one person interviewed.
- Individual consultation by telephone with a Southern Sierra Miwuk elder from the Mariposa vicinity, October 2, 2012; one person interviewed.
- Individual consultation by telephone with a Southern Sierra Miwuk elder from the Mariposa vicinity, October 5, 2012; one person interviewed.

- Consultations with Tuolumne Me-Wuk elders and others during examination of Don Pedro archaeological collections at San Francisco State University, February 2-3, 2013, in San Francisco and Tiburon; three people interviewed.
- Field visit with Tuolumne Me-Wuk and Yokuts/Me-Wuk elders to archaeological sites on non-Federal lands in the Don Pedro Project area, April 16, 2013; three people interviewed.
- Individual consultation by telephone with a Yokuts/Me-Wuk elder from the Chinese Camp vicinity, May 16, 2013; one person interviewed.
- Individual consultation during a face-to-face meeting with a Yokuts/Me-Wuk elder in the Don Pedro Recreation Agency facilities at Bonds Flat, June 10, 2013; one person interviewed.
- Consultation with two Tuolumne Me-Wuk elders while visiting archaeological sites and traditional gathering areas along Kanaka Creek and at Blue Oak Recreation Area in the Project area, June 11, 2013.
- Consultation with five Tuolumne Me-Wuk elders while visiting several archaeological sites in the Project area, June 12, 2013.
- A meeting on June 29, 2014, in Modesto with three Native Americans (one Central Sierra Me-Wuk, one Southern Sierra Miwuk, and one Me-Wuk/Yokuts), District and HDR representatives, and the author to discuss reviewers' comments on the draft TCP Study Report.
- E-mail messages, phone calls, and letters between Native Americans and the author during the period from June 12, 2013 until August 12, 2014 (Appendix A).

Altogether, the Project's Principal Anthropologist interviewed 16 separate individuals, some of them on two or more occasions. A basic list of "standard" questions was posed initially, to the extent permitted by the immediate social context of the particular interview(s). Maps were available to help the elders envision the Project boundaries. Once each conversation was underway, the anthropologist posed additional questions to pursue any line of inquiry that seemed relevant to the study's objectives. The initial "standard" questions posed were:

- (1) Do you know of any former Indian settlement locations in the Project area?
- (2) Are you aware of the names of any Indian families or individuals who once lived there?
- (3) When and why did they leave?
- (4) Where did they go?
- (5) How did they make their living before and after being displaced?
- (6) Do you recall any of the old place names?
- (7) Are there landscape features in the Project area that are important to Indians today?
- (8) Did people of earlier generations talk about seasonal movements up and down the river or up and down slope in the mountains?
- (9) Do any segments of the old Native trails still exist? What are their routes? How were the trails used?

- (10) What about traditional stream-crossing and fishing places; are any of these accessible and still being used?
- (11) Do you know of locations where plants were traditionally gathered for use as food, medicine, and/or material for arts, crafts, or industries?
- (12) Are any of these gathering places still being visited?
- (13) What about locations where the people extracted rocks and minerals to make tools and pigments?
- (14) Are rocks and minerals still being collected?
- (15) Are you familiar with any sites where there are remains of dance houses or other evidence of ceremonies?
- (16) How are these sites being managed/treated today?
- (17) Any sacred sites? Are these still visited?
- (18) Cemeteries? Are these still visited?
- (19) Do you know of historical events important to Native Americans that took place in the study area?
- (20) What is your opinion of the cultural landscape of the project area as a whole?
- (21) When the Federal Energy Regulatory Commission relicenses Don Pedro Reservoir, how would you like to see the area's cultural resources managed?
- (22) What changes would you recommend in the way that the resources are presently being treated?
- (23) Have you any other information, or any concerns, about cultural resources within the Project area that you would like to share?

The elicited responses to these questions are recorded in the ethnographic field notes and summarized in Chapter 8, "Findings," of this TCP Study report.

Those interviewed variously represent the Central Sierra Me-Wuk Cultural & Historic program at Tuolumne, the Chicken Ranch Rancheria of Me-Wuk, the Southern Sierra Miwuk Nation, the Tuolumne Band of Me-Wuk Indians, and an individual Yokuts/Me-Wuk elder, not affiliated with a Federally-recognized tribe, from the Chinese Camp vicinity near the Project area. One of the tribes on the NAHC contact list, the California Valley Miwok Tribe, deferred to the Tuolumne Me-Wuk and asked not to be contacted further about the Project. The four remaining Tribal groups—the Buena Vista Rancheria, Mono Nation, North Fork Mono Tribe, and Picayune Rancheria of the Chukchansi Indians—were invited to Project meetings and field trips, but did not participate in these events (see HDR 2010-2013 and Appendix A). However, the Buena Vista Rancheria was among the reviewers who did provide valuable information in response to the Districts' request for comments on the draft TCP Study Report.

The original field notes of the interviews have been deposited in the Special Collections of the campus library at the University of California, Merced, where access to the notes will not be granted until January 1, 2065, and thereafter. No copy of the notes has been made. The ethnographic testimony presented in the field notes is deemed confidential for three reasons: (1) to protect the intellectual property of consultants; (2) to honor the requests and respect the

stipulations imposed by some elders as a condition for their sharing of information for purposes of the TCP study, including in some cases the stipulation that information not be made available to other Native Americans; and (3) in compliance with such Federal and State laws as Section 304 of the NHPA, Section 9(a) of the Archaeological Resources Protection Act (ARPA), exemptions authorized under the Freedom of Information Act (FOIA), and The California Public Records Act exemptions from disclosure (California Government Code 6254(r)).

7.3 Cultural Site Visits

The TCP Study Plan suggests that Tribal representatives may want to visit archaeological sites identified during the TCP Study or during the Historic Properties Study.

The purpose of the visit would be to provide tribal representatives the opportunity to examine prehistoric archaeological sites encountered during the Historic Properties Study field work, and for the ethnographer to obtain additional information on potential TCPs [TID/MID 2011a:7].

All of the Native Americans on the NAHC contact list, except for members of the California Valley Miwok Tribe at their request, were sent written invitations to take part in field visits to archaeological and other cultural sites on three separate days. Transportation by automobile and boat within the Project area was arranged in advance and provided gratis, and a modest honorarium was offered to each participant. Those planning to attend were asked to convene in the parking lot at the Don Pedro Recreation Agency (DPRA) visitors' center on Bonds Flat Road, a location easy to find and with convenient access to Route J-59. The sites to be visited were chosen by elders who were familiar with the full range of cultural resources that had been found during the Historic Properties Study for the Project.

The first field trip took place on April 16, 2013. Due to forecasted high winds, the turnout was lower than anticipated. Two Native American elders, the anthropologist, and other members of the field party traveled by DPRA boat to visit sites HDR-DP-106 on Ranchero Creek and HDR-DP-113 on a small drainage east-northeast of Jenkins Hill. Upon returning to the visitors' center at mid-day, we were joined by a third Native American elder. Following lunch and a brief meeting, our party visited site HDR-DP-92 a short distance east of Don Pedro Dam. All of the site numbers given here are temporary designations.

On June 11, 2013, two Native American elders took part in the second field visit. Again we departed the visitor's center and traveled by DPRA boat. Our first destination was the Kanaka Creek Mining Landscape, FW-DP-53. However, our focus was not so much on the historical archaeological remains related to nineteenth-century gold mining as it was on the extraordinary botanical richness of the Kanaka Creek drainage—an area with numerous plants of traditional importance as foods, medicines, and craft materials (see Chapters 6, 8). From Kanaka Creek we hiked southeastward to another botanically productive locale near Kanaka Court, just south of Jacksonville Road, and then returned to the visitors' center. After lunch, we visited yet another area of biotic richness, this one in the Blue Oaks Recreation Area near the dam, which the visitors believed could serve as an ideal venue for teaching the Me-wuk youth about native plants and their traditional dietary and medicinal values.

The number of Native Americans participating in the third and final field trip, on June 12, 2013, varied from three to six as people came and went throughout the day. We first traveled by boat to the lower reach of Moccasin Creek where we visited two archaeological sites, FW-DP-81 and HDR-DP-192—both with rockshelters and bedrock mills—on a rocky ridge above the Moccasin arm of the reservoir. We then boated to the Graveyard Creek vicinity on Middle Bay where we examined features and artifacts exposed by erosion in the fluctuating pool zone at site HDR-DP-119.

The findings pertinent to this study that have emerged during background research, interviews, and field visits to sites in the Project area are presented in Chapter 8.

7.4 Methods for NRHP Evaluation and Assessment of Effects

Step 5 in the TCP Study Plan (TID/MID 2011a:7-8) calls for evaluation of identified TCPs with respect to their eligibility for the NRHP. The evaluation methods and results are described fully in Chapter 9. The TCP Study Plan also requires the identification and assessment of any potential Project effects on NRHP-eligible properties including, specifically for this study, any TCPs as defined in *National Register Bulletin* 38 (TID/MID 2011a:8-9). The methods of assessing such effects are set forth in Chapter 10. The last task in the TCP Study Plan is reporting study goals, methods, and results. The present report meets the requirements of this final task.

8.0 STUDY RESULTS

As discussed in Chapter 7, this study has involved background research, consultation with Native Americans, and field visits to various locations in the reservoir area. The purpose of Chapter 8 is to present study results, that is, to describe the cultural resources that have been identified as possible TCPs. The objective of Chapter 9 is to evaluate these properties with respect to the NRHP-eligibility criteria in order to ascertain whether any of them is a “historic property” (per 36 CFR 60.4) and thus qualifies as a TCP in accordance with *National Register Bulletin* 38 (Parker and King 1998).

8.1 Results of Background Research

Prior to the inception of Æ’s work, the Districts examined cultural site records on file at the CHRIS Central California Information Center in Turlock and at the Mother Lode Field Office of the BLM in El Dorado Hills (see Chapter 7). Although these searches revealed the records of many archaeological and historic sites within the Don Pedro Project area, they did not identify any TCPs or Indian Trust Assets within the Project boundaries (TID/MID 2011a:3).

The TCP Study Plan requires specific archival research (TID/MID 2011a:6) in addition to the records searches. Chapter 7 summarizes the methods employed to perform that task. Goals of the archival study were to: (1) develop a context for understanding Me-wuk cultural traditions; (2) compile data to be used in overviews of local history, ethnohistory, and ethnography; and (3) identify potential TCPs. The archival and library research yielded ample information for Section 3.3 and Chapter 4, which deal respectively with Gold Rush impacts on natural resources of traditional cultural value in the Project area and with Central Sierra Me-wuk ethnohistory. Similarly, both the library research and the records searches produced abundant ethnographic data, some of which are presented in Chapters 5 and 6 of this report. While the background research did not result in the identification of any TCPs *per se*, it did permit the development of historical and ethnographic contexts within which potential TCPs identified subsequently could be interpreted and evaluated.

8.2 Results of Consultation

“Consultation” here refers to all of the communications between Native Americans and the Project’s Principal Anthropologist, including meetings, telephone conversations, letters sent by U.S. mail, e-mail message exchanges, and both individual and group interviews (see Chapter 7). Although discussions with elders during field visits to cultural sites are also an important form of consultation, those discussions are addressed separately below in Section 8.3. The material in the current section is summarized, and in some instances redacted, from the more detailed presentation in the original field notes (see also Appendix A). Because confidentiality of personal testimony was either requested or required by interviewed Native Americans, the information presented in this chapter is without attribution in order to maintain the anonymity of the consulting elders.

The results of consultation are organized below according to several topics related to traditional cultural activities. These include: plant gathering, fishing, hunting, use of rocks and minerals, and material conveyance. Potential TCPs are identified in each section and summarized in 8.4.

8.2.1 Gathering

Traditional gathering of native plants for use as foods, medicines, and raw material for baskets and ceremonial regalia is still a vital cultural practice today. Some of the historical and contemporary gathering locations are in or near the Don Pedro Project area. One elder from Tuolumne stated that black oak acorns, watercress, coyote mint, oyster mushrooms, and numerous other plants were traditionally harvested in the Kanaka Creek vicinity and continue to be gathered there today. Many of the same kinds of plants can be found at Moccasin Point. In addition, mushrooms were picked along Deer Creek, wild onions were taken from Hunters Creek as well as from Knights Ferry, and there were wetlands south of Chinese Camp that were once full of watercress. A second elder commented on medicinal plants growing “near the old road at Moccasin Point,” and recalled that his great grandfather had “gathered things in the Don Pedro vicinity that were not available anywhere else.” A third consultant, also from Tuolumne, visited gathering places within the study area in March, 2013, and reported that Kanaka Creek was especially productive, yielding soap plant, Indian potatoes, watercress, and medicinal teas. The resources of Kanaka Creek are described more fully in Section 8.3.

A fourth elder from Tuolumne recalled that “bull pines” (gray pines; *P. sabiniana*) were once common in the Don Pedro locality and their nuts were eaten, but now there are fewer trees as a result of mining, road building, fires, reservoir clearing and filling, and other recent land uses. He also stated that blue oak acorns were a substitute food whenever the black oak crop failed (which suggests that oak savannas in the Project area might have been especially important during “bad years” for the black oak acorn crop). This same consultant said that in the old days each village had its own medicine-gathering places. This elder and others stated that medicinal plants often grew near springs, and, unfortunately, sheep and cattle have destroyed many of the springs and their associated vegetation. After being driven out of the Don Pedro area by the Gold Rush and later events, the Me-wuk people in subsequent generations lost much of their traditional knowledge about resources in that area. Elders in the past would have conveyed specialized knowledge to those most likely to use that knowledge to benefit the community. Regrettably, “most of the old families who would have known the most about the Don Pedro area are gone now.”

Despite the severe impacts on native societies and cultures from 1848 onward (see Section 3.3 and Chapter 4), Indians of the Sierra Nevada foothills retain and employ a remarkable amount of information about local plant species. Several elders reported that, as children, they had learned from older relatives to check on the status of plants—when they had sprouted, how many there were, when they were ripening—whenever they traveled around the countryside. The family car would stop frequently along the back roads of Calaveras, Tuolumne, Stanislaus, and Mariposa counties so that the adults could inspect favored collecting sites and gather herbs and food plants that were ripe.

Whenever something was being gathered, the people always checked on the status of other plants and judged when they, too, might be ready for harvest. When they got back, other people would always ask, “How is the redbud?” “How is this?” “How is that?” Everybody needed to know how the various plants were coming along.

A further example was related by a consultant from Chicken Ranch. He reported that his grandfather, who had worked at a mine in the Project vicinity, always kept an eye out for watercress and other plants valued by his wife (the Me-wuk grandmother of the consultant for the present study), who was busy raising a family and often not able to get into the country to check on the plants herself. A different consultant shared the traditional wisdom that clusters of the same kind of plant are like families; they have to be treated with respect. “You never take all of them; just what you need. Leave the rest so that they will be there if you come back next year.”

Many of the interviewed elders commented that pine nuts are still collected today. One Me-wuk man from Tuolumne related that,

[w]hen I was ten or eleven, we used to go out across the [Tuolumne] river to Duckwall and Hunters Bend. There’s a ridge out there where there’s a bunch of bull [gray] pines, and we’d just sit there on that ridge and have a big picnic. We’d take the nuts out of the [brown] pine cones; you just break them on a rock, and they fall out. I never harvested green cones. We used to go there with our .22s and shoot right where they’re connected, and pop them off.

An elder from Tuolumne stated that her mother and other female relatives, as Me-wuk doctors, would “start low and make their way up to Groveland” on all-day gathering trips. Plants were picked at each stop along the way, the emphasis being on medicinal plants. Among the medicines collected were “tea,” horehound, manzanita, and yarrow (*kam-i-ya* in Me-wuk). Of particular relevance to the current study, this same elder remembered that the Indians camped at Kanaka Creek in the Project area and that, in addition to such medicines as wormwood and “tea,” she collected blackberries, elderberry wood for clapper sticks, and willow shoots to be passed along to basket makers.

To summarize the elders’ testimony related to gathering, the harvesting of native plants for use as traditional foods, medicines, and materials for basket making and ceremonial regalia affirmed that these are a vital, ongoing cultural practice among Indian peoples in the Sierra Nevada foothills. Although plants were and are gathered at many places in the Tuolumne River country, two of these places—Moccasin Point and lower Kanaka Creek—lie within the Don Pedro Project area. The latter was prominently mentioned by a number of elders, and was selected as the location of a field visit in 2013. It is discussed further in Section 8.3 and assessed in Chapter 9 as a Traditional Cultural Property.

8.2.2 Fishing

Stream fishing has long been an important economic pursuit of the Me-wuk and other tribes in the Sierra Nevada (Barrett and Gifford 1933; Bates 1984; Clark 1904; Kroeber 1925; Lightfoot

and Parrish 2009). The testimony of Native American consultants during the present study shows that the traditional cultural emphasis on fishing in and near the Don Pedro Project area persisted through the nineteenth and twentieth centuries and continues to the present day.

A Tuolumne Me-wuk elder recalled that, early in the twentieth century, his ancestors and those of other families now living at the Rancheria used to fish for salmon near the mouth of Kanaka Creek, along Deer Creek, and on the Stanislaus River at Knights Ferry. Another Me-wuk elder from Tuolumne remembered when salmon and sturgeon could be taken from the river at Moccasin Point, and that the fish were then smoked. Likewise, a member of the Chicken Ranch Rancheria reported that his uncles had fished for salmon on the river, just below the mouth of Moccasin Creek, until (“new”) Don Pedro Dam was built; later they fished for trout. One man from Tuolumne recalled hiking with his father down into the canyon to fish for salmon and trout. Once caught, the fish were wrapped in sedge to keep them wet so as to arrive fresh back at the Rancheria. “It was a long hike from Tuolumne.” Several of the people interviewed at Tuolumne said that Indians from Tuolumne, Groveland, and other places would come to the salmon camp on the river, from the 1930s (and probably earlier) until the 1960s, when construction of the new dam started. One Me-wuk man added that he and his father used to fish for salmon and trout at various places along the Tuolumne River, and a Me-wuk woman observed that Indian people still go down river to fish, take crawdads, and gather tea.

Another favorite traditional fishing place on the river seems to have been in the vicinity of La Grange. One elder from Tuolumne remembered that her father, together with several male friends, speared salmon in the riffles near La Grange during the 1920s, 1930s, and 1940s. At least three other Me-wuk from the Rancheria had similar recollections to share. After the fish had been caught, they were brought back to Tuolumne to be smoked over low fires of manzanita or apple wood, often with boughs of incense cedar added to the coals to enhance the flavor of the smoked salmon. In the old days, one elder’s father and his relatives would spear salmon in the riffles at La Grange. Fishing was also done there at night, a flashlight or lantern being used to attract the fish; the light made the fish eyes appear red. One day, the father of an elder interviewed at Tuolumne hooked a huge sturgeon; that great fish “almost pulled him into the river.”

Several elders mentioned that there used to be well developed Indian fishing trails along the Tuolumne River. People of older generations were said to have encountered elk and grizzly bear along the river when they were fishing. Sometimes, the bears were fishing, too. Even today, one of the pleasant aspects of fishing is the opportunity to see eagles, ospreys, and other wildlife. A Me-wuk man from Tuolumne still likes to fish on the river between La Grange Reservoir and Don Pedro Dam. The river there flows through a canyon, and conditions are ideal for spearing, netting, or angling. It is claimed that trout in that stretch of the river typically weigh 4-5 pounds and may attain 10 pounds. Eagles and ospreys are common in that locality, and some of the fish caught have talon marks on their backs.

The Tuolumne River in and near the Project area was visited by fishing parties from the south and east as well as from upriver and local settlements. One representative of the Southern Sierra Miwuk Nation, based in Mariposa, said in a 2012 e-mail message to HDR that “We had about four of the crossings and fishing spots on the stretch of the river under Don Pedro.” Another

Southern Sierra Miwuk recalled his grandfather (born 1884) talking about fishing “somewhere down that way,” but as a youngster “I didn’t listen well enough to recall the particulars.” A third elder reported that, prior to the 1950s, “a lot of the Mariposa Indians” (i.e., Southern Sierra Me-wuk) used to fish at La Grange. Some of them dragged grapnel hooks across the river, hoping to snag a salmon. They never seemed to catch much, so the elder’s father would spear salmon for them. This same person (i.e., the interviewed consultant) speared salmon at La Grange during the 1940s and 1950s, “pink” (humpback) salmon being the preferred game fish. He remembered that the salmon could be seen in the deep water, but “you couldn’t get them; people had to fish [with spears] in the riffles; had to know where the riffles were.”

Several consultants spoke of fishing at Knights Ferry on the Stanislaus River. Yokuts parties came upriver, Southern Sierra Miwuk traveled from Mariposa, and Central Sierra Me-wuk groups hiked or rode horseback to fishing places there. Three sets of riffles in that vicinity are ideal places to catch salmon. A Me-wuk elder from Tuolumne said that salmon used to be speared in the river below Lovers Leap. Other residents of Tuolumne Rancheria can remember that several families would go fishing together at Knights Ferry. Although spearing was an effective technique for harvesting salmon, it was also illegal during much of the twentieth century. Stories about fishing told by the elders included stashing fish spears in the brush along the rivers and clever ruses to avoid being caught by game wardens. However, the Indians needed the salmon for food, never wasted it, and shared the fish with poor families in their communities. Occasionally, there were instances of commercialism. One elder’s father owned an automobile and, after catching six or seven salmon at Knights Ferry, he would drive down to “the islands” (i.e., the Delta) where he sold the fish to local restaurants. More often, however, the fish were brought home where the consultant’s grandmother had a smoker that could handle a half-dozen salmon at a time.

In sum, the elders’ testimony has indicated beyond any doubt that the Tuolumne River in the Project area as well as downstream was important to the Indians for its salmon and trout fisheries in the distant past and continued to be important until key fishing places vanished as a result of dam construction and reservoir filling. The Tuolumne Me-wuk reported traditional fishing sites on the river at the mouths of Moccasin Creek and Kanaka Creek, and the Mariposa Miwuk claimed to have fished at several (unidentified) places along the river. The most frequently mentioned salmon-fishing location on the Tuolumne was at La Grange, where parties of Central and Southern Sierra Me-wuk as well as Yokuts convened to spear salmon during runs. The segments of the river below Kanaka Creek and Moccasin Creek are now inundated, so those cultural properties are no longer accessible, and the salmon-spearing grounds at La Grange lie outside of the Project area. Other than La Grange, the mentioned fishing places of the Southern Sierra Miwuk have not been identified precisely, but they too are believed to be inundated by the reservoir. Thus, while the Me-wuk from Tuolumne, Chicken Ranch, and Mariposa do maintain their strong interest in fishing, and continue to fish on accessible streams, all of the traditional stream-fishing places within the Project area that otherwise might have qualified as TCPs presently lie within the pool of Don Pedro Reservoir.

8.2.3 Hunting

Most of the interviewed Native Americans claimed little or no knowledge of traditional hunting activities within the Don Pedro Project area. One Me-wuk man from Tuolumne had no memory of anyone hunting in the reservoir locality, although he has hunted for deer farther upriver near Walton Springs. A different consultant opined that, in the past, people hunted deer in the Project area, but he did not know much about that and personally does not like to hunt deer. A third Me-wuk elder from Tuolumne said that men hunted deer higher in the mountains, and that dried venison (jerkey) was an important food. Bucks in velvet were not hunted, nor were does during the fawning season. Bucks were preferred because they were bigger and provided more meat. Deer were sometimes humorously referred to as “side-hill salmon,” and venison was often smoked just as fish was. A fourth elder at Tuolumne reminisced that, as a young girl, she would accompany her mother and aunt on plant-gathering trips up to the Second Garrote area (just east of Groveland) and that, during such trips, “[i]f we saw a deer, we got that too.” She also recalled once seeing a white deer—“a good sign; never to be killed.”

A Me-wuk man from Chicken Ranch indicated that people from his Rancheria have not done much deer hunting since the mid-1970s. He recalled one successful “water-hole hunter” who used to wait quietly for the deer to come within range of his rifle. This was in the foothills north of the Rancheria, not in the Don Pedro Reservoir area. He added that the Chicken Ranch people saved deer bones for use in hand games, but did not tan their own deer hides; they paid to have tanning done commercially. By contrast, an elder from Tuolumne remembered Me-wuk men brain-tanning their deer hides. Various Central Sierra Me-wuk consultants spoke of hunting grouse and quail near Second Garrote, shooting jackrabbits with a .22 near Jamestown, hunting cottontails close to the river and along Route J-59, and a Mariposa Miwuk gunning for quail in Shawmut Canyon. Several interviewees also said that frogs (species unidentified) were once gigged at Red Hills and in spring seeps between La Grange and Jamestown—a practice no longer possible because ranchers have boxed the springs and cattle have trampled the former wetlands where the frogs once thrived. The Me-wuk ate not only frogs’ legs but also backs; “nothing was wasted.”

The dearth of information about traditional hunting in the Project area seems remarkable in light of the abundant testimony regarding fishing in the same area. Possibly this bespeaks a Me-wuk preference for deer hunting farther up in the mountains, or perhaps it reflects a decline in hunting by foothill Indians during or not long after the Gold Rush while fishing persisted until gradually being impacted and then precluded by the construction of La Grange, “old” Don Pedro, and, finally, “new” Don Pedro dams. In any event, the interviews of elders for this study did not identify any cultural property in the Project area related to traditional hunting practices.

8.2.4 Use of Rocks and Minerals

When asked about ongoing cultural uses of rocks and minerals in the Project area, many of the interviewed elders could not think of any examples. This response is not at all surprising, given that metal implements quickly replaced most traditional stone tools during the mid-nineteenth century. An interviewee from Chicken Ranch did recall that when he was a child one of the local women would send him “and other kids down Moccasin Creek to gather just the right kinds

of rocks for use as cooking stones whenever preparations were being made for a big festival.” An elder from Tuolumne was aware that steatite outcrops near Buchanan Mine were quarried by the Me-wuk long ago, and a third consultant remembered working as a 10-year-old boy at an ochre mine operated in the late 1930s by a White man about a mile from the Knights Ferry bridge; but he did not know whether Indians had ever mined ochre in the same vicinity. (There is no mention of Indian quarries of hematite in this locality by Heizer and Treganza [1944:309-312], although Barrett and Gifford [1933:224] do describe a source of red ochre on a mountain [*Yololamü* in Central Me-wuk] in the upper Tuolumne watershed “between Lake Eleanor and Cherry river.”)

A notable exception to the historical decline in the use of traditional rocks and minerals is that the Me-wuk have extracted gold from local streams ever since 1848 when they became aware of its economic value (see Chapters 3 and 4). An elder at Tuolumne said that she knew of Indians who panned for gold during the Great Depression and made enough to feed their families. Gold was traded for food and other necessities in Sonora. People from Chicken Ranch Rancheria, including a consultant for this study, have done “snipe panning” for gold along Woods Creek all the way (from Jamestown) to the river. It was a way to make money when people were “between jobs.” This same consultant stated that “Indians also mined during the Great Depression and, before that, during the Gold Rush. In fact, once they recognized that gold had market value, the Me-Wuk mined it more or less continuously for the past 160 years. It was just another resource to be utilized.” Although stretches of Woods Creek and other auriferous streams in the central Sierra foothills may have witnessed panning by local Me-wuk people, continuing a cultural tradition with historical roots in the Gold Rush, the fact that no single location was mined for long periods by the Indians makes it unlikely that a particular TCP related to this cultural practice can be identified.

8.2.5 Material Conveyance

The traditional interaction spheres that witnessed warm-season trade between Me-wuk and Paiute in the High Sierra seem to have largely disintegrated since the mid-nineteenth century, and the same may be said of the previous commerce between the Sierra Me-wuk and Valley Yokuts. One elder from the Tuolumne Rancheria knew that in the old days Knights Ferry was a customary venue for exchanging goods between Valley Yokuts and Sierra Me-wuk groups, and that the Don Pedro area was used jointly by the Me-wuk and Yokuts, with Bonds Flat being “a big trading center” with commercial ties to Knights Ferry. A second elder, while confirming that Knights Ferry was an important inter-tribal exchange site, mentioned two other trading locations: one “at Dr. Dunn’s Ranch near Groveland” and the other at Phoenix Lake near Sonora. With regard to the latter, “Paiutes and Me-wuk would gather there. There was a lot of drinking; sometime killings. This was before PG&E [i.e., Pacific Gas and Electric Company] came in. Phoenix Lake was a killing grounds.” Only one of these places—Bonds Flat—lies within the Project area, and the precise spatial relationship between the Project’s APE boundaries and the old trading site (or sites) in that location has not been defined.

Nonetheless, elders interviewed for the present study did offer a substantial amount of information about recent and ongoing material conveyance within and between Me-wuk communities. Acorns, manzanita berries, various other food plants, herbal medicines, venison,

salmon, and basketry materials are among the items that still figure in reciprocity, sharing with relatives, and/or as outright gifts to those unable to procure such traditional items for themselves. Much of this comports with the patterns of conveyance described by Dick-Bissonnette in her study of *Foothill Yokoch, Mono, and Miwok Women* (1997). For example, one consultant from Tuolumne recalled that decades ago when she, her mother, and aunt would go up into the mountains to gather medicines, they would also look for and gather redbud to be traded later to women who were basket makers. Another mentioned that a woman at Chicken Ranch used to exchange basketry materials with people living at Tuolumne. Several elders spoke at length about excursions during the spring and early summer of 2013 to various places in the Don Pedro Project area and immediate vicinity for the purpose of gathering food and medicinal plants, and then about sharing their harvest with others in the community. Thus, the traditional cultural practices of gathering native medicinal and food plants, and redistributing them among relatives and friends, have continued to the present day. Specific gathering venues are identified in Sections 8.2.1 and 8.3.2.

8.2.6 Ceremonial Activity

No information regarding the occurrence of ceremonies, dances, “big times,” funerals, or mourning rites at places within the Project area was disclosed during the interviews and field visits, except as such information could be inferred from visible archaeological evidence.

8.3 Results of Cultural Site Visits

As discussed in Chapter 7, the TCP Study Plan suggests that tribal representatives and the anthropologist “may want to visit archaeological sites identified during the [TCP] study or during the Historic Properties Study” (TID/MID 2011a:7). Accordingly, three site visits were scheduled and undertaken:

- (1) on April 16, 2013, with two Native American elders to archaeological site HDR-DP-106 on Rancho Creek and HDR-DP-113 on a small drainage east-northeast of Jenkins Hill, and with three elders to HDR-DP-92 a short distance east of Don Pedro Dam;
- (2) on June 11, 2013, with two elders, first to a native plant gathering area partly overlapped by the Kanaka Creek Mining Landscape, FW-DP-53; second, to another botanically productive locale near Kanaka Court, just south of Jacksonville Road; and, third, to an area of biotic richness in the Blue Oaks Recreation Area near Don Pedro Dam; and
- (3) on June 12, 2013, with three to six elders, first to archaeological sites, FW-DP-81 and HDR-DP-192 on the lower reach of Moccasin Creek, and then to the Graveyard Creek vicinity on Middle Bay where cultural features and artifacts were exposed by erosion in the fluctuating pool zone at site HDR-DP-119.

The visited archaeological sites are summarized briefly in Section 8.3.1 and documented in detail in the Archaeological Site Records (Appendix B). The plant-gathering sites are described below in Section 8.3.2. As mentioned in Chapter 7, the sites have been given temporary designations (“FW” for Far Western Anthropological Research Group, or “HDR” for HDR Engineering, Inc.;

“DP” for Don Pedro; and sequential numbers) that will be replaced by “permanent” trinomial designations, such as CA-TUO-1234, assigned by the CCIC in Turlock.

8.3.1 Archaeological Sites and District

▪ FW-DP-53

Location: Kanaka Creek
Attributes: A landscape (archaeological district) consisting of prospect pits, “coyote holes”, placer tailings, ditches, and other evidence of gold mining (see Appendix B).
Age: Traces of prehistoric occupation have been almost obliterated by later mining activity. The mining debris appears to date mostly to the last half of the nineteenth century and early decades of the twentieth.
Comments: Unrelated to the archaeological mining landscape, lower Kanaka Creek is culturally important as a location where native plants are gathered. This place and its traditional uses are discussed in Section 8.3.2.

▪ FW-DP-81

Location: Moccasin Creek, north of Moccasin Point Marina.
Attributes: Midden, possible rockshelter, BRMs with 48 mortar cups and two slicks, round and flaked stone artifacts (see Appendix B).
Age: Probably late prehistoric.
Comments: FW-DP-81 lies within a dense cluster of sites—4-Tuo-307, 4-Tuo-313, 4-Tuo-314, and 4-Tuo-318—recorded in 1970 on lower Moccasin Creek and could be a part of any one of these, or an entirely separate site. Most of the Native American archaeological sites in this vicinity have been extensively damaged, variously by mining, road and railroad construction, riverine erosion, mechanical earthmoving, and inundation by the reservoir.

▪ HDR-DP-92

Location: On Big Creek at Bonds Flat, near Don Pedro Dam.
Attributes: Midden, not less than 15 housepits in two clusters 52 BRMs, ground and flaked stone artifacts (see Appendix B).
Age: Late prehistoric and/or protohistoric and historic.
Comments: Eleven of the housepits are more distinct than the remaining four, suggesting two different intervals of habitation. The number of housepits would indicate that this was a substantial settlement not long ago, perhaps during the nineteenth century. Elders who visited this site thought it was a good candidate for TCP status.

▪ HDR-DP-106

Location: Ranchero Creek, on west side of Big Creek Arm.
Attributes: Midden, 7 residential housepits, 1 large housepit (possibly representing a dance house), 2 dry-laid clastic boulder features, 67 BRMs, mortar “lids,” pestles, flaked stone artifacts and debitage (see Appendix B).

Age: Site record says “prehistoric;” but the pristine condition of this site, absence of historical disturbance, sharply defined housepit features showing little or no evidence of erosion, and abundance of pestles and lids near the BRMs all suggest that this Indian settlement was occupied during the nineteenth century and very possibly after the Gold Rush.

Comments: An elder from Tuolumne Rancheria who visited the site suggested that the diversity of bedrock mortar types—shallow, deep, conical, ellipsoidal, small, large, and even one punched all the way through the rock—represent different milling techniques and a variety of foodstuffs being processed. The mortar with a hole in the bottom was thought to be a “hopper.” The deep mortars next to the stream, together with the adjacent discoidal stones identified as lids, may have been a cooking station. “People would put water, meat, [Indian] potatoes, and [wild] onions into the mortars, add [heated] soapstone [cooking rocks], put the lid on, and cook the food in the mortar ‘pot’. Whatever they were cooking here may have been for ceremonial purposes.” The fact that some of the bedrock mortars are situated in veins of quartz was interpreted by the elder, and others with whom she has consulted, to mean that “we have something sacred here.” Also of interest are the two, large, dry-laid boulder features on the knoll top near the housepits. One of these has an elongate stone projecting from it, possibly a “directional signal.” The elder opines that this site is “high on my list of TCPs.”

▪ **HDR-DP-113**

Location: On a small drainage east-northeast of Jenkins Hill.

Attributes: Midden, nine housepits, five milling stations with a total of 38 BRMs and two slicks, ground and flaked stone artifacts (see Appendix B).

Age: Prehistoric (suggested by portable mortar fragment); late prehistoric or protohistoric indicated by housepits.

Comments: Additional BRMs may be buried under colluvium.

▪ **HDR-DP-192**

Location: On the north side of Moccasin Arm, near the former confluence of Moccasin Creek and the Tuolumne River.

Attributes: Midden, rockshelter, two outcrops with a total of three mortars and one slick, flaked and ground stone artifacts (see Appendix B).

Age: Prehistoric or protohistoric.

Comments: HDR-DP-192 lies within a dense cluster of sites—4-Tuo-307, 4-Tuo-313, 4-Tuo-314, and 4-Tuo-318—recorded in 1970 on lower Moccasin Creek. Most of the Native American archaeological sites in this vicinity have been extensively damaged, variously by mining, road and railroad construction, riverine erosion, mechanical earthmoving, and inundation by the reservoir.

▪ **HDR-DP-119**

Location: At Graveyard Creek, on the east shore of Middle Bay.

- Attributes: Surficial and buried middens, possible housepits, >95 BRMs, rock features, clusters of milling implements, bone concentrations, hearth features, abundant fire-altered rock, and extensive scatters of ground and flaked stone tools, together with (worked?) glass and other historic-era artifacts (see Appendix B).
- Age: Two or more prehistoric components; possible protohistoric occupation; Definite historic-era (possibly non-Indian) habitation.
- Comments: This was obviously a major settlement during one or more intervals of the prehistoric past. The archaeological deposits have been extensively eroded in the fluctuating pool zone of the reservoir, and as a result cultural materials are exposed to various direct and indirect effects.

8.3.2 Plant-Gathering Sites

8.3.2.1 Kanaka Creek

Several Indians from Tuolumne reported that the Kanaka Creek area has been and still is actively used as a gathering area for many traditional foods and medicines. Three elders mentioned that Me-wuk people used to camp there when plants were being harvested. A field visit on June 11, 2013 confirmed the diversity and abundance of native plants growing near lower Kanaka Creek, within 330 feet of the stream, at least along the first 0.6 mi upstream from the reservoir. One elder likened this stretch of the watercourse to “a pharmacy or, better, the whole Walmart store.” Listed below are plants identified during the field visit. Their scientific and Me-wuk names as well as their traditional uses are presented in Tables 6-1 (food plants) and 6-3 (medicinal plants). This is an incomplete listing of the Kanaka Creek resources, as additional species would be expected to be found during other seasons.

Angelica	Interior Live Oak
Blue Oak	Lupine
California Everlasting	Manzanita
California Wild Grape	Oyster Mushrooms
Common Mullein (“Mule Ears”)	Poison Oak
Coyote Mint	Sedge
Curley-leaved Dock	Soaproot
Grasses	Toyon
Gray Pine	Watercress
Harvest Brodiaea	Water Plantain
Hinds Black Walnut	Willows (spp.)
Horehound	Willow Mushrooms
“Indian Potatoes” (several species)	

Native food and medicinal plants also were pointed out by elders in the Kanaka Court locale approximately a mile to the southeast, but the diversity and abundance of plant resources there are not nearly as rich as they are along the creek.

Lower Kanaka Creek is a traditional gathering area that remains important to the Tuolumne Me-wuk. Native food and medicinal plants continue to be harvested there for both individual use and community events. At one or more times during the historic era, gold mining extensively disturbed the natural landscape and probably obstructed access by Indians to the area. Subsequently, the watercourse began to recover, native plants are once again flourishing, and Me-wuk traditional uses of the area resumed at least two or three generations ago. The consulted elders believe strongly that lower Kanaka Creek is a TCP.

8.3.2.2 Blue Oaks Recreation Area

Elders from Tuolumne also were pleased to visit and remark on the qualities of a natural spring with associated native vegetation located adjacent to the paved road up to the group campground in the Blue Oaks Recreation Area above the Don Pedro Reservoir's West Bay. Among the plants growing near the spring are willows, cattails, a large toyon, mustard, soaproot, juniper, and jimsonweed. Additional species are likely to be present in different seasons. This is not claimed to be a traditional gathering place. Rather, Me-wuk elders suggest it would be an ideal venue to bring tribal youth to teach them to identify culturally valuable plants, how they are used as foods and medicinally, and how the plants should be tended. The location is easily accessible by elders, so that they could join the youth and share their knowledge. "None of our kids know our traditional plants, but they all want to know." "Our kids need to learn who they are and what... [their ancestors] did. A lot of the kids now are wanting to know what we used, or how come we did this, or how come we did that?" On the Reservation, tribal members are told not to disturb native plant resources; "here, the kids can come out and learn. It is a great opportunity to preserve our culture."

8.4 Summary of Potential Traditional Cultural Properties

During the course of interviews, e-mail exchanges, meetings, and field visits, Native Americans identified various traditional practices, archaeological sites, plant-gathering venues, fishing places, and natural areas of botanical richness that are culturally important. Whether or not any of these qualifies as a Traditional Cultural Property is assessed in Chapter 10. Summarized here are the study results presented in this chapter as they relate to *potential* TCPs.

- (1) Although no TCPs were identified during the study's background research, historical and ethnographic contexts were developed within which possible TCPs could and can be evaluated and interpreted.
- (2) Consultations with Indian people showed that native plants continue to be gathered for use as foods, medicines, and material for baskets and ceremonial regalia. Moccasin Point and lower Kanaka Creek were identified as traditional gathering localities within the Project area. The latter is the more important of the two for gathering activities today.

- (3) Salmon fishing was a vital economic activity prior to the construction of La Grange Dam, and the Central Sierra Me-wuk, Southern Sierra Miwuk, and Valley Yokuts all had customary fishing places (e.g., at the mouths of Moccasin Creek and Kanaka Creek) along the Tuolumne River within what is now the Project area as well as farther downstream (e.g., at La Grange). All of the traditional salmon fishing locations on the former river within the study area are now inundated, and anadromous salmon cannot run or spawn there anymore.
- (4) No cultural properties associated with traditional hunting practices were identified in the Project area.
- (5) During the Great Depression, the “great recession,” and times “between jobs,” Me-wuk people have continued to pan for gold in local streams, just as they did in the early days of the Gold Rush. While this traditional practice seems to have been focused mainly along Woods Creek, no specific gold-panning site was identified in the Project area.
- (6) Native food plants, medicines, and basketry materials are often given or exchanged among traditionalists within or between communities; however, there does not seem to be any site within the study area where such material conveyance regularly takes place.
- (7) No ethnographic testimony about ceremonies in the Project was adduced during the interviews and field visits.
- (8) The historical mining landscape on lower Kanaka Creek, archaeological district FW-DP-53, is not the product of Indian activity. Nonetheless, the abundant native plants in this vicinity have been, and continue to be, gathered by Me-wuk people for use as traditional foods, medicines, and raw materials. Thus, the natural resources here are considered as a TCP.
- (9) Six archaeological sites—FW-DP-81, HDR-DP-92, HDR-DP-106, HDR-DP-113, HDR-DP-119, and HDR-DP-192 (Appendix B)—were considered important enough culturally to have been selected by elders for field visits. Several of these sites were explicitly deemed by elders to be TCPs. These are evaluated in Chapter 9.
- (10) Finally, there is the area of botanical richness around the spring in the Blue Oaks Recreation Area. Although Me-wuk elders do not characterize this as a TCP, they do believe that its resources are significant, deserve protection, and have great potential as a cultural interpretive venue for the benefit of tribal youth.

9.0 EVALUATION OF PROPERTIES

The purpose of this chapter is to determine whether any of the resources identified in Chapter 8 is a Traditional Cultural Property. According to the National Park Service's *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (Parker and King 1998), a TCP

...can be defined generally as one that is eligible for inclusion in the National Register [of Historic Places] because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of that community [Parker and King 1998:1].

The chapter first sets forth the NRHP and TCP criteria (Section 9.1), then applies those criteria to the assessment of the individual cultural properties identified in Chapter 8 (Section 9.2).

9.1 NRHP and TCP Criteria

9.1.1 Significance

In the context of a federal undertaking such as the continued operation and maintenance of the Don Pedro Project, the significance of cultural resources is measured against the NRHP criteria for evaluation:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) That are associated with the lives of persons significant in our past; or
- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) That have yielded or may be likely to yield information important in prehistory or history [36 CFR 60.4(a-d)].

The criteria by which a cultural resource's eligibility is judged for the California Register of Historical Resources (CRHR; California Public Resources Code [PRC] 5024.2; 14 CCR 15065.5(a)(3)) are similar and will not be discussed separately, as any property determined eligible for the NRHP is automatically eligible also for the CRHR.

These criteria, by which NRHP eligibility is judged, are essential for identifying and managing historic properties because they "indicate what properties should be considered for protection

from destruction or impairment” (36 CFR 60.2). Any action, as part of an “undertaking” that could affect a significant (i.e., NRHP-eligible) property is subject to review and comment under Section 106 of the NHPA. Cultural resources listed or eligible for listing in the NRHP (i.e., *historic properties*) must be considered and treated in accordance with 36 CFR 800 and any properly executed PA or MOA prepared to manage or treat historic properties completed in compliance with those regulations. Insignificant cultural properties (i.e., not NRHP-listed or eligible) usually do not require management consideration beyond identification and evaluation unless they possess qualities covered by the NEPA or some other federal or state law(s).

To qualify under NRHP Criterion “a” (i.e., 36 CFR 60.4[a]), a property

can be associated with either (or both) of two kinds of events:

- A specific event marking an important moment in American prehistory or history and
- A pattern of events or a historic trend that made a significant contribution to the development of a community, a State, or the nation [NPS 1995:12].

Under Criterion “b”, a property is deemed NRHP-eligible if it is unequivocally associated with the life of an identified individual whose activities

are demonstrably important within a local, State, or national historic context. The criterion is generally restricted to those properties that illustrate (rather than commemorate) a person’s important achievements [NPS 1995:14].

A property is NRHP-eligible under Criterion “c” if it is significant for its “physical design or construction, including such elements as architecture, landscape architecture, engineering, and artwork” (NPS 1995:17). In addition, the property must meet at least one of the four requirements (e.g., represent the work of a master) identified in 36 CFR 60.4(c), above.

Lastly, eligibility under Criterion “d”

has two requirements, which must *both* be met for a property to qualify:

- The property must have, or have had, information to contribute to our understanding of human history or prehistory, and
- The information must be considered important.

Under the first of these requirements, *a property is eligible if it has been used as a source of data and contains more, as yet unretrieved data*. A property is also eligible if it has not yet yielded information but, through testing or research, is determined a likely source of that data.

Under the second requirement, the information must be carefully evaluated within an appropriate context to determine its importance. *Information is considered to be “important” when it is shown to have a significant bearing on a research design that*

addresses such areas as: 1) current data gaps or alternative theories that challenge existing ones or 2) priority areas identified under a State or Federal agency management plan [NPS 1995:21; emphasis added].

Criterion “d” most commonly applies to properties “that contain or are likely to contain information on an important archeological research question” (NPS 1995:21).

The property must have characteristics suggesting the likelihood that it possesses configurations of artifacts, soil strata, structural remains, and other natural or cultural features that make it possible to do the following:

- *Test a hypothesis or hypotheses about events, groups, or processes in the past that bear on important research questions in the natural sciences or humanities; or*
- Corroborate or amplify currently available information suggesting that a hypothesis is either true or false; or
- *Reconstruct the sequence of archeological cultures for the purpose of identifying and explaining continuities and discontinuities in the archeological record for a particular area [NPS 1995:21; emphasis added].*

The importance of information is typically measured by its relevance to identified research questions that can be addressed through study of particular kinds of data. A cultural property is thus evaluated in terms of its confirmed or potential yield of specific classes of data necessary to address such questions. However, research questions may be irrelevant for judging the significance of a TCP whose value lies in associations with traditional uses and the maintenance of cultural identity rather than in scientific data potentials.

9.1.2 Integrity

To qualify as eligible for the NRHP, a property must be significant *and* must have “integrity of location, design, setting, materials, workmanship, feeling, and association” (36 CFR 60.4). For archaeological sites, location and setting, together with intra-site spatial relationships, evince patterns of cultural behavior in the past. Archaeological properties without such integrity have little information value. Hence, the integrity and significance of archaeological resources are directly interrelated.

The integrity of historic properties may be “retained,” “impaired,” or “lacking.” Properties in the first class are largely undisturbed. Typically, “retained” integrity bespeaks original location, intact setting, and data potentials not significantly reduced by post-depositional factors. Historic properties with “impaired” integrity are disturbed (e.g., partly removed, plowed, excavated, covered, eroded, etc.), but not destroyed. Their general locations are original; settings, however, may be considerably altered. Research values have been compromised to some extent; nonetheless, significant data potentials may remain. Because research potentials may exist even in severely disturbed sites (cf. Talmage et al. 1977), careful assessment of integrity is required. Finally, a property “lacking” integrity is one whose removal or complete destruction has eliminated the context essential for interpretation. Properties lacking integrity have lost all

potential to yield important information. To be significant, a historic property must have integrity (“retained” or “impaired”) and satisfy at least one of the four criteria of NRHP eligibility (i.e., 36 CFR 60.4[a–d]).

9.1.3 Traditional Cultural Property Criteria

National Register Bulletin 38 recognizes a TCP as a property that is eligible for the NRHP in part because of its traditional cultural significance.

“Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices [Parker and King 1998:1].

Examples of TCPs include:

- a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- a rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- ...a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historical identity [Parker and King 1998:1].

9.2 Evaluation of Cultural Properties

The reader should be aware that the two plant-gathering areas (on Kanaka and Moccasin creeks) discussed below each incorporates several archaeological sites. The archaeological site boundaries do not coincide with those of the gathering areas, and no temporal, cultural, or functional association between the sites and areas is necessarily implied by the spatial overlap.

9.2.1 Lower Kanaka Creek Traditional Native Plant-Gathering District

The diverse natural vegetation along lower Kanaka Creek, currently extending 330 feet on both sides of the stream and 0.6 mile upstream from the edge of Don Pedro Reservoir, has been viewed by generations of Indians as a source of traditional foods, medicines, and materials for making baskets and ceremonial regalia. Plants are still harvested in this locality today, and their availability contributes importantly to the maintenance of the Tuolumne Me-wuk community’s cultural traditions and identity (see Chapters 6 and 8). In the past, before La Grange Dam was

built, salmon fishing also was important at the confluence of Kanaka Creek and the Tuolumne River; however, this activity can no longer be practiced here and thus it cannot be a factor in the TCP evaluation.

The plant-gathering area along lower Kanaka Creek is deemed to be a NRHP-eligible district significant under the criterion set forth at 36 FCR 60.4(a) because of its association with a “pattern of events or a historic trend that made a significant contribution to the development of a community, a State, or the nation” [NPS 1995:12], and specifically because of its association with cultural practices of a living community. This native plant-gathering area is not considered significant with respect to Criteria “b”, “c”, or “d” (i.e., 36 CFR 60.4(b-d)). The district is significant at the local level. Although the district has been disturbed by past mining, as evinced by archaeological district FW-DP-53, the traditional gathering area has retained its integrity of location, feeling, and association, albeit with impaired integrity of setting. In this case, integrity of design, materials, and workmanship is not relevant. Thus, the Lower Kanaka Creek Traditional Native Plant-Gathering District is deemed to be a TCP (see Appendix C) and, as such, a historic property that must be managed in accordance with Section 106 of the NHPA.

Early in 2015, the California SHPO formally concurred that the Lower Kanaka Creek Traditional Native-Plant Gathering District is a TCP eligible for the NRHP under Criterion “a” (but not under “b-d;” see Appendix F). Subsequently, the CCIC at California State University, Stanislaus, assigned Primary Number P-55-008925 to this TCP (see Appendix C).

9.2.2 Lower Moccasin Creek Cultural Area

There is ample testimony to the effect that the lower reach of Moccasin Creek and the area of its confluence with the Tuolumne River were an important hub of Native American activity in the past. This was once an established salmon-fishing place, a gathering area for native plants, and the location of prehistoric settlements, including at least one large village with midden, housepits, scores of bedrock mortars, and cemetery(ies). Four archaeological sites—4-Tuo-307, 4-Tuo-313, 4-Tuo-314, and 4-Tuo-318—were recorded in 1970 on lower Moccasin Creek (Moratto 1971c). [Subsequently, these sites were re-designated as follows by the CCIC at CSU, Stanislaus: 4-Tuo-307 is P-55-1908/CA-TUO-898; 4-Tuo-313 is P-55-1914/CA-TUO-904; 4-Tuo-314 is P-55-1915/CA-TUO-905; and 4-Tuo-318 is P-55-1343/CA-TUO-318.]

By the time when they were documented, these sites had been damaged extensively by gold mining, road and railroad construction, streamside erosion, and clearing for the reservoir. Later, the sites were further impacted by reservoir inundation, heavy erosion within the fluctuating pool zone, development of the Moccasin Point Marina, and recreational uses. Two archaeological sites—FW-DP-81 and HDR-DP-192 (see Appendix B)—recorded in 2012 on the north side of Moccasin Arm, may be parts of previously documented sites or entirely “new” discoveries. While any or all of these archaeological sites may be found to be NRHP-eligible under Criterion “d,” and possibly under other criteria as well, none of them qualifies as a TCP because they have not continued to be used into the present by a living community in order to maintain its cultural traditions and identity. Nor could traditional salmon fishing at Moccasin Point continue after the Tuolumne River’s flow downstream was blocked by La Grange dam. This leaves the ongoing gathering of native plants as the sole basis for justifying the location as a TCP. Also, the

integrity of location, setting, feeling, and association have been lost or greatly diminished by the presence of the reservoir, inundation of the lower reach of Moccasin Creek, loss of the natural stream and riparian biota, and severe erosion within the fluctuating pool zone. Integrity of design, materials, and workmanship are not relevant. Because of its lack of integrity, the lower Moccasin Creek plant-gathering area is judged to be ineligible for the NRHP and thus not a TCP, even though some of the local archaeological sites may be found to be NRHP-eligible.

9.2.3 Auriferous Streams

Continuing a cultural tradition that dates to the late 1840s, local Me-wuk have panned for gold along auriferous streams in the central Sierra foothills, especially when they needed income to survive and feed their families. Woods Creek was identified as a favorite stream for “snipe panning.” However, the fact that no single location was mined by Indians for long periods, certainly not over a span of generations, makes it unlikely that a particular TCP related to this cultural practice can be identified in the Project area.

9.2.4 Archaeological Site HDR-DP-92

As summarized in Chapter 8 and described at length in Appendix B, this large Native American habitation site features an extensive midden, clusters of four and 11 housepits, 52 bedrock mortars, and both flaked and ground stone artifacts. The integrity of location, setting, feeling, and association is exceptionally well retained; integrity of design, materials, and workmanship is irrelevant. The occupation(s) here apparently date to late prehistoric and/or protohistoric times. As an archaeological site, HDR-DP-92 is being evaluated in a separate document (Risse et al. 2014a, 2014b) for its NRHP-eligibility under Criterion “d.” Tribal elders visiting the site have opined that it might also be a TCP. The site, however, does not appear to be associated “with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of that community” (Parker and King 1998:1). Consequently, while HDR-DP-92 may be judged to be a NRHP-eligible historic property under Criterion “d,” it does not seem to qualify as a TCP.

9.2.5 Archaeological Site HDR-DP-106

As summarized in Chapter 8 and described at length in Appendix B, this Native American habitation site features a dark midden deposit, seven residential housepits, one large (possibly dancehouse) housepit, 67 bedrock mortars, two enigmatic features of large dry-laid stones, and both flaked and ground stone artifacts including several unusual discoidal “lids” (perhaps for use on mortars?). The integrity of location, setting, feeling, and association is exceptionally well retained; integrity of design, materials, and workmanship is irrelevant. The occupation(s) here apparently date to late prehistoric and/or protohistoric times. It is possible that the site was re-settled after the Gold Rush, and that its final occupation dates to the last few decades of the nineteenth century. As an archaeological site, HDR-DP-106 is being evaluated in a separate document (Risse et al. 2014a, 2014b) for its NRHP-eligibility under Criterion “d.” The site vicinity would also be an excellent place to harvest clover and brodiaea during the spring, although the current study produced no report of such harvesting in this area today. A Me-wuk elder visiting the site opined that it was high on her list of TCPs. The site, however, does not

appear to be associated “with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of that community” (Parker and King 1998:1). Consequently, while HDR-DP-106 may be a NRHP-eligible historic property under Criterion “d,” it does not seem to qualify as a TCP.

9.2.6 Archaeological Site HDR-DP-113

As summarized in Chapter 8 and described at length in Appendix B, this Native American habitation site features a midden deposit, nine housepits, 38 bedrock mortars, two bedrock milling slicks, and both flaked and ground stone artifacts including a portable mortar fragment. The integrity of location, setting, feeling, and association is excellent; integrity of design, materials, and workmanship is irrelevant. The occupations here apparently date to (1) a time earlier than ca. A.D. 1200, based on the portable mortar fragment, and (2) the late prehistoric and/or protohistoric era(s). As an archaeological site, HDR-DP-113 is being evaluated in a separate document (Risse et al. 2014a, 2014b) for its NRHP-eligibility under Criterion “d.” A Me-wuk elder visiting the site opined that it might also be a TCP. The site, however, does not appear to be associated “with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of that community” (Parker and King 1998:1). Consequently, while HDR-DP-113 may be judged to be a NRHP-eligible historic property under Criterion “d,” it does not seem to qualify as a TCP.

9.2.7 Archaeological Site HDR-DP-119

As summarized in Chapter 8 and described at length in Appendix B, this very large Native American habitation site features extensive buried and surficial midden deposits, possible housepits, >95 bedrock mortars, hearths, faunal bone concentrations, clusters of milling implements, numerous rock features, abundant flaked and ground stone artifacts, and historical debris. The integrity of location is retained, while that of setting, feeling, and association has been compromised, but not lost, as a result of inundation by the reservoir and severe erosion within the fluctuating pool zone; integrity of design, materials, and workmanship is irrelevant. The occupations here apparently date to various prehistoric times and possibly the protohistoric era as well. As an archaeological site, HDR-DP-119 is being evaluated in a separate document (Risse et al. 2014a, 2014b) for its NRHP-eligibility under Criterion “d.” Tribal elders visiting the site have opined that it might also be a TCP. The site, however, does not appear to be associated “with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of that community” (Parker and King 1998:1). Consequently, while HDR-DP-119 may be judged to be a NRHP-eligible historic property under Criterion “d,” it does not seem to qualify as a TCP.

9.2.8 Native Plants and Spring at Blue Oaks Recreation Area

The Me-wuk elders who visited this location do not claim that it is a traditional gathering place. Rather, it would be an ideal educational venue where tribal youth could learn to identify culturally valuable plants, how they are used as foods and medicinally, and how the plants

should be tended. Thus, the spring and associated native plants in the Blue Oaks Recreation Area are considered to be a potential educational resource to be developed but not a TCP.

10.0 ASSESSMENT OF EFFECTS

10.1 Criteria of Adverse Effect

The Advisory Council on Historic Preservation (ACHP) defines the Criteria of Adverse Effect as follows:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative [36 CFR 800.5(a)(1)].

Examples of adverse effects include: “physical destruction of or damage to all or part of the property” (36 CFR 800.5[a][2][i]); “change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance” (36 CFR 800.5[a][2][iv]); and “introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historical features” (36 CFR 800.5[a][2][v]).

10.2 Project Effects on the TCP

Only one cultural property—the Lower Kanaka Creek Traditional Native Plant-Gathering District (Appendix C)—qualifies as a TCP in accordance with the guidelines set forth by Parker and King (1998). The SHPO has concurred that this is NRHP-eligible property (see Appendix F). Any number of other properties within the Project's APE may prove to be NRHP-eligible archaeological and/or historic sites, but those properties are evaluated separately (Risse et al. 2014a, 2014b) and Project effects on them are not considered in this TCP Study report.

The evaluation of this TCP in Chapter 9 is summarized as follows:

The plant-gathering area along lower Kanaka Creek is deemed to be a NRHP-eligible district significant under Criterion “a” (i.e., 36 FCR 60.4(a)) because of its association with a “pattern of events or a historic trend that made a significant contribution to the development of a community, a State, or the nation” [NPS 1995:12], and specifically because of its association with cultural practices of a living community. The district is significant at the local level. Although the district has been disturbed by past mining, as evinced by archaeological district FW-DP-53, the traditional gathering area has retained its integrity of location, feeling, and association, albeit with impaired integrity of setting. In this case, integrity of design, materials, and workmanship is not relevant.

This TCP has been affected mostly in the past, first by episodes of extensive gold mining (described in Appendix B [see the record of archaeological district FW-DP-53]), and second by

the construction and operation of “new” Don Pedro Dam and Reservoir. The latter has involved vegetation clearing, inundation of the lowermost portion (approximately 1.0 mi) of Kanaka Creek, and severe erosion within the reservoir’s fluctuating pool zone. The TCP as presently defined extends from the reservoir’s edge upstream approximately 0.6 mi towards Jacksonville Road.

This stretch of the Creek is gradually recovering from the wounds inflicted by gold mining, and does not appear to be affected by current activities related to the Project. Site visits have disclosed no evidence of disturbance by boaters or other visitors. However, this and other areas of the Project APE have been invaded by exotic species which ultimately may threaten native plants. Not all of the introduced plants are undesirable; indeed, some, such as watercress, have become naturalized and are much prized by Indians. Others, such as non-native thistles and filaree, are considered “weeds.” Tribal members would be pleased if the undesirable exotics could be eradicated without using herbicides or methods that might harm the native species. In short, although the lower portion of Kanaka Creek was affected greatly in the past, the specific area of the TCP appears to be rather stable and not facing additional impacts at the present time. This said, Native Americans are concerned about having ongoing unrestricted access to the TCP for plant gathering in the future and have expressed the hope that such access will be assured as part of cultural resource management efforts under the new FERC license.

11.0 CONCLUSIONS AND DISCUSSION

11.1 Conclusions

The goal of the present study has been to identify any Traditional Cultural Property(ies) that may be affected by the continuing operation and maintenance, including recreational uses, of the Don Pedro Project. Methods of investigation have included records searches, archival and library research at facilities in central and southern California, meetings with Native Americans, face-to-face and telephone interviews of tribal members (both individually and in groups), and field visits with elders to archaeological sites and places where native plants are gathered within the Project's Area of Potential Effects. These investigations showed that certain traditional cultural activities—harvesting plants for use as foods, medicines, and basketry materials, the redistribution of harvested plants, fishing, and panning for gold—are still practiced today by residents of foothill Me-wuk communities.

Eight cultural properties have been identified as possible TCPs: (1) the Lower Kanaka Creek Traditional Native Plant-Gathering District; (2) lower Moccasin Creek cultural area, encompassing a native plant harvesting area and archaeological sites 4-Tuo-307, 4-Tuo-313, 4-Tuo-314, 4-Tuo-318, FW-DP-81, and HDR-DP-192; (3) auriferous streams; (4-7) archaeological sites HDR-DP-92, HDR-DP-106, HDR-DP-113, and HDR-DP-119; and (8) a spring with associated native plants in the Blue Oaks Recreation Area. In Chapter 9, each of these properties is evaluated in terms of the significance and integrity criteria for the National Register of Historic Places (36 CFR 60.4) as well as the additional guidance regarding qualifications for TCP status (Parker and King 1998). As a result of this evaluation, one property—the Lower Kanaka Creek Traditional Native Plant-Gathering District (see Appendix C)—is deemed to be NRHP-eligible under Criterion “a” (i.e., 36 CFR 60.4(a)) as a TCP and thus is a historic property that must be managed in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR 800. The SHPO has concurred with this evaluation (see Appendix F). Some of the other cultural properties identified in Chapter 9 are being assessed separately as part of archaeological (i.e., non-TCP) resource identification and evaluation efforts (see Risse et al. 2014a, 2014b) and may also prove to be NRHP-eligible under Criteria “a” and/or “d.”

Chapter 10 considers the Project's potential effects on the eligible TCP. Lower Kanaka Creek was heavily impacted in the past, first by intensive gold mining and later by reservoir clearing, inundation, and erosion following the construction of “new” Don Pedro Dam. The stretch of the creek within the TCP is recovering nicely from the impacts of gold mining, and no adverse effects from ongoing Project activities were observed. A minor problem is the invasion of exotic species and their competition with native plants. Local Indian people hope that, in the future, they will enjoy gratis, unrestricted access to the TCP for the purpose of tending and harvesting native plants for use as traditional foods and medicines, and that a “green” solution will be found to the problem of undesirable exotic plants.

11.2 Discussion

Tribal members who were interviewed and who participated in field visits to cultural sites shared their concerns and offered recommendations for the long-term management of Native American cultural properties within the Project APE.

- (1) The elders were unanimous in their belief that Native American archaeological sites in the Project area need to be preserved and protected from further deterioration. Specific recommendations are to: (a) respectfully and appropriately treat any human remains exposed at archaeological sites; (b) thoroughly document bedrock milling features that are being weathered/eroded, especially in the fluctuating pool zone of the reservoir, and stabilize them if feasible; (c) recover from site surfaces any obvious artifacts likely to be carried off by visitors; and (d) protect eroding midden deposits with geofabric, a soil cap, vegetation, riprap, or other suitable techniques.
- (2) Potentially affected sites should be periodically monitored and, if adverse effects are observed, treated appropriately to avoid or resolve the effects.
- (3) Gathering areas likewise should be protected, and measures should be continued, or if necessary instituted, to ensure unrestricted access to these areas for Native American traditionalists who desire to tend the plants and harvest them sustainably. Elders spoke approvingly of an access program like the one administered by Yosemite National Park. Specifically within the Don Pedro area, it would be desirable for tribal members to continue to have access to native plant resources along, but not limited to, Big, Kanaka, Moccasin, Ranchero, Slate, and Woods creeks for the purpose of gathering traditional foods, medicines, and materials (see Tables 6-1 and 6-3).
- (4) A number of elders advocated improvements to the Project's natural environment, including: (a) protecting springs from contamination by cattle and water flows from being disrupted by wells and overdrafting; (b) restoring the salmon fishery by construction of a fish ladder or other effective means; (c) restoring some of the previous vegetation communities, such as oak/"bull pine" (gray pine) woodlands, where they formerly existed; and (d) remediating the problem of invasive aquatic plants outcompeting natives on Woods Creek and elsewhere. The exotics should be removed with environmentally responsible ("green") methods so that the native plants can survive and flourish.
- (5) Members of the Tuolumne Me-wuk community would like to make the gathering area around the spring in the Blue Oaks Recreation Area a venue which elders can visit with tribal young people and manage/maintain the native plant resources. They want the Indian youth to learn the proper ways to tend and gather native plants of traditional importance.
- (6) Some Me-wuk elders would like to see the Districts waive fees for Native Americans to fish, boat, and camp at Don Pedro Reservoir. They would also be pleased if tribes were to have gratis use of group campgrounds (e.g., at Moccasin Point and the Blue Oaks Recreation Area) where they could hold ceremonies or provide outdoor educational experiences for their young people.

- (7) A further concern, expressed by elders from Tuolumne and Chicken Ranch has to do with mercury and other pollutants from gold mining that remain in the gravels and silt at the bottom of the reservoir and that may be released into the water, earth, or air whenever the reservoir is flushed or releases water from deep in the pool.

11.3 Epilogue

Not long after the interviews and field visits for this study, a catastrophic fire raged through the Tuolumne River country upstream from Don Pedro Reservoir. Ignited on August 17, 2013, by a hunter's illegal campfire, the Rim Fire burned 401 square miles from Tuolumne and Groveland on the west to areas on the east as far as six miles into the western part of Yosemite National Park. The fire, one of the largest ever in California history, was terribly destructive to wildlife, vegetation, soils, and to watershed values. An analysis published in the *Los Angeles Times* carried the subhead, "Ecologists say huge swaths of the Stanislaus National Forest could take 30 to 50 years to reestablish themselves" (Boxall 2013:A1). From the perspective of the current study, the fire has profound negative consequences for traditional cultural practices in Tuolumne County, not least being the extensive hunting, fishing, and plant-gathering areas that have been charred—their resources swept away for decades to come. In this context, the natural resources of the Don Pedro Project area have assumed even greater importance for Native American traditionalists than they held before the devastation wrought by the Rim Fire.

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