Placer County Water Agency

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July 18, 2006

Subject: Middle Fork American River Hydroelectric Project Relicensing
FERC Project No. 2079 - Draft Existing Resource Information Reports

Dear Stakeholder;

Placer County Water Agency (PCWA) is pleased to provide for your review and comment the enclosed "Draft Existing Resource Information Reports" for the Middle Fork American River Hydroelectric Project (MFP or Project) (FERC Project No. 2079). The report narratives, figures, tables and appendices are provided electronically on the enclosed CD. In addition Non-Internet Public (NIP) maps referenced in the text are provided as 11X17 color paper copies. Non-Internet Public (NIP) should not be posted on the Internet.

PCWA's intent in distributing the draft reports is to provide stakeholders with the opportunity to better understand the resources in the vicinity of the MFP early in the relicensing process, and to comment on the content of the material in the reports. PCWA encourages all stakeholders to identify any additional sources of information in the vicinity of the MFP for inclusion in the resource information reports. A final version of the resource reports, incorporating stakeholder comments, will be provided in the Pre-Application Document (PAD), which will be filed with FERC and distributed to the stakeholders by PCWA in late 2007.

PCWA is providing the Draft Existing Resource Information Reports to the stakeholders in three distributions. The first series of reports were distributed to the relicensing stakeholders for review and comment on June 20, 2006. The second series of reports (enclosed) are being distributed to the relicensing stakeholders for review and comment on July 18, 2006. The third series of reports will be distributed in August, 2006. The following table shows the general table of contents and distribution schedule for the Draft Existing Resource Information Reports.

		DISTRIBUTION DATES		
		June 2006	July 2006	August 2006
6.0	Introduction	X		
6.1	Description of the River Basin			X
6.2	Geology and Soils	X		
6.3	Water Use			X
6.4	Water Quality			X
6.5	Fish and Aquatic Resources	X		
6.6	Wildlife and Botanical Resources	X		
6.7	Geomorphology	X		
6.8	Riparian Resources	X		
6.9	Recreation		X	
6.10	Land Use		X	
6.11	Aesthetics		X	
6.12	Cultural Resources	X		
6.13	Tribal Resources	X		
6.14	Socioeconomics		X	
7.0	Relative Comprehensive Plans and Resource Management Plans		X	

The text of the reports has been provided to you in Word format so that you may provide your comments as single-text edits, which would be greatly appreciated. Electronic files are currently saved in the following example format: 6.8_Riparian Resources_Narrative_V1_Jun 06.doc. The electronic version of the document with your comments should use the same save name with your initials and/or affiliation added, for example: 6.8_Riparian Resources_Narrative_V1_June 06_PCWA_MT.doc. Remember to show your edits in track changes.

If you choose to provide your comments in another format (e.g. e-mail correspondence or letter), please be clear to differentiate general comments from specific comments or recommendations on individual reports. Comments of a technical nature should include the basis for the comment and any appropriate citations to scientific literature. When providing comments or recommendations, please identify the specific report that you are commenting on and the specific section, page or line (s). This will help PCWA to more effectively address your comments.

PCWA would like to obtain your feedback on this set of Existing Resource Information Reports within 60-days, or by September 18, 2006. Please e-mail electronic comments to relicensing@pcwa.net. You may also provide comments to me at the following address:

Mal Toy
Director of Resource Development
Placer County Water Agency
P.O. Box 6570
Auburn, CA 95604

We appreciate your participation in this project and look forward to receiving your feedback. Please call me at (530) 823-4889 if you have any questions.

Sincerely,

PLACER COUNTY WATER AGENCY

Mal Toy
Director of Resource Development

MT:bb

Attachment

The text of the Existing Resource Information Reports and all associated tables, figures and appendices are provided on the enclosed CD. Text and tables are provided in their original Microsoft Word or Excel formats. Figures are provided electronically in Adobe Portable Document Format (PDF).

Note that several of the figures discussed in the Existing Resource Information Reports show the location of Project facilities with respect to roads and other landmarks. These figures are considered Non-Internet Public (NIP) and should not be posted on the Internet. Color paper copies of these NIP figures are enclosed in this distribution for reference, as follows:

Figure 6.9-1. Developed Recreation Facilities in the Vicinity of the MFP. Includes an index map and 3 detailed sheets, as follows:

- Sheet 1 of 3, Duncan Creek and French Meadows Reservoir Areas
- Sheet 2 of 3, Hell Hole Reservoir and Long Canyon Area
- Sheet 3 of 3, Ralston Afterbay Area

Figure 6.9-2. Specially-designated Areas in the Middle Fork American Watershed.

Figure 6.9-3. Dispersed Recreation Resources in the Vicinity of the MFP.

Figure 6.10-1. Land Jurisdictions in the Middle Fork American River Watershed.

Figure 6.10-2. USDA-FS Range Allotments in the Middle Fork American River Watershed.

Figure 6.10-3. Fire History in the Middle Fork American River Watershed.

Figure 6.11-1. (5 sheets) Visual Quality Objectives in the Vicinity of the MFP.

[Please note: The Existing Resource Information Reports will be included as Chapter 6.0 in the Pre-Application Document. Therefore, the table of contents begins with 6.0 and not 1.0.]

Page

List of Tables

6.9 Recreation

6.11 Aesthetics

6.14 Socioeconomics

List of Figures

6.9 Recreation

6.10 Land Use

6.11 Aesthetics

6.14 Socioeconomics

List of Appendices

6.9 Recreation

401 WQC	Section 401 Water Quality Certification
ac-ft	acre-feet
ACHP	Advisory Council on Historic Preservation
ACOE	Army Corps of Engineers
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
Advisory Council	Advisory Council on Historic Preservation
AIR	Additional Information Request
ALP	Alternative Licensing Process
APE	Area of Potential Effect
ARB	Air Resources Board
ARPA	Archaeological Resources Protection Act
ARWG	American River Watershed Group
ASR	Additional Study Requests
Auburn SRA	Auburn State Recreation Area
BA	Biological Assessment
BACT	Best Available Control Technology
Basin	American River Basin
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
BPR	Bureau of Public Roads
BVET	Basinwide Visual Estimation Technique
CAA	Clean Air Act
CAISO	California Independent System Operator
Cal Trout	California Trout
CCR	California Code of Regulations
CDC	California Department of Conservation
CDEC	California Data Exchange
CDF	California Department of Finance
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEII	Critical Energy Infrastructure Information
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
Commission	Federal Energy Regulatory Commission
CORP	California Outdoor Recreation Plan
CORRP	California Outdoor Recreation Recovery Planning
CSC	California Species of Special Concern
CSL	California State Library

CSPS	California State Park Service
CSWRB	California State Water Rights Board
CTR	California Toxics Rule
CWA	Clean Water Act
dbh	diameter at breast height
DEA	Draft Environmental Assessment
DEIS	Draft Environmental Impact Statement
DHS	California Department of Health Services
DO	Dissolved Oxygen
DOE	Department of Energy
DOI	Department of Interior
DOQQ	digital orthorectified quarter quad
DPR	California Department of Parks and Recreation
DRG	Digital raster graphic
DWR	California Department of Water Resources
EDD	California Employment Development Department
EID	El Dorado Irrigation District
EIS	Environmental Impact Statement
ENF	Eldorado National Forest
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
FOR	Friends of the River
FPA	Federal Power Act
fps	firm peaking service
FR	The Federal Register
FRI	Four Reservoir Index
FSS	Forest Service Sensitive
ft	feet
GCMP	Granite Chief Wilderness Management Plan
GIS	Geographic Information System
GLO	General Land Office
GPS	Global Positioning System
GPUD	Georgetown Public Utility District
GWHr	gigawatt-hour
HB	Howell Bunger
HBI	Hilsenhoff Biotic Index
hp	Horsepower
HPMP	Historic Properties Management Plan
IFIM	Instream Flow Incremental Methodology
IHA	Indicators of Hydrologic Alteration
ILP	Integrated Licensing Process
IRA	Inventoried Roadless Area
IRMP	Interim Resource Management Plan
kV	kilovolt
LRMP	Land and Resource Management Plan
Lat	latitude

Long	longitude
Maidu	Maidu Native American
MCL	Maximum Concentration Limits
MDL	Method Detection Limit
MFP	Middle Fork American River Hydroelectric Project
mg/l	milligrams per liter
MIS	management indicator species
Miwok	Miwok Native American
msl	mean sea level
MTRL	maximum tissue residue level
MW	Megawatt
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NGO	non-governmental organization
NHPA	National Historic Preservation Act
NID	Nevada Irrigation District
NOI	Notice of Intent
NOPR	Notice of Proposed Rulemaking
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRDC	Natural Resources Defense Council
NTR	National Toxics Rule
NTU	nephelometric turbidity unit
NWIS	National Water Information System
O&M	Operation and Maintenance
OHV	off-highway vehicle
ORV	Outstandingly Remarkable Value
PAD	Pre-Application Document
PAOT	persons at one time
PARC	Protect American River Canyons
PC	Placer County
PCPD	Placer County Planning Department
PCWA	Placer County Water Agency
pdf	Adobe Portable Document Format
PG&E	Pacific Gas and Electric Company
PM&E	protection, mitigation and enhancement
PMF	Probable Maximum Flood
Project	Middle Fork American River Hydroelectric Project
QA/QC	Quality Assurance/Quality Control
REA	Ready for Environmental Analysis
RM	River Mile
ROD	Record of Decision
rpm	revolutions per minute
RV	recreational vehicle
RWQCB	California Regional Water Quality Control Board
SARA	Save the American River Association
SCADA	supervisory control and data acquisition

SHPO	State Historic Preservation Officer
SMUD	Sacramento Municipal Utility District
SPCC	Spill Prevention, Containment and Countermeasure Plan
SPM	semi-private motorized
SPT	sediment pass-through
SWRCB	California State Water Resources Control Board
TAF	thousand acre feet
TLP	Traditional Licensing Process
TMDL	Total Maximum Daily Load
TNF	Tahoe National Forest
UAIC	United Auburn Indian Community
UARM	Upper American River Model
UARP	Upper American River Project
USBR	United States Bureau of Reclamation
USC	United States Code
USDA	United States Department of Agriculture
USDOC	United States Department of Commerce
USDA-FS	United States Department of Agriculture Forest Service
USDOT	United States Department of Transportation
USEPA	United State Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
Washoe	Washoe Native American
Watershed	Middle Fork American River Watershed
WTP	Water Treatment Plant
WSR	Wild's Scenic River
WY	Water year

TABLE OF CONTENTS

List of Tables

List of Figures

Appendix

6.9 RECREATION RESOURCES

This report describes the recreational resources in the vicinity of the Middle Fork American River Hydroelectric Project (MFP or Project). The Federal Energy Regulatory Commissions (FERC) content requirements for this report are specified in Title 18 of the Code of Federal Regulations (CFR) Chapter 1 § 5.6 (d) (3) (viii), as follows.

> ***Recreation and Land Use**. A description of the existing recreational and land uses and opportunities within the Project boundary. The components of this description include:*
>
> *(A) Text description illustrated by maps of existing recreational facilities, type of activity supported, location, capacity , ownership and management;*
>
> *(B) Current recreational use of Project lands and waters compared to facility or resource capacity;*
>
> *(C) Existing shoreline buffer zones within the Project boundary;*
>
> *(D) Current and future recreation needs identified in current State Comprehensive Outdoor Recreation Plans, other applicable plans on file with the Commission, or other relevant local, state, or regional conservation and recreation plans;*
>
> *(E) If the potential applicant is an existing licensee, its current shoreline management plan or policy, if any, with regard to permitting development or piers, boat docks and landings, bulkheads, and other shoreline facilities on Project lands and waters;*
>
> *(F) A discussion of whether the Project is located within or adjacent to a;*
>
> *1 River segment that is designated as part of, or under study for inclusion in, the National Wild and Scenic River System; or*
>
> *2 State-protected river segment;*
>
> *(G) Whether any project lands are under study for inclusion in the National Trails System or designated as, or under study for inclusion as, a Wilderness Area.*
>
> *(H) Any regionally or nationally important recreation areas in the Project vicinity;*
>
> *(I) Non-recreational land use and management within the project boundary; and*
>
> *(J) Recreational and non-recreational land use and management adjacent to the project boundary.*

Note that the FERC regulations require the applicant to provide information regarding both recreation and land use. This report provides general information about the developed and dispersed recreation resources in the Middle Fork American River Watershed (Watershed) and specific information about the developed Project recreation facilities. Land management related topics, including shoreline buffer zones (C),

shoreline management plans (E), and non-recreation land use within (I) and adjacent to (J) the FERC Project boundary are discussed separately in the Land Use Report (Section 6.10). Additional information about the recreation resources associated with the MFP, including use levels and facility capacity, will continue to be developed as the relicensing process proceeds. Future reports will provide this new information.

6.9.1 Information Sources

General information concerning recreation facilities, opportunities, activities, and management goals was developed using the following information sources:

- Placer and El Dorado County General Plans*;*
- Tahoe and Eldorado National Forest Land and Resource Management Plans;
- Granite Chief Wilderness Management Plan;
- Auburn State Recreation Area Interim Resource Management Plan;
- National Forest and United States Geographical Society (USGS) topographic maps;
- Resource agency websites; and,
- Miscellaneous recreation brochures and resource agency publications.

Specific information regarding the Project recreation facilities was developed using the following information sources:

- Placer County Water Agency (PCWA) and the United States Department of Agriculture Forest Service (USDA-FS) Tahoe and Eldorado National Forests Collection Agreement (2003 and Amendments).

- The Middle Fork American River Project (FERC No. 2079) Revised Recreation Plan (PCWA 1989).

The discussion on whitewater boating is based on information obtained from resource agency websites, maps, and the following two guidebooks:

- California Whitewater*:* A Guide to the Rivers by Jim Cassady and Fryar Calhoun (1995), and;
- The Best Whitewater in California*:* The Guide to 180 Runs by Lars Holbek and Chuck Stanley (1998).

This report also contains information provided by various agency personnel from the USDA-FS, the California Department of Parks and Recreation (DPR) and the United States Bureau of Reclamation (USBR). The information presented in this report is based on existing information; no new recreation data was collected or analyzed.

6.9.2 Overview of Recreation Resources in the Watershed

The MFP facilities are situated in the foothills and mountainous uplands of the western slope of the central Sierra Nevada, within the Tahoe and Eldorado National Forests. The MFP facilities are located on the Middle Fork American River, the Rubicon River, Duncan Creek and the North and South Forks of Long Canyon Creek, within an area referred to in this report as the Middle Fork American River Watershed (Watershed). The Watershed boundaries are shown on Figure 6.9-1. Note that Figure 6.9-1 includes an index map plus three detailed sheets.

The Watershed is characterized by steep canyons and rugged terrain with dense forests and woodlands. The bypass streams (streams located downstream of Project facilities) flow from elevations ranging from a high of approximately 5,200 ft above mean sea level (msl) at French Meadows Reservoir and Duncan Creek Diversion to approximately 1,200 ft msl at Ralston Afterbay. The surrounding ridges reach elevations as high as 7,000 ft msl.

The Watershed is heavily forested, rural in nature and sparsely populated. There are no residential or commercial developments in the immediate vicinity of the Project. The nearest population center is Foresthill (population 1,791), located approximately four miles west-northwest of Ralston Afterbay. Several paved County roads provide the primary access to the MFP facilities and Watershed. These include: Mosquito Ridge Road, Ralston Ridge Road, Blacksmith Flat Road and Soda Springs Riverton Road. Access to more remote locations in the Watershed is possible using ancillary roads and trails associated with either the Forest Service Transportation System or the Auburn State Recreation Area (Auburn SRA), located downstream of Ralston Afterbay.

The Project facilities and the land within the FERC Project boundary are located primarily within the Eldorado National Forest (ENF) and Tahoe National Forest (TNF). Private parcels are present throughout the Watershed and intersect the FERC Project boundary at various locations. Land use within the FERC Project boundary is focused on hydropower generation and recreation. The land outside the FERC Project boundary is managed for recreation, timber harvest, grazing, natural resource protection, and to a lesser extent mining.

A wide variety of land and water-based recreational opportunities are available in the Watershed. Popular recreation activities include camping, hiking, equestrian use, sightseeing, swimming, camping, picnicking, hunting, flat water boating, whitewater boating, fishing, recreational mining (e.g. dredging and gold panning), cross-country skiing, snowmobiling, and off-highway vehicle (OHV) riding. These activities are supported by a variety of developed recreation facilities located throughout the Watershed including public campgrounds, day-use and picnic areas, boat ramps, scenic vistas, hiking and equestrian trails, off-highway vehicle (OHV) staging areas and trails, river access for whitewater boating, and snowmobile and cross-county snow trails.

Developed recreation facilities in the vicinity of the MFP are depicted on Figure 6.9-1, grouped by Project and Non-Project recreation facilities. As indicated most of the

developed recreational facilities are concentrated around French Meadows Reservoir, Hell Hole Reservoir, Ralston Afterbay, and along the South Fork of Long Canyon Creek. Recreation also occurs at many undeveloped or "dispersed" sites throughout the Watershed. Most areas in the ENF and TNF are open to dispersed camping, free of charge (ENF 2006) and visitors may camp anywhere that camping is not specifically prohibited. Campfire permits are required.

Numerous foot trail and OHV trails traverse the Watershed. Most of the trails within the National Forest are considered multi-purpose and are used for hiking, mountain biking and equestrian use. OHV use is restricted to designated areas and is limited due to steep terrain. Motorized snow travel is permitted in most areas with a minimum snow pack of 12 inches, barring all ground contact. The nearest designated cross-country ski and snowshoe trails are found at Deller Springs off Mosquito Ridge Road.

Whitewater boating occurs on the Middle Fork American River, downstream of Ralston Afterbay, and to a lesser extent on the Rubicon River, between Ellicott Bridge and Ralston Afterbay. The river downstream of Ralston Afterbay is boated both commercially and privately and PCWA voluntarily releases flows to accommodate whitewater boating activities to the extent practicable. The Rubicon River between Ellicott Bridge and Ralston Afterbay is considered difficult and is only boated by advanced and expert boaters. It is not boated commercially. More information about the whitewater boating opportunities in the Watershed, including the location of popular runs, flow preferences, and estimated use is provided in Section 6.9.6 of this report.

6.9.3 Specially Designated Areas in the Watershed

Several specially designated areas are present in the Watershed and are shown on Figure 6.9-2. In accordance with the FERC regulations, this section addresses the following:

- River segments that are designated as part of, or are under study for inclusion in, the National Wild and Scenic River System;
- State-protected river segments;
- Project lands that are designated as or are under study for inclusion in the National Trails System;
- Project lands that are designated as, or are under study for designation as, a Wilderness Area.
- Regionally or nationally important recreation areas in the vicinity of the Project.

This section also addresses other protected areas that are not specifically identified in the FERC regulations, for example a State Game Refuge that is present in the northeast portion of the Watershed.

6.9.3.1 National Wild and Scenic Rivers System

Two reaches in the Watershed are considered eligible for Wild and Scenic River status under the Wild and Scenic Rivers Act (WSRA) of 1968, or have been recommended for inclusion in the Wild and Scenic Rivers Act System. These river reaches are identified on Figure 6.9-2 and are described as follows.

- The Middle Fork American River, from Ralston Afterbay Dam to the North Fork American River confluence, was found to be eligible for Wild and Scenic River (WSR) designation by the U.S. Bureau of Reclamation (USBR). (Note that this same study also found portions of the North Fork American River eligible for inclusion in the WSR system but these are outside the Watershed boundary).

- The Rubicon River, from Hell Hole Dam to Ralston Afterbay, was found to be suitable for inclusion by the Eldorado National Forest. (The river upstream of Ellicott Bridge was found to meet the classification requirements as a "Scenic" river segment. The river downstream of Ellicott Bridge was found to meet the classification requirements of a "Wild and Scenic" river segment).

The outstandingly remarkable values (ORV's) for which these segments are considered eligible or suitable for inclusion in the Wild and Scenic River system are discussed in the background information provided in Appendix 6.9-A. Note that none of these stream reaches has been formally included in the Wild and Scenic Rivers System. To date, these river segments have only been considered eligible or been recommended for inclusion. Regardless, the USDA-FS, USBR and other State and federal resource agencies are required to manage these segments and the area within ¼ mile of the river to protect their ORVs.

6.9.3.2 State Protected River Segments

The Rubicon River, from Hell Hole Reservoir to Ralston Afterbay, is designated by the State of California as a Wild Trout Stream, as shown on Figure 6.9-2. In 1971, the California Department of Fish and Game (CDFG) established the California Wild Trout Program to protect and enhance wild trout fisheries. The primary purpose of the program is to preserve attractive stream trout fisheries, which are naturally sustained by wild strains of trout.

Pursuant to its designation as a Wild Trout stream, CDFG developed the "Rubicon River Wild Trout Management Plan (Plan)" in 1979. This plan summarized the trout resource status and proposed management goals, direction, activities, and recommendations for the Rubicon River. To date, the Plan has not been updated. The stated goals of the Plan are to:

- Protect the aquatic environment of the Rubicon River and its tributaries,
- Perpetuate a naturally sustained, balanced population of rainbow trout,

- Provide a quality backcountry angling experience characterized by a naturally scenic streamside environment.

6.9.3.3 National Trails System

There are no trails located within the FERC Project boundary that are designated or under study for inclusion in the National Trails System. However, numerous trails traverse the Watershed. Three of these trails are considered nationally or regionally important, the Pacific Crest Trail, the Western States Trail, and the Rubicon Trail. These trails are briefly described in the following and are shown on Figure 6.9-2.

Pacific Crest Trail

The Pacific Crest Trail (PCT) traverses the crest of the Sierra and the northeastern portion of the Watershed. With a few exceptions, the PCT is one continuous trail that extends more than 2,650 miles from Mexico to Canada. At its nearest point to the MFP, the PCT is located about 5 miles east of Hell Hole Reservoir.

Western States Trail

The Western States Trail is a 100-mile route which starts from a base camp at Squaw Valley near Lake Tahoe and extends to Auburn, California. The route is used for the world famous Western States 100 Mile Endurance Run. The trail traverses the northern boundary of the Watershed and crosses Duncan Creek about one mile upstream of the Duncan Creek Diversion Dam. From there it continues along the northern boundary of the Watershed. It eventually crosses the Middle Fork American River near the Greenwood Access located about 14.5 miles downstream of Oxbow Powerhouse, in the Auburn State Recreation Area.

Much of the Western States Trail is also used for the Western States 100 Mile Equestrian Trail Ride referred to as the “Tevis Cup”. The trail alignment currently follows the Western States throughout the entire Watershed to the Greenwood Access point in the Auburn SRA, at which point the two trails diverge. The Tevis Cup trail follows the west side of the river to Poverty Bar, where it crosses the Middle Fork American River. It merges with the Western States Trail near Mammoth Bar. Both trails cross the river again at the confluence of the North and Middle Forks of the American River. During the races, MFP operations are modified as much as practicable to reduce flow release into the Middle Fork American River downstream of Oxbow Powerhouse to facilitate river crossings.

The Rubicon Trail

The Rubicon Trail is a world-renowned 4-wheel drive route. The entire route extends from Georgetown to Lake Tahoe (USDA--FS Rubicon Trail Brochure 2006). Some of the route is paved and some is not. The OHV segments begin at either Wentworth Springs or Loon Lake. Most people begin the OHV stretch near Loon Lake located off Highway 50 in the Crystal Range. Others begin near Wentworth Springs, which is a

point approximately mid-way on the route. These routes are characterized by steep, rocky and un-maintained terrain. At its nearest point to the MFP, the trail is located about 5 miles south of Hell Hole Reservoir.

6.9.3.4 Wilderness Areas

None of the Project facilities are located within a designated Wilderness Area or within an area under study for designation as a Wilderness Area. However, the Granite Chief Wilderness Area is located immediately east of the MFP, as shown on Figure 6.9-2. At its closest points the Granite Chief Wilderness boundary is located approximately 0.25 mile east of Hell Hole Reservoir and approximately 4.5 miles east of French Meadows Reservoir.

The Granite Chief Wilderness Area is located west of Lake Tahoe and south of Highway 80 along the crest of the Sierra Nevada. Elevations in the Granite Chief range from 5,000 foot valleys to 9,000 foot peeks. Deep snow usually makes the Granite Chief inaccessible to hiking until late May or early June. The natural environment is predominantly unmodified providing outstanding opportunities for visitors to enjoy isolation and solitude. The Granite Chief Wilderness was established in 1984 in accordance with the direction provided by the Wilderness Act of 1964. The area was designated Wilderness “because of its pristine nature, natural beauty, and potential to provide non-motorized recreation opportunities” (USDA-FS brochure 1993).

The USDA-FS, TNF - Truckee and American River Ranger Districts administer the Granite Chief Wilderness according to the 1993 Granite Chief Wilderness Management Plan and Wilderness Implementation Schedule (USDA-FS 1993). General management direction of the Wilderness Area is also implemented in accordance with the National Forest Management Act of 1976; the California Wilderness Act of 1984; the National Historic Preservation Act; USDA-FS policy guidelines; Associate Chief Leonard’s letter dated April 12, 1988 regarding exempted competitive events; and the TNF-LRMP (USDA-FS 1990). The management objectives stress maintenance of the Wilderness as one of the multiple uses of National Forest System lands.

The Granite Chief Wilderness Area is one of the few Wilderness Areas that does not require an entry permit. However, group and stock size are limited and campfire permits are required.

6.9.3.5 Regionally or Nationally Important Recreation Areas

The Auburn SRA is located immediately west of the MFP and includes approximately 42,000 acres along 40 miles of the North and Middle Fork American rivers. The Auburn SRA boundary and primary recreation resources are shown on Figures 6.9-2 and 6.9-3. The DPR administers the area under contract with the USBR, the land owner. The main access is from Auburn, either on Highway 49 or the Auburn-Foresthill Road. The area offers a wide variety of recreation opportunities to an average of 979,279 visitors a year (DPR no date).

The Auburn SRA includes over 100 miles of hiking, biking, and equestrian trails that traverse the steep American River canyon. Primary recreational activities include hiking, swimming, boating, fishing, camping, mountain biking, gold panning, and off-highway motorcycle riding. Whitewater recreation is also very popular along both forks of the river, with 86 commercial outfitter permits issued in 2005 (DPR no date).

6.9.3.6 Other Protected Areas

A portion of the Watershed has been designated as a State Game Refuge. As shown on Figure 6.9-2, the refuge boundaries encompass French Meadows Reservoir, and extend roughly from the west end of French Meadows Reservoir to the northwest portion of the Granite Chief Wilderness Area. While the designation is intended primarily to protect habitat used by the Blue Canyon mule deer herd, California state law prohibits hunting of any species within a State Game Refuge. State law also prohibits possession or discharge of firearms, pellet guns, and bows and arrows within the refuge.

6.9.4 Developed Project Recreation Facilities

PCWA has developed a number of recreation facilities in association with the MFP. The Project recreation facilities are identified in PCWA's Revised Recreation Plan (PCWA 1989) and subsequent amendments. PCWA's original Project Recreation Plan (Exhibit R) was submitted to the FERC on April 11, 1967. By memorandum dated October 9, 1987, FERC requested that PCWA revise the Project Recreation Plan and offered specific recommendations. The 1989 Revised Recreation Plan amended and updated Exhibit R, identified the "Project Recreation Facilities", and proposed enhancements and upgrades to those facilities to make them accessible to persons with disabilities. The Revised Recreation Plan was approved by FERC with modifications and the License was amended by FERC Order dated April 27, 1992.

The Project recreation facilities were developed by PCWA but are maintained by the USDA-FS in accordance with a Collection Agreement between PCWA and the USDA-FS TNF and ENF. This agreement states that PCWA will provide the USDA-FS with the necessary funds to operate and maintain Project recreation facilities. The 2003 Collection Agreement was amended in April 2005 and most recently in February 2006.

All of the Project recreation facilities are identified in Table 6.9-1 by area, and are shown on Figure 6.9-1, which includes an Index map plus three detailed sheets. As indicated, most of the Project recreation facilities are concentrated around French Meadows Reservoir, Hell Hole Reservoir, the South Fork of Long Canyon Creek, and Ralston Afterbay. The recreation opportunities, activities, and developed Project recreation facilities associated each of these areas are summarized in the following.

6.9.4.1 French Meadows Reservoir Area

French Meadows Reservoir is located in Placer County within the boundaries of the TNF in the American River Ranger District. The reservoir is located at an elevation of 5,262 feet above mean sea level (MSL) and approximately 36 miles east of the city of

Foresthill by way of Mosquito Ridge Road (USDA-FS Road 96), a two-lane paved access road.

Recreation use at French Meadows Reservoir is concentrated in the summer months. Primary summer activities include camping, sightseeing, fishing, swimming, hiking, boating, and mountain bike riding. Winter activities include cross-country skiing, snowshoeing and snowmobiling.

Camping in the French Meadows area is permitted only within the developed areas (TNF website 2006). The USDA-FS restricts overnight camping in undeveloped areas around the reservoir for resource protection. The area around French Meadows Reservoir is a designated State Game Refuge and no firearms are permitted.

Popular watercraft used on the reservoir include 10-to 20-foot aluminum-fishing boats equipped with outboard engines. Jet skis, sailboats, canoes and kayaks are also used on the reservoir to a lesser extent. There are no restrictions on the type or size of boats at French Meadows Reservoir and according to the USDA-FS, no speed limits are imposed (S. Hill pers. comm.). All Federal, State and local Boating Regulations apply and the operator of any vessel is obligated to know the laws (USDA-FS Boating Regulation brochure 2001).

French Meadows Reservoir contains rainbow and brown trout, which are planted by the CDFG throughout the season to enhance recreation fishing (TNF website 2006).

The developed Project recreation facilities in the vicinity of French Meadows Reservoir are managed by the TNF, American River Ranger District, through an agreement with PCWA. The reservable campgrounds are managed under concessionaire agreement currently with American Land and Leisure, Inc. (www.reserveusa.com).

Each of the developed Project recreation facilities in the French Meadows Reservoir area are shown on Figure 6.9-1 (Sheet 1 of 3) and are briefly described in the following. The amenities available at each of the developed Project recreation facilities are summarized in Table 6.9-1. Facility capacities are summarized in Table 6.9-2.

Campgrounds

Campsites in the French Meadows Reservoir area typically include a graveled or paved parking spur, picnic table, a campfire ring or low grill, and bear proof containers. The campgrounds include both flush and vault toilets (USDA-FS Handout no date). Most of the campground facilities are situated within or are surrounded by coniferous forest.

Group sites in the French Meadows Reservoir area have been redesigned to accommodate Recreational Vehicles (RVs). These sites feature Klamath-type (flat griddle) stoves, campfire rings with benches, and tent space. All group sites except Black Bear have vault toilet facilities. Black Bear has a flush restroom and is designed to meet the Americans with Disabilities Act (ADA) specifications (PCWA 1997 and 2003).

A number of campsites have been redesigned to be accessible to persons with disabilities. According to the TNF information brochures on Accessible Recreation Facilities, the facilities listed as "accessible for people with disabilities" meet the federal accessibility standards (32-inch minimum width for doorways, adequate room for turning, etc.). Slopes, pathways, and trails generally meet outdoor accessibility standards, although some assistance may be required at certain locations.

An RV dump station was installed in 2004 and was first available for use in 2005. The dump station is centrally located for access approximately 0.5 mile east of French Meadows Campground along Mosquito Ridge Road (E. Moore pers. comm.).

French Meadows Campground. This campground, which is located on the south shore of French Meadows Reservoir, consists of 75 single-unit campsites, a potable water supply, and vault and flush toilets. Each unit can accommodate a maximum of six persons at one time (PAOT) and a maximum number of two vehicles giving the campground a capacity of 450 overnight visitors. The campground facilities are generally open from mid-May until the end of September, depending on snow conditions.

Sites 1–31 are reservable "Family Standard Single" sites. Four reservable sites are accessible to persons with disabilities, as is one of the toilets. Driveway lengths range from 20 to 52 feet, depending on the campsite.

Sites 32 through 75 are non-reservable and are available on a first-come, first-served basis. Four of these sites are listed as handicap accessible. The non-reservable driveway spur lengths range from 23 to 45 feet, depending on the campsite.

Poppy Campground (Boat-in and Trail Campground). This campground, located on the north shore of French Meadows Reservoir, is accessible by boat or via a hiking trail. The hiking trail begins near the McGuire Picnic Area and joins the Western States Trail. The Poppy Campground is located along the trail approximately 0.5 miles east of the McGuire Picnic Area. The trail is generally referred to as the McGuire Trail and is identified by the USDA-FS as route 16E10. This primitive campground consists of 12 single-units with no water supply. Vault toilets are available. The single units can accommodate six PAOT giving the overall campground a capacity of 72 overnight visitors. All sites are available on a first-come first-serve basis. There is no fee for use. Poppy Campground is open year–round but snow limits access to the region from late fall to late spring.

Lewis Campground. This campground, which is located on the north shore of French Meadows Reservoir, consists of 40 single-units, potable water supply and vault and flush toilets. The sites are available on a first-come, first-served basis. One site and an adjacent toilet have been designed for accessibility by handicapped individuals. Each single unit can accommodate six PAOT; the campground can accommodate a total of 240 overnight visitors. Lewis Campground is generally open from mid-May until the end of September depending on snow conditions.

Coyote Group Campground. This group campground, which is located on the northeast shore of French Meadows Reservoir, consists of four reservable group campsites with campfire circles, potable water supply, vault toilets and central parking. The campground facilities are closed during the winter months and are generally open from mid-May until the end of September, depending on conditions. The capacity of each group site is as follows:

- Black Bear – capacity 50 persons, maximum vehicles 20
- Little Wolf – capacity 25 persons, maximum vehicles 6
- Brush Wolf – capacity 25 persons, maximum vehicles 6
- Prairie Wolf – capacity 25 persons, maximum vehicles 6

Gates Group Campground. This group campground, is located on the northeast shore of the reservoir, and consists of three reservable group campsites with a campfire circle, potable water supply, flush toilets and central parking. The campground facilities are closed during the winter months and are generally open from mid-May until the end of September, depending on snow conditions. The campground can accommodate 125 overnight visitors. The capacity of each group site is as follows:

- Aspen – capacity 25 persons, 1 restroom, maximum vehicles 8
- Lodgepole – capacity 25 persons, 1 restroom, maximum vehicles 8
- Ponderosa – capacity 75 persons, 2 restrooms, maximum vehicles 25

Ahart Campground. This campground, which is located on the northeast shore of French Meadows Reservoir, consists of 12 single units with no water supply. Vault toilets are available. The single units can accommodate six PAOT giving the campground a capacity of 72 overnight visitors. All sites are available year-round on a first-come, first-serve basis depending on snow conditions.

Day Use Areas

Two developed day use areas are present in the French Meadows Reservoir Area. Both of these day use areas consist of a boat ramp and an adjacent picnic area, as described in the following.

French Meadows Boat Ramp. This boat ramp is located on the south shore of French Meadows Reservoir adjacent to the French Meadows Picnic Area. The concrete boat ramp is 775 feet long by 20 feet wide. The length of the boat ramp above water varies, depending on the time of year, from approximately 50 to 500 feet. There are no restrictions on the type of boat that can be used on the reservoir. The unpaved parking lot that serves the boat ramp is 368 feet long by 104 feet wide and includes 46 parking spaces. The French Meadows boat ramp is open year-round but access may be limited by snow conditions.

French Meadows Picnic Area. This day-use picnic area is located on the south shore of French Meadows Reservoir adjacent to the boat ramp. The picnic area consists of seven picnic units with picnic tables and cooking grills. The picnic area can accommodate a total of 35 visitors. The area has vault toilets and a potable water supply. The unpaved parking lot is 90 by 18 feet. The French Meadows Picnic Area is generally open from mid-May until the end of September depending on snow conditions.

McGuire Boat Ramp. This boat ramp is located on the north shore of French Meadows Reservoir adjacent to the McGuire Picnic Area. The concrete boat ramp is 440 feet long by 20 feet wide. The length of the boat ramp above water varies, depending on the time of year, from approximately 50 to 440 feet. There are no restrictions on the type of boat that can be used on the reservoir. There are 75 parking spaces that serve the boat ramp. McGuire Boat Ramp is open for year-round use, but access may be limited by snow conditions.

McGuire Picnic Area. This day-use picnic area is located on the north shore of French Meadows Reservoir adjacent to the boat ramp. The picnic area consists of 10 units with picnic tables and cooking grills. The picnic area can accommodate a total of 50 visitors. The picnic area includes vault toilets and a potable water supply. The unpaved parking lot for the picnic area is 335 by 67 feet. McGuire Picnic Area is generally open from mid-May until the end of September depending on snow conditions.

6.9.4.2 Hell Hole Reservoir Area

Hell Hole Reservoir is located at an elevation of 4,630 feet above MSL. The reservoir can be accessed from the north by USDA-FS Road 24 (Chipmunk Ridge Road) or from the west via USDA-FS Road 2 (also referred to as the Soda Springs Riverton Road). The reservoir is surrounded by steep slopes, which are sparsely vegetated.

The lands surrounding the reservoir include both private lands and public lands managed by the USDA-FS. About 50 percent of the reservoir shoreline is administered by the ENF (USDA-FS 1997), Georgetown Ranger District. The remainder is private land under the jurisdiction of El Dorado County.

The recreation season typically occurs from April 15 to November 1, with the heavy use season from Memorial Day through Labor Day (USDA-FS 1997). Recreation activities include camping, sightseeing, fishing, swimming, hiking, boating, mountain bike riding and OHV use. The hiking trails in the vicinity of Hell Hole Reservoir provide good access to the southwestern portion of Granite Chief Wilderness.

Dispersed camping is not restricted in the Hell Hole Reservoir area. However, the steep terrain and limited road access constrains use. Motorized snow travel is permitted in most areas with a minimum snow pack of 12 inches, barring all ground contact.

The boating season normally occurs from April 15 to November 1 and is concentrated in the summer months between Memorial Day and Labor Day. There are no restrictions on the type or size of boats at Hell Hole Reservoir and, according to the USDA-FS no

speed limits are imposed (ENF 2006). All Federal and State Boating Regulations apply including age restrictions for operation of a vessel, personal flotation devices, reckless operation and navigation rules, etc. The operator of any vessel is obligated to know the laws (USDA-FS Boating Regulation brochure 2001).

Popular watercraft used on the reservoir includes small (10 to 14 foot) aluminum fishing boats equipped with outboard engines and some larger (20 foot) aluminum boats as well. Sailboats, kayaks and canoes are also used on the reservoir to a lesser extent. A minor amount of water skiing occurs at the reservoir. Jet skis are uncommon (USDA-FS 1997).

Hell Hole Reservoir has been stocked extensively in the past with a variety of salmonid species including rainbow trout (e.g., Eagle Lake strain), brown trout, brook trout, cutthroat trout (and cutthroat-rainbow hybrids), lake trout, kokanee, and coho salmon. Recent management includes stocking of brown trout, rainbow trout (although official records of recent rainbow plants were not located), and kokanee. The kokanee fishery in Hell Hole Reservoir is popular.

The developed recreation facilities in the vicinity Hell Hole Reservoir are located in two ENF Ranger Districts, the Georgetown Ranger District and the Pacific Ranger District. However, all of the facilities are managed by the Georgetown Ranger District, through an agreement with PCWA.

Each of the developed Project recreation facilities in the Hell Hole Reservoir area are shown on Figure 6.9-1 (Sheet 2 of 3) and are briefly described in the following. The amenities available at each of the developed Project recreation facilities are summarized in Table 6.9-1. Facility capacities are summarized in Table 6.9-2.

Campgrounds

Campsites in the Hell Hole Reservoir area typically include a graveled or paved parking spur, picnic table, and a campfire ring or low grill. The campgrounds include both flush and vault toilets. Most of the campground facilities are situated within or are surrounded by coniferous forest. Reservations are not required at any of the campgrounds in the vicinity of Hell Hole Reservoir.

Hell Hole Campground. This campground is located on the northwest shore of Hell Hole Reservoir uphill on a flat ridge, approximately 500 feet from the shoreline. The campground consists of 10 non-reservable single-units, potable water supply, and vault toilets. Each single unit can accommodate six PAOT giving the campground a capacity of 60 overnight visitors. The campground facilities are generally open from May 15 until November 1 depending on snow conditions.

Upper Hell Hole Campground (Boat-in and Trail Campground). This campground, which is located on the southeast shore of upper Hell Hole Reservoir, consists of 15 primitive single-unit campsites which can accommodate 6 PAOT each. The campground can accommodate 90 overnight visitors and is accessible by boat or via a

5 mile hiking trail, known as the Hell Hole Trail (FS route 14E02.3). This trail begins at the dam on the south side of the reservoir. It is a scenic and rocky walk along the reservoir ending at Upper Hell Hole Campground. The campground does not have drinking water. Vault toilets are available. None of the sites are reservable or handicap accessible and there is no fee. The campground is generally open between May 15 and September 15, depending on snow conditions.

Day Use Areas

Two developed day use areas are present in the Hell Hole Reservoir Area, a boat ramp and a vista, as described in the following.

Hell Hole Boat Ramp. This boat ramp, located adjacent to the Hell Hole Dam, is used to access the reservoir for fishing and for boating. It is open year-round, subject to snow conditions. The two-lane concrete boat launch is approximately 24 feet wide by 275 feet long, with a low masonry wall along one side. The area includes a chip-seal parking lot with space for 50 cars, with boat trailers, and two vault toilets. Masonry steps and a walkway connect the parking lot to the roadway.

Hell Hole Vista. This facility includes vault toilets, one picnic table and parking for approximately eight vehicles. The parking area is unpaved but the USDA-FS plans to pave the area in 2008. The facility includes a 3 foot-wide hiking trail that leads to an observation point, which overlooks Hell Hole Reservoir. The hiking trail is not handicap accessible. The vista is generally open from mid-May to the first of November depending on snowfall.

6.9.4.3 South Fork of Long Canyon Creek Area

The South Fork of Long Canyon Creek area includes private lands and land managed by the ENF. The area is accessible by taking Ralston Ridge Road to USDA-FS Road 23 (FR23) to USDA-FS Road 2. USDA-FS Road 2 parallels most of the South Fork of Long Canyon Creek.

Campgrounds

Two developed Project recreation facilities are present along the South Fork of Long Canyon, Big Meadows Campground and Middle Meadows Campground, as shown on Figure 6.9-1 (Sheet 3 of 3) and described below. The amenities available at each of these facilities are summarized in Table 6.9-1. Facility capacities are summarized in Table 6.9-2.

Big Meadows Campground. This campground, which is located approximately 1 mile north of Hell Hole Reservoir near South Fork Long Canyon Creek, consists of 54 single-unit family campsites with potable water supply and flush toilets. Each unit can accommodate six PAOT giving the campground a capacity of 324 overnight visitors. The campground facilities are generally open from May 15 until November 1 depending on snowfall.

Of the 54 campsites, 47 have spur lengths of 40 to 50 feet, allowing for tent, trailer, or recreational vehicle (RV) units; 6 sites have spur lengths of 25 to 40 feet, allowing for tent access only. One site is a designated handicap accessible campsite.

Middle Meadows Group Campground. This group campground is located 22 miles east of Georgetown and approximately 2.25 miles southwest of Big Meadows Campground along the South Fork Long Canyon Creek. The campground is available by reservation only. The campground consists of two walk-in units with a total capacity of 75 overnight visitors. Unit 1 has a 50-person capacity and Unit 2 has a 25-person capacity. The site includes potable water supply, vault and flush toilets, picnic tables, group stoves, and group fire rings. None of the sites are handicap accessible. The campground is generally open between May 15 and November 1 depending on snowfall.

6.9.4.4 Ralston Afterbay Area

Ralston Afterbay is located in the TNF, American River Ranger District at an elevation of 1,179 feet above MSL. The afterbay is located 29 road miles from Auburn and 12 miles from Foresthill. It can be accessed by taking Mosquito Ridge Road, a two-lane paved access road, to the Ralston Ridge Road.

Day Use Areas

One developed Project recreation facility is located adjacent to the Ralston Reservoir, the Ralston Afterbay Picnic Area, as shown on Figure 6.9-1 (Sheet 3 of 3). The amenities available at this facility are summarized in Table 6.9-1. Facility capacity is summarized in Table 6.9-2.

Ralston Afterbay Picnic Area. This picnic area, which is located on the north shore of Ralston Afterbay, consists of five picnic units with cooking grills and vault toilets. Potable water is available from spigots. Each picnic unit can accommodate five PAOT giving the picnic area a capacity of 25 visitors. The site is generally accessible year-round.

6.9.5 Estimated Recreation Use and Percent Capacity Reached at Project Recreation Facilities

PCWA does not collect use data at any of the developed Project recreation facilities. PCWA plans to utilize recreation use data collected by the USDA-FS or by the concessionaire responsible for the operation and maintenance of the Project recreation facilities. Estimates of recreation use and percent capacity reached at Project recreation facilities will be developed when use data is acquired.

6.9.6 Dispersed Recreation

Dispersed recreation occurs throughout the Watershed. Dispersed uses mainly include: hiking, picknicking, camping, site seeing, nature viewing, fishing, hunting, mountain

biking, recreational mining and whitewater boating. In general, dispersed use is more prevalent where roads or trails provide access. The location of the most popular trails and dispersed camping areas in the vicinity are shown on Figure 6.9-3.

Whitewater boating is popular in the Watershed, particularly on the Middle Fork American River, downstream of Ralston Afterbay. Whitewater boating also occurs on the Rubicon River between Ellicott Bridge and Ralston Afterbay, but the difficulty of the rapids on this river reach excludes all but advanced and expert boaters. The established whitewater runs, including put-ins and take-outs, are shown on Figure 6.9-3 and are described in more detail below. The discussion relies on information available in two published guide books, *The Best Whitewater in California- A Guide to the 180 Runs* (Stanley and Holbek 1998) and *California Whitewater – A Guide to the Rivers* (Cassady and Calhoun 1995), and on information published by the DPR for the Auburn SRA.

6.9.6.1 Whitewater Boating on the Middle Fork American River

Whitewater boating occurs on the Middle Fork American River between Oxbow Powerhouse and the confluence of the North Fork American River. This section is typically divided into three distinct runs as shown on Figure 6.9-3 and described as follows:

- **Tunnel Chute Run.** The Tunnel Chute Run begins at a put-in located near the Oxbow Powerhouse and extends about 17 miles to a take-out at the old Greenwood Bridge site located at McKeon Road. The run is considered Class IV on the International Scale of Difficulty and is typically boated between flows of 800 and 1,500 cfs, with optimum flows being around 1,200 cfs (Holbek and Stanley 1998). Holbek and Stanley recommend portaging around Tunnel Chute, a tunnel blasted through a horseshoe in the river by miners, and around Ruck-A-Chucky rapids. The Tunnel Chute Run is the most popular run on the Middle Fork American River. It is boated both commercially and privately but commercial use accounts for most of the whitewater use.

- **Mammoth Bar Run.** The Mammoth Bar Run begins at the old Greenwood Bridge site and extends 7 miles to a take-out at Mammoth Bar, which is accessible from an unpaved road leading off of the Auburn-Foresthill Road. The run is considered a Class II on the International Scale of Difficulty with long stretches of Class I pools and riffles. This run is popular with novice and beginning boaters and is boatable between flows ranging from 400-3000 cfs, depending on watercraft.

- **Murderer's Bar Run.** This run begins at Mammoth Bar and ends 2 miles downstream at the confluence of the North Fork and Middle Fork American rivers. Boaters typically take-out just past the confluence with the North Fork American River at a gravel bar located below Old Foresthill Road Bridge. This run is considered a Class V on the International Scale of Difficulty and involves a possible portage around Murderer's Bar. This run is boatable between flows ranging from 400-3,000 depending upon watercraft and skill level.

These three runs can be boated in one day or in a two-to three-day trip. Overnight camping associated with whitewater boating occurs at two primitive camping areas found at Cache Rock and the confluence with Otter Creek and at two developed campgrounds located at the Greenwood Access and Cherokee Bar. Boaters who plan to camp along the river must obtain a River Camping Permit from the Auburn SRA Headquarters (DPR no date).

Currently, boating is not allowed downstream of the Middle Fork/North Fork American River confluence. However, in 2008 the DPR plans to open a 4-mile run from the confluence of the Middle and North Forks American River to the old Auburn Dam site. This run will likely be rated as Class I to Class II on the International Scale of Difficulty (B. Deitchman pers. comm.).

Availability of Flows Downstream of Oxbow Powerhouse

Pacific Gas and Electric Company (PG&E) and PCWA currently coordinate with the DPR and a designated commercial whitewater boating representative to schedule MFP operations to enhance whitewater recreation in the Middle Fork American River below Oxbow Powerhouse. Whitewater boating releases are scheduled on a voluntary basis such that they do not compromise power production needs. This informal coordination typically occurs by telephone conference call in May or June, each year.

When whitewater flows are provided, they typically occur on weekends from June until September during late morning (10 or 11 a.m.) to early afternoon (2 or 3 p.m.) MFP operations provide flow releases of approximately 950 to 1,000 cfs. On summer weekdays, Project operations are voluntarily modified to accommodate commercial whitewater boating by releasing water 1 to 2 hours earlier than would normally occur for power production purposes only, starting from 10 to 11 a.m. (S. Lau, pers. Comm. 2006). Over the past five years, 2001 was the only year in which power production demands limited releases for whitewater boating (S. Lau, pers. comm. 2006).

Commercial Whitewater Boating Management

The DPR manages commercial whitewater boating along the North Fork and Middle Fork of the American rivers within the Auburn SRA. Commercial whitewater permits are required annually for the lower Middle Fork American River; however, no permits are required for private boaters.

In 2003, the Auburn SRA updated the River Management Plan (RMP) for the Middle Fork American River within the Auburn SRA. The updated RMP is designed to better regulate and administer boating demands on the river. Pursuant to the RMP, the Middle Fork whitewater outfitters are allowed to operate commercial trips through a written, signed and approved State Parks Concessions Contract (Concessions Contract).

The Concessions Contracts or “permits” issued for the Middle Fork American River are divided into two types: Middle Fork Class IV, and Middle Fork Class II. In 2005, 28 Class IV permits and 24 Class II permits were issued for the Middle Fork American

River. A Class IV permit allows boating along both the Tunnel Chute (Class IV) and Mammoth Bar (Class II) runs while a Class II permit is restricted to the Mammoth Bar Run.

According to the Concessions Contract (DPR 2006), the demand for "starting" trips down the river on weekends and holidays during the summer generally exceeds the maximum allowable commercial (concession) use. To address this issue, DPR worked closely with commercial outfitters, other agencies, the general public, and various user groups to design a system of "Special Requirements". The Special Requirements limit the number of launches at the Oxbow Put-In to 25 during specified "control dates". The companies allowed to launch on any specific control day are determined each year during the Outfitter Draw meeting.

Estimated Boating Use

According to DPR, 85 percent of the whitewater boating use along the Middle Fork American River is commercial.

Private and commercial use estimates provided by the DPR are summarized on Table 6.9-3. As indicated, between January 1 through October 31, 2005, a total of 2,844 commercial boats with 14,678 clients ran the Class IV "Tunnel Chute Run". A total of 28 commercial boats with 192 clients ran the Class II "Mammoth Bar Run" during the same year. By contrast, an estimated total of 53 private boats with 318 people boated both runs during the same time period.

Commercial whitewater boating use on the Middle Fork American River varies according to the day of the week. According to the DPR (1997 and 1998), the majority of boating occurs on Fridays, Saturdays and Sundays. The least amount of use occurs on Tuesdays and Wednesdays.

In 2005, approximately 11.6 percent of the total number of commercial clients who boated the Middle Fork American River spent at least one night camping (K. Dey pers. comm.).

6.9.6.2 Whitewater Boating on the Rubicon River

The Rubicon River is boatable from Ellicott Bridge to the Ralston Afterbay. This run is typically referred to as the Lower Rubicon Run and considered Class V on the International Scale of Difficulty. It is considered boatable at flows ranging from 500 to 2,000 cfs, with optimum flows around 1,200 cfs. This run is typically only boated during periods of high run off, when Hell Hole Dam spills.

This run is considered difficult and involves 2 to 5 portages, depending on flow conditions. The entire run is 20.3 miles long and typically requires two days.

Estimated Boating Use

There are no verifiable use data for whitewater boating activity along the Rubicon River from Ellicott Bridge to Ralston Afterbay.

6.9.7 Current and Future Recreation Needs Identified in Management Plans

The FERC regulations require a discussion of current and future recreation needs identified in State comprehensive plans and regional conservation and recreation plans. PCWA evaluated the various comprehensive plans identified on the FERC's March 2006 List of Comprehensive Plans, and found a number of plans relevant to the relicensing of the MFP. In addition, PCWA evaluated other plans not included on the FERC's List of Comprehensive Plans. The following four Comprehensive Plans specifically pertain to recreation:

- California Department of Parks and Recreation: Recreation Outlook in Planning District 3. An Element of the California Outdoor Recreation Resources Plan (1980).
- California Department of Parks and Recreation: Recreation Needs in California (1983).
- California Department of Parks and Recreation: California Outdoor Recreation Plan (CORP) (2002).
- California Department of Parks and Recreation: Public Opinions and Attitudes on Outdoor Recreation in California (2002).

These four plans and their relevance to the Project are discussed in detail in the Comprehensive Plans Report (Section 7.0).

6.9.8 References

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USDA-FS. 1993. Granite Chief Wilderness Management Plan, Wilderness Implementation Schedule and Decision Notice.

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California DPR. 2006 (May). Telephone correspondence with Kris Dey. Auburn State Recreation Area.

USBR. Folsom Office. 2006 (Feb 25). Telephone and e-mail correspondence with Rob Schroeder.

USDA-FS. 2006. E-mail correspondence with Sarah Hill, Tahoe National Forest.

USDA-FS. 2006. Telephone correspondence with Ed Moore, Tahoe National Forest.

TABLES

Table 6.9-1 Developed Project Recreation Facilities.

Project Region	Single Units	Group Units	Flush Toilet	Vault Toilet	Potable Water	RV Dump Station	Boat Launch	Handicap Accessible	Amenities[a]
French Meadows Reservoir Area									
Campgrounds									
French Meadows Campground	75 Units: Sites 1-31 (R) 32-75 (Non-R)		X	X	X	Nearby		Sites 16, 17, 18, 21, 36, 38 (+2 non-numbered)	Bear-proof containers, driveway lengths from 20 to 52 feet
Poppy Campground	12 Units (Non-R)			X					Hike-in or boat-in access
Lewis Campground	40 Units (Non-R)		X	X	X	Nearby		Site 21	Bear-proof containers
Coyote Group Campground		4 Group Units (R)	X	X	X	Nearby		Black Bear Group Site	Bear-proof containers
Gates Group Campground		3 Group Units (R)	X		X	Nearby			Bear-proof containers
Ahart Campground	12 Units (Non-R)			X		Nearby			Bear-proof containers
Day-Use Areas									
French Meadows Picnic Area and Boat Ramp				X	X		X (46 parking spaces)		Picnic tables, cooking grill
McGuire Picnic Area and Boat Ramp				X	X		X (75 parking spaces)		Picnic tables, cooking grill

Table 6.9-1 Developed Project Recreation Facilities (continued).

	Single Units	Group Units	Flush Toilet	Vault Toilet	Potable Water	RV Dump Station	Boat Launch	Handicap Accessible	Amenities[a]
Hell Hole Reservoir Area									
Campgrounds									
Upper Hell Hole Campground	15 Units (Non-R)			X					Hike-in or boat-in access
Hell Hole Campground	10 Units (Non-R)			X	X				
Day-Use Areas									
Hell Hole Boat Ramp				X			X (50 parking spaces)		
Hell Hole Scenic Vista				X					Picnic tables, trail
South Fork Long Canyon Creek Area									
Campgrounds									
Big Meadows Campground	54 units (Non-R)		X		X			Site 52	
Middle Meadows Group Campground		Unit 1 (R) Unit 2 (R)	X	X	X				
Ralston Afterbay Area									
Day-Use Areas									
Ralston Afterbay Picnic Area				X	X				Picnic tables, cooking grill

Source: USDA Forest Service Website and reserveusa.com.

[a]Developed campgrounds typically include parking, picnic tables, campfire ring, and cooking grill.

R = Reservable, Non-R = Non-reservable

Table 6.9-2 Capacity of Developed Project Recreation Facilities.

Facility	Number of Units	Maximum PAOT[a] Capacity
Campgrounds (assumes 6 person per unit capacity, except as noted)		
French Meadows	75	450
Poppy[b]	12	72
Lewis	40	240
Ahart	12	72
Gates Group	3	25
		25
		75
Coyote Group	4	25
		25
		75
		50
Hell Hole	10	60
Upper Hell Hole[b]	15	90
Big Meadows	54	324
Middle Meadows Group	2	50
		25
Total (Family):	**218**	**1,308**
Total Group:	**9**	**325**

Picnic Areas (assumes 5 person per unit capacity)		
McGuire	10	50
French Meadows	7	35
Ralston Afterbay	5	25
Total:	**22**	**110**

Scenic Vista	Parking Spaces
Hell Hole Vista	Approximately 8
Boat Ramp	
McGuire	75
French Meadows	46
Hell Hole	50

Sources: PCWA Revised Recreation Plan (1989), FERC Order Approving the Revised Recreation Plan (1992), USDA Forest

[a]PAOT – Persons At One Time
[b]Boat-In and trail accessible Campground

Table 6.9-3 Auburn State Recreation Area: Whitewater Recreation Use January 1 – October 31, 2005.

	Middle Fork Class IV	Middle Fork Class II	Comments
Permits Approved	28	24	Firm count
Boats/Commercial	2844	28	Firm count
Vehicles/Commercial	978	7	Total represents approx. 20%-50% of actual count.
Trips/Commercial 1-day	976	16	992 total commercial trips (Firm count)
Trips/Commercial Camping	-	85	
Clients/Commercial	14,678	192	Firm count
Private Boaters	288	30	Total represents approx. 5%-10% of actual count.
Private Boats	48	5	Total represents approx. 5%-10% of actual count.

Data and comments were provided by California Department of Parks and Recreation - Auburn State Recreation Area

Note: "-" indicates no data available or count is zero

FIGURES

Placeholder for Figures 6.9-1--3

Figure 6.9-1 Sheet1 Duncan Creek and French Meadows Reservoir Areas

Sheet 2 Hell Hole Reservoir and Long Canyon Area

Sheet 3 Ralston Afterbay Area

Figure 6.9-2 Specially-designated Areas in the MFAR Watershed

Figure 6.9-3 Dispersed Recreation Resources in the Vicinity of the MFP

Non-Internet Public Information

These Figures have been removed in accordance with the Commission regulations at 18 CFR Section 388.112.

These Figures are considered Non-Internet Public information and should not be posted on the Internet. This information may be accessed from the Placer County Water Agency's (PCWA) Public Reference Room, but is not expected to be posted on PCWA's Website, except as an indexed item.

APPENDIX 6.9-A

Background Information Regarding the National Wild and Scenic Rivers Act

Background Information Regarding the Eligible or Suitable National Wild and Scenic Rivers in the Middle Fork American River Watershed

The following provides additional background regarding the status of eligible or suitable Wild and Scenic River segments located in the Middle Fork American River Watershed.

Middle Fork of the American River

In January 1993, the Bureau of Reclamation published the report entitled, "American River Water Resources Investigation, Wild and Scenic Rivers Eligibility and Preliminary Classification" (USBR 1993). This study was conducted as part of a larger land and water resource planning effort known as the American River Water Resources Investigation (also known as the Auburn Dam Project). In this study, three segments on the North and Middle Forks of the American rivers were found "Eligible" for Wild and Scenic designation under the WSRA. One of these segments is located within the Middle Fork American River Watershed and is described in the USBR report as follows:

- Middle Fork American River: From Oxbow Dam to the confluence with the North Fork American River. Length is approximately 23 miles.

The study concluded that this segment possesses "outstandingly remarkable values" (ORVs) that meet the required WSRA standards for eight resource categories including Recreation, Scenic, Geologic, Wildlife, Fish, Ecological and Other Values and Cultural. Only one ORV is required to qualify a river segment for WSR eligibility. In order for the river segment to be considered eligible in this study, the ORVs must occur on federally administered lands.

The summary statement in the 1993 study indicated that the next step in the process would be a suitability study to determine if the eligible river segments are suitable for designation to the National Wild and Scenic River System. According to the USBR, a suitability study has not been conducted and there are no plans to conduct a suitability study at this time (R. Schroeder, pers. comm. 2006). The USBR and other State and federal resource agencies are required to manage the river and the area within ¼ mile of the river to protect the ORVs until the suitability study is completed.

Rubicon River

In the early 1980s, as part of the preparation to develop the Eldorado National Forest (ENF) Land and Resources Management Plan (1988 LRMP), the ENF conducted eligibility and suitability studies to determine if the Rubicon River met the requirements for designation as a national Wild and Scenic River (WSR). The full length of the Rubicon River was evaluated for eligibility. The upper Rubicon, above Hell Hole Reservoir was found not eligible, and the lower Rubicon, below Hell Hole Dam was found eligible. Subsequently, a suitability study was conducted along three segments of the Rubicon River from Hell Hole Dam to Ralston Afterbay. The study concluded that all three segments of the Rubicon River possessed ORVs that met the required WSRA

standards for “Scenic”, “Fish”, and “Other” Values. Only one ORV is required to qualify a river segment for WSR eligibility.

The ENF-LRMP recommended all three segments of the lower Rubicon River for scenic river designation. However, the classification for the river in the ENF-LRMP was appealed, and in a subsequent decision by the Chief of the Forest Service, the two lower segments, from Ellicott Bridge to Ralston Afterbay were recommended for Wild classification in addition to Scenic classification. The upper segment, from 100 yards below the Hell Hole Dam to Ellicott Bridge, continues to have a Scenic classification (S. Rodman pers. comm.). The ENF formally recommended that Congress designate the Rubicon River under the Wild and Scenic Rivers system (S. Rodman pers. comm.). However, the United States Congress has not yet acted to officially designate the river. Regardless, the USDA-FS manages the Rubicon River, and a ¼ mile corridor, to protect the ORV’s identified in their W&SR eligibility study.

In an amendment to the Tahoe National Forest (TNF) LRMP, the Forest Supervisor concluded that the segment of the upper Rubicon River on the TNF above Hell Hole Reservoir is not eligible to be included in the National Wild and Scenic Rivers System. This decision is described in the report entitled, “Record of Decision: Twenty-two Westside Rivers Wild and Scenic Study Report and Final Environmental Impact Statement” (USDA-FS, Tahoe National Forest/Plumas National Forest undated). This recommendation concurs with the findings of the ENF for the same river segment as described above.

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TABLE OF CONTENTS

List of Figures

6.10 LAND USE

This report describes the land use in the vicinity of the Middle Fork American River Hydroelectric Project (MFP or Project). The Federal Energy Regulatory Commission's (FERC or Commission) content requirements for this report are specified in Title 18 of the Code of Federal Regulations (CFR) Chapter 1 § 5.6 (d) (3) (viii), as follows.

> ***Recreation and land use****. A description of the existing recreational and land uses and opportunities within the project boundary. The components of this description include:*
>
> *(A) Text description illustrated by maps of existing recreational facilities, type of activity supported, location, capacity, ownership and management;*
>
> *(B) Current recreational use of project lands and waters compared to facility or resource capacity;*
>
> *(C) Existing shoreline buffer zones within the project boundary;*
>
> *(D) Current and future recreation needs identified in current State Comprehensive Outdoor Recreation Plans, other applicable plans on file with the Commission, or other relevant local, state, or regional conservation and recreation plans;*
>
> *(E) If the potential applicant is an existing licensee, its current shoreline management plan or policy, if any, with regard to permitting development of piers, boat docks and landings, bulkheads, and other shoreline facilities on project lands and waters;*
>
> *(F) A discussion of whether the project is located within or adjacent to a:*
>
> *(1) River segment that is designated as part of, or under study for inclusion in, the National Wild and Scenic River System; or*
>
> *(2) State-protected river segment;*
>
> *(G) Whether any project lands are under study for inclusion in the National Trails System or designated as, or under study for inclusion as, a Wilderness Area.*
>
> *(H) Any regionally or nationally important recreation areas in the project vicinity;*
>
> *(I) Non-recreational land use and management within the project boundary; and*
>
> *(J) Recreational and non-recreational land use and management adjacent to the project boundary.*

Note that the FERC regulations require the applicant to provide information regarding both recreation and land use. This report focuses on describing the land uses and pertinent land management plans and policies that govern land uses within and outside the MFP FERC Project boundary. Recreation is discussed separately in the Recreation Report (Section 6.9).

6.10.1 Information Sources

The information presented in this report was developed using the following seven information sources:

- Eldorado National Forest Land and Resource Management Plan (ENF-LRMP) (USDA-FS 1988).
- Tahoe National Forest Land and Resource Management Plan (TNF-LRMP) (USDA-FS 1990).
- Sierra Nevada Forest Plan Amendment (SNFPA), Final Supplemental Environmental Impact Statement (EIS), and Record of Decision (ROD) (USDA-FS 2004). These documents augment the previously published 2001 SNFPA, FEIS, and ROD.
- Placer County General Plan (Placer County 1994).
- El Dorado County General Plan (El Dorado County 2004).
- Auburn State Recreation Area (Auburn SRA) Interim Resource Management Plan (USBR 1992). This plan amends the 1978 General Plan for the Auburn Dam and Reservoir Project.
- Placer County Water Agency Fire Plan - Middle Fork American River Project, FPA No. 2079 (PCWA 1962).

6.10.2 Overview of Land Use in the Middle Fork American River Watershed

The MFP facilities are situated in the foothills and mountainous uplands of the western slope of the central Sierra Nevada, within the Tahoe and Eldorado National Forests. The MFP facilities are located on the Middle Fork American River, the Rubicon River, Duncan Creek and the North and South Forks of Long Canyon Creek within an area referred to in this report as the Middle Fork American River Watershed (Watershed). The Watershed boundary is shown on Figure 6.10-1.

The Watershed is characterized by steep canyons and rugged terrain with dense forests and woodlands. The rivers and streams associated with the MFP flow from elevations ranging from a high of approximately 5,200 feet (ft) above mean sea level (msl) at French Meadows Reservoir and Duncan Creek Diversion to approximately 1,200 ft msl at Ralston Afterbay. The surrounding ridges reach elevations as high as 7,000 ft msl.

The Watershed is heavily forested, rural in nature and sparsely populated. There are no residential or commercial developments in the immediate vicinity of the MFP. The nearest population center is Foresthill (population 1,791), located approximately four miles west-northwest of Ralston Afterbay. Several paved county roads provide the primary access to the MFP vicinity. These include: Mosquito Ridge Road, Ralston Ridge Road, Blacksmith Flat Road and Soda Springs Riverton Road. Access to more remote locations in the Watershed is possible using ancillary roads and trails associated with either the Forest Service Transportation System or the Auburn SRA, located downstream of Ralston Afterbay.

The Project facilities and the land within the FERC Project boundary are located primarily within the Eldorado National Forest (ENF) and Tahoe National Forest (TNF). Private parcels are present throughout the Watershed and intersect the FERC Project boundary at various locations. Figure 6.10-1 shows the MFP facilities and FERC Project boundary with respect to the various land jurisdictions in the Watershed. Land use within the FERC Project boundary is focused on hydropower generation and recreation. Land use outside the FERC Project boundary is managed mainly for recreation, timber harvest, grazing, natural resource protection, and to a lesser extent mining.

Note that the MFP includes a system of tunnels. However, the tunnels are not discussed in this report because they are located underground and do not involve land management activities.

6.10.3 Land Management Plans

Land use and management is governed by federal, state, and local plans and regulations, depending on ownership status. Lands that lie within the jurisdiction of the USDA-FS are subject to the policies, goals, objectives, and prescriptions contained in the National Forest Land and Resource Management Plans (LRMPs) and the SNFPA (2001; 2004). West of French Meadows Reservoir, the Middle Fork American River forms the boundary between the TNF and the ENF. The boundary bisects the area between French Meadows and Hell Hole reservoirs. Upstream of Hell Hole Reservoir, the Rubicon River forms the boundary of the TNF and the ENF. Private land holdings in the Watershed are generally subject to the Placer County or El Dorado County General Plans. Pertinent management plans are briefly described in the following.

6.10.3.1 Tahoe National Forest Land and Resource Management Plan

The TNF-LRMP provides direction for long-term land management in the TNF. The TNF-LRMP goals are to: 1) ensure wise use and protection of TNF resources; 2) fulfill legislative requirements; and, 3) address local, regional, and national issues.

Land within the TNF is divided into 109 Management Areas (MAs). The Project facilities lies and FERC Project boundary lie in four of these, including the “French”, “Sunflower”, “End of the World”, and “Little Oak” Management Areas. Resource management in these areas emphasizes the following activities:

- Water-oriented recreation.
- Dispersed recreation along the Middle Fork American River.
- Safety for the forest visitor.
- Public sector facilities appropriate to the Recreation Opportunity Spectrum (ROS) classification to accommodate average weekend demand levels.
- Maintenance or improvement of visual quality.
- Development of a management plan for the Western States National Recreation Trail during TNF-LRMP implementation.

The TNF-LRMP recognizes the potential for hydroelectric power on the TNF and contains standards and guidelines that allow for hydropower generation while protecting natural resources and meeting area-specific management objectives.

Note that management direction regarding certain resources, for example timber and wildlife, have been revised as part of the SNFPA (USDA-FS 2004) as described in Section 6.10.3.3.

6.10.3.2 Eldorado National Forest Land and Resource Management Plan

The ENF-LRMP provides direction for long-term land management of the ENF. The ENF-LRMP prescribes compatible sets of forest practices for land and natural resources. Land managed by the ENF is classified into six major "Emphasis Zones" where similar combinations of resource opportunities and land use potential exist simultaneously (ENF-LRMP 1988). The six Emphasis Zones are furthered categorized into 30 MAs that stress predominant management themes, practices and prescriptions. The Project facilities and FERC Project boundary lie in four Emphasis Zones and five MAs as described below. As with the TNF-LRMP, management direction for certain MAs (e.g., High Site Timber, Spotted Owl) was revised as part of the SNFPA.

The ENF-LRMP also identifies numerous management practices that are applied to the MAs. Management Practice 98 provides directives specific to energy-related licenses and permits.

- ***Zone I - Designated: Lands set aside by legal or official designation.*** The Rubicon River from Hell Hole Dam to Ralston Afterbay lies within a Wild and Scenic River MA. The ENF-LRMP identifies that this is a preliminary administrative recommendation that this reach of the Rubicon River receive interim protection of its Wild, Scenic or Recreational values until Congress makes a formal designation by law or disposes of the proposal. According to the Standards and Guidelines described under Management Practice 98, the Wild and Scenic River MA excludes transportation-utility corridors.

- ***Zone II - High Country: Lands that are largely undeveloped, and in some cases, unroaded.*** High Country lands occur in large tracts that are generally above 6,000 feet in elevation and are characterized by natural crest-like Sierran landscapes. Hell Hole Reservoir is located in this Emphasis Zone in a MA classified "Semiprimitive Motorized". Management of these areas stresses dispersed recreation, livestock forage, wildlife habitat, and snowpack retention. Management Practice 98 recommends that design, construction, and maintenance of projects are subdued in this landscape. The Standards and Guidelines call for minimal road construction, restricted use of access roads to project facilities, and instream flows that satisfy aesthetic and recreation needs where streams border this MA.

- ***Zone IV - Wildlife: Lands managed to maintain viable populations of spotted owls and goshawks.*** The North and South Forks Long Canyon Creek diversions are located in this Wildlife Emphasis Zone within a MA classified as "Spotted Owl". Management direction for these areas was revised and is described in the 2004 SNFPA.

- ***Zone V - General Forest: Lands that are most favorable for growth and harvest of commercial conifer species.*** This Emphasis Zone is the most intensely managed and most prevalent in the Watershed. The General Forest Emphasis Zone is further categorized into nine MAs. Most of the ENF land in the Watershed is classified as MA "High Site Timber", which contains the most productive timberland base in the Forest. The management direction for this MA was revised and is superceded by the 2004 SNFPA; however, the SNFPA did not revise management direction for those MAs that address visual quality. The MA "Visual Foreground Retention" occurs near Ralston Afterbay, and along the Middle Fork American River and North and South Forks Long Canyon Creek. General Direction described in Management Practice 98 does not allow major power projects that are incompatible with Foreground Retention Visual Quality Objectives.

6.10.3.3 Sierra Nevada Forest Plan Amendments

The 2001 and 2004 SNFPAs augment the TNF-LRMP and ENF LRMPs. Appendix A of the 2004 SNFPA Final Supplemental EIS - ROD, identifies the management direction for all National Forests within the Sierra Nevada bioregion, including the TNF and ENF. The ROD sets forth the management goals and strategies for five problem areas including 1) old forest ecosystems and associated species, 2) aquatic, riparian and meadow ecosystems and associated species, 3) fire and fuels management, 4) lower westside hardwood ecosystems, and 5) noxious weed management. The ROD describes in detail the management standards and guidelines relevant to these five resource topics.

6.10.3.4 Placer County General Plan

The boundary between Placer County and El Dorado County follows the Rubicon River from Hell Hole Reservoir to its confluence with the Middle Fork American River at the Ralston Afterbay. Below Ralston Afterbay the Middle Fork American River forms the

boundary between Placer and El Dorado counties. Activities on private land within Placer County are subject to the provisions contained in the Placer County General Plan (1994). The Placer County General Plan provides goals, policies, and implementation programs in the following areas: land use, housing, transportation and circulation, public facilities and services, recreational and cultural resources, natural resources, agricultural and forestry resources, health and safety, and noise.

The Placer County General Plan identifies five land uses in the Watershed including Agriculture, Resource Protection, Rural Residential, Timberland, and Urban uses. Although all five of these designations occur in the Watershed, all of the MFP facilities are located on lands designated as "Timberland." This designation is applied to mountainous areas where the primary land uses relate to the growing and harvesting of timber and other forest products (together with limited, low-intensity public and commercial recreational uses). Necessary public utility facilities are an allowed use on lands designated as Timberland.

6.10.3.5 El Dorado County General Plan

Activities on private land within El Dorado County are subject to the provisions contained in the El Dorado County General Plan (2004). The El Dorado General Plan identifies three land use designations in the Watershed including Agricultural Preserve (AP), Natural Resource (NR), and High Density Residential (HDR). The Project facilities and FERC Project boundary falls entirely within an area designated as NR. NR areas are designed with the purpose of protecting the economic viability of those resources through managed conservation and beneficial uses. The NR designation applies to areas with economically viable natural resources, such as forestry resources, mineral resources, grazing land, and water resources. The designation applies only to properties greater than 40 acres and contains one or more of these resources. Compatible uses on private land include agriculture, rangeland, forestry, wildlife management, recreation, water resources development, and rural density single-family dwellings (El Dorado 2004).

6.10.3.6 Auburn State Recreation Area Interim Resource Management Plan

The Auburn SRA is situated downstream of the Ralston Afterbay and it includes approximately 42,000 acres along 40 miles of the North and Middle Forks of the American River (B. Deitchman, pers. comm.). It extends generally from the Oxbow Powerhouse to Folsom Reservoir. Three broad planning goals are identified in the Auburn SRA Interim Resource Management Plan (1992), as follows: 1) provide for health and safety of the public, 2) minimize and correct environmental damage caused by recreational use and development, and 3) allow and encourage active volunteerism for projects or programs where feasible.

6.10.4 Land Use within the FERC Project Boundary

The MFP FERC Project boundary encompasses approximately 4,482 acres of land. With the exception of a few private parcels, most of the land within the FERC Project

boundary is under the jurisdiction of either the ENF or the TNF. No state or county-owned lands are present within the FERC Project boundary. Land use within the FERC Project boundary includes hydropower generation and recreation.

The primary Project facilities are shown on Figure 6.10-1 and described in detail in the Project Description (Section 5.0). The Project recreation facilities are described in the Recreation Report (Section 6.9).

6.10.4.1 Shoreline Buffer Zones

The FERC Project boundaries represent buffer zones around the reservoirs and smaller impoundments. These buffer zones serve two purposes – to ensure public access to the Project lands and waters and to help protect the recreation and aesthetic values of the Project reservoirs and their shorelines. PCWA does not restrict access to any of the Project reservoirs or shorelines. However, access to some portions of the reservoirs and to the smaller impoundments is limited due to the steep terrain. Some private land intersects the FERC Project boundary around the perimeter of Hell Hole Reservoir. However, all public land within the FERC Project boundary is owned by PCWA. Public access is allowed on this land given public safety and Project operation constraints.

6.10.4.2 Shoreline Management Plan

There are no permitted piers, boat docks, landings, bulkheads or other shoreline facilities associated with any of the MFP reservoirs or diversion pools. Therefore, PCWA does not maintain a shoreline management plan.

6.10.5 Other Land Uses within the Watershed

Land use adjacent to the FERC Project boundary and within the Watershed primarily consists of recreation, timber management, livestock grazing/range land, mining and natural resource protection. In general, these uses began in the early 1800s and continue today. Current land uses in the Watershed are briefly described below. Historic lands uses are discussed for perspective, where appropriate.

6.10.5.1 Recreation

A wide variety of land and water-based recreational opportunities are available in the Watershed. Popular recreation activities include camping, hiking, equestrian use, sightseeing, swimming, picnicking, hunting, flat water boating, whitewater boating, fishing, recreational mining (e.g. dredging and gold panning), cross-country skiing, snowmobiling, and off-highway vehicle (OHV) riding. These activities are supported by a variety of developed recreation facilities located in the Watershed including public campgrounds, day-use and picnic areas, boat ramps, scenic vistas, hiking and equestrian trails, OHV staging areas and trails, river access for whitewater boating, and snowmobile and cross-county snow trails. The recreation opportunities and Project and non-Project facilities in the vicinity of the MFP are described in the Recreation Report (Section 6.9).

6.10.5.2 Timber Management

Prior to the construction of Foresthill Road and Mosquito Ridge Road in 1949, timber harvesting was minimal in the upper portions of the Watershed, as access was limited to mining trails. Extensive timber harvesting occurred from 1949 through the mid-1980s (USDA-FS 2003a).

Logging trends based on LRMPs of the national forests in the Sierra Nevada indicate a decline in the amount of remnant stands of old growth forests. Clear-cut, seed-tree, and shelterwood cutting techniques all have the same effect: production of even-aged forest stands.

Timber sale offerings (timber available for sale) of green (live and healthy trees) and salvage (dead and dying timber caused by insect, disease, or wildfire) on ENF and TNF lands have been decreasing since the late 1980s. Likewise, the average annual sales of sawtimber sold from the ENF and TNF have decreased by nearly 77% over the fifteen-year period between 1988 and 2002 (USDA-FS 1998 – 2002).

In the ENF, four main types of timber harvest prescriptions are practiced. These include thinning treatments designed in accordance with regulations for California spotted owls (CASPO), clear cutting, fuelbreak thinning, and forest thinning. From 1992 to 2002, clearcutting has occurred within the Rubicon and Long Canyon sub-watersheds. CASPO thinning has also occurred within the upper American River and North Fork Long Canyon watersheds. Fuel break thinning and forest thinning treatments have been applied in the lower Middle Fork American River and Rubicon River watersheds, respectively.

6.10.5.3 Grazing

Seasonal sheep and cattle grazing in the vicinity of French Meadows and Hell Hole reservoirs began prior to the 1850s and continues today. Figure 6.10-2 shows the grazing allotments present on National Forest Lands within the Watershed. An allotment is a designated area of land available for livestock grazing. As indicated on Figure 6.10-2, many of the Project facilities and bypass streams lie within the boundaries of or adjacent to a range allotment.

6.10.5.4 Mining

Mining activities began in 1848 with the discovery of gold by John Marshall on the South Fork American River near Coloma, California. The bars on the principal tributaries of the American River, including the North Fork and Middle Fork, were also explored during that year. On the Middle Fork American River, prospectors explored as far upstream as the Oxbow/Ralston Powerhouse area in 1848. Beginning in the 1850s, miners traveled farther upstream, possibly to the French Meadows area. Mining also occurred along many of the streams tributary to the Middle Fork American River. The Middle Fork is believed to be the most productive placer mining main tributary of the American River, with many of these sites now under Folsom Reservoir. At some

locations, the river course was altered to expose gold-bearing gravels within the river bed by moving the channel through the adjacent bluff, reportedly dredging more sediment between 1913 and 1916 than was removed from the Panama Canal (James 1999). Hillsides and bars were denuded to supply lumber to build the flumes and other structures needed to support the mining activities. Entire towns for the miners were established on the bars.

Gold continues to be mined in some areas along the Middle Fork today. In addition to the locations of mines, dredging, and other activities, the Watershed is laced with dams, ditches, flumes, tunnels, and canals used to move water for hydraulic mining. Some of these ditches have become part of local water supply systems and hydroelectric power systems, including PCWA, Nevada Irrigation District (NID), and Pacific Gas and Electric Company (PG&E). Mining activities in the area are discussed further in the Geology and Soils Report (Section 6.2) and in the Cultural Resources Report (Section 6.12).

6.10.5.5 Natural Resource Protection

State and federal resource agencies manage land use within the Watershed to protect and enhance the natural resources. Protection and enhancement is achieved through implementation of the policies, goals, objectives, and prescriptions contained in the various management plans described above. In addition, natural resource protection is achieved through the establishment of specially designated areas. Several specially designated areas are present in the Watershed. These specially designated areas are identified below and are described in more detail in the Recreation Report (6.9).

Granite Chief Wilderness Area – This Wilderness area is located in the uppermost portion of the Watershed, immediately east of the MFP. At its nearest point, the Wilderness boundary is approximately 0.25 mile east of Hell Hole Reservoir and approximately 4.5 miles east of French Meadows Reservoir.

Rubicon Wild Trout Stream – The Rubicon River, from Hell Hole Reservoir to the Middle Fork American River confluence, is designated by the State of California as a Wild Trout Stream.

Nationally or Regionally Important Trails – Numerous trails traverse the Watershed, including three that are considered regionally or nationally important. These include the Pacific Crest Trail in the Granite Chief Wilderness, the Western States/Tevis Cup Trail near the Middle Fork American River, and the Rubicon OHV Trail located approximately three miles south of the Rubicon River.

National Wild and Scenic Rivers – None of the rivers or streams in the Watershed are included in the National Wild and Scenic Rivers (W&SR) system. However, two reaches are considered eligible or suitable for inclusion in the W&SR system, including the Rubicon River from Hell Hole Dam to the Ralston Afterbay (designated by ENF) and the Middle Fork American River from Ralston Afterbay to the North Fork American River confluence (designated by U.S. Bureau of Reclamation (USBR)). Section 6.9.3.1 of the

Recreation Report provides more detail on the Wild and Scenic River designates in the vicinity of the MFP.

Auburn State Recreation Area - The Auburn SRA is situated downstream of the Ralston Afterbay and encompasses approximately 42,000 acres of land along 40 miles of the North and Middle Forks of the American River. The Auburn SRA is administered by the California Department of Parks and Recreation (DPR) under contract with the USBR, the land owner. The area offers a wide variety of recreation opportunities to an average of 979,279 visitors a year.

State Game Refuge - A California State Game Refuge is present in the Watershed. The refuge boundaries extend, roughly, from the west end of French Meadows Reservoir to the northwest portion of the Granite Chief Wilderness. The designation is intended primarily to protect habitat used by the Blue Canyon mule deer herd.

6.10.6 Fire History

Large, catastrophic fires have occurred in the Watershed. The major fires that have occurred since the early 1,900s are shown on Figure 6.10-3, by decade.

Since European settlement, the fire return interval, pattern, and severity within Sierra Nevada forests have changed as a result of development and fire management practices within the region (J. Jue, pers. comm. 2006). Prior to the 1800s, the fire return intervals were probably between 5 and 20 years (USDA-FS 2003). The fires would have burned moderately large areas, been well-distributed within the landscape, and burned with low to moderate intensity, interspersed with smaller patches of higher severity. The majority of the fires were likely surface fires, causing little tree mortality. By the 1900s, fires were typically high severity, with only small portions of the landscape experiencing fires of low to moderate severity, with return intervals between 35 and 100 years. In addition, decades of fire suppression have caused accumulations of understory vegetation enabling surface fires to easily become crown fires and burn upper canopy vegetation. This has resulted in a growing number of catastrophic fires that burn out of control.

The 2001 Red Star Fire is an example of a recent catastrophic fire in the Watershed. The Red Star Fire consumed 17,500 acres of forest within the ENF and TNF and on private land. The fire burned approximately 2,416 acres in the ENF, 10,473 acres in the TNF, and 4,590 acres of private land (USDA-FS 2006). The USDA-FS determined that it will take 100 years to reestablish large trees (>24” diameter at breast height (dbh)) and at least 250 years to develop old trees with decadence features that would be beneficial to wildlife (USDA-FS Georgetown Ranger District 2002).

6.10.7 Fuels Management

Fire management in the Watershed is the responsibility of the USDA-FS and local fire districts. PCWA maintains a Fire Plan that outlines PCWA and contractor responsibilities, as well as fire prevention, reporting, and control measures.

Fire and fuels management has become a high priority for the USDA-FS in an effort to reduce threats to communities and wildlife from large, severe wildfires and to reintroduce fire into the USDA-FS fire-adapted ecosystem (USDA-FS 2004a; USDA-FS 2004b). Specific broad-scale USDA-FS goals for fire and fuels management that are practiced within the Watershed include:

- Treating fuels in a manner that reduces wildland fire intensity and rate of spread, thus contributing to more effective fire suppression and a smaller number of acres burned; and

- Restoring fire-adapted ecosystems by implementing various treatments to forests to reduce unnaturally dense conditions in certain areas.

The USDA-FS uses two main strategies for landscape-level fuels management: 1) containing fires with linear fuelbreaks and Defensible Fuel Profile Zones (DFPZs), and 2) using a spatial arrangement of dispersed treatments (called strategically placed area treatment or SPLATS) to interrupt the spread of fire. The linear fuelbreaks are intended to provide defensible areas and facilitate suppression action by indirect tactics including backfiring. By reducing the size of a fire, the practice reduces the potential of large severe burns. The SPLATS, which includes treatments such as prescribed burns, thinning and clearcutting, and planting, modify fire effects and behaviors by reducing fire loads and the spread and severity of fire where it encounters the treatment units.

6.10.8 References

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FIGURES

Placeholder for Figures 6.10-1--3

Figure 6.10-1 Land Jurisdictions in the MFAR Watershed

Figure 6.10-2 USDA-FS Range Allotments in the MFAR Watershed

Figure 6.10-3 Fire History in the MFAR Watershed

Non-Internet Public Information

These Figures have been removed in accordance with the Commission regulations at 18 CFR Section 388.112.

These Figures are considered Non-Internet Public information and should not be posted on the Internet. This information may be accessed from the Placer County Water Agency's (PCWA) Public Reference Room, but is not expected to be posted on PCWA's Website, except as an indexed item.

TABLE OF CONTENTS

List of Tables

List of Figures

6.11 AESTHETIC RESOURCES

This report describes the aesthetic resources in the vicinity of the Middle Fork American River Hydroelectric Project (MFP or Project). The Federal Energy Regulatory Commission (FERC or Commission) content requirements for this report are specified in Title 18 of the Code of Federal Regulations (CFR) Chapter I § 5.6 (d) (3) (ix), as follows.

> ***Aesthetic resources**. A description of the visual characteristics of the lands and waters affected by the Project components of this description include a description of the dam, natural water features, and other scenic attractions of the Project and surrounding vicinity. Potential applicants are encouraged to supplement the text description with visual aids.*

This report describes the MFP facilities and surrounding landscape with respect to the United States Department of Agriculture Forest Service's (USDA-FS) Visual Management System (VMS). The VMS provides a framework for systematically evaluating scenic resources and the effects of land management activities on those resources. Use of the VMS is relevant because most of the Project facilities are located on land managed by the USDA-FS.

The information presented in this report focuses on describing the above-ground Project facilities and the USDA-FS Visual Quality Objectives (VQOs) associated with those facilities. A visual quality assessment will be performed later in the relicensing process to determine whether the MFP facilities conform to established USDA-FS VQOs.

6.11.1 Information Sources

The information presented in this report was developed using the following five information sources:

- National Forest Landscape Management, *Volume 2*, Chapter 1, "The Visual Management System" Agricultural Handbook Number 462 (USDA-FS 1974)
- Visual Resource Management Guides: Visual Quality Standard Determination and Application. Region 5 (USDA-FS 1973)
- Landscape Aesthetics – A Handbook for Scenery Management. Agricultural Handbook Number 701 (USDA-FS 1995)
- Tahoe National Forest Land and Resource Management Plan (USDA-FS 1990)
- Eldorado National Forest Land and Resource Management Plan (USDA-FS 1988)

6.11.2 Overview of the USDA-FS Visual Management System

The USDA-FS developed a VMS to inventory, classify, analyze, and manage visual resources in National Forests. The central goals of the VMS are to maintain and

enhance the natural appearance and visual characteristics of the landscape while actively managing for various resource benefits such as timber, grazing, wildlife, and recreation. The VMS considers existing visual conditions, physical and human-made features, viewer sensitivity to scenic quality, and distance zones to determine the goals for visual resource management. In addition, the VMS provides the methodology to assess the visual landscape as a basic resource. It is designed to function at any level of the land planning process and is flexible enough to incorporate the extreme variability of various landscapes.

The VMS organizes forest landscapes into three categories, as follows:

1) Character type or "Variety Class" - Describes the physical features of the land.
2) Sensitivity Level – Describes people's concern for scenic quality.
3) Visual Quality Objectives (VQOs) – Defines the degree of acceptable alteration to the natural landscape.

The VMS combines the landscape character type and sensitivity levels to determine the VQOs on all National Forest lands. The VQOs are documented in the Land and Resource Management Plans (LRMPs) for each of the individual National Forests. In addition to designating VQOs, the LRMPs designate management areas and describe the desired future condition for visual resources within the National Forest.

The VQOs that are pertinent to the MFP are identified in the Tahoe National Forest (TNF) LRMP and the Eldorado National Forest (ENF) LRMP. The USDA-FS recognizes five VQOs. Four of these are pertinent to the MFP, as follows:

- **Preservation:** This standard allows ecological changes only with some exceptions for recreation facilities. This objective applies to Wilderness areas, primitive areas, other special classified areas, areas awaiting classification, and some unique management units which do not justify special classification.

- **Retention:** This standard requires management activities to be designed and located to blend into the natural landscape and not be visually apparent to the casual forest visitor. A management activity may repeat the visual elements and principles common in the characteristic landscape only if this repetition does not evidently change the essential quality of the existing dominance factors.

- **Partial Retention**: This standard provides that management activities may be evident to the casual forest visitor; however, the activity should remain subordinate to the visual strength and natural character of the landscape.

- **Modification:** This standard provides that management activities may be visually apparent to the casual observer and may also become dominant in the landscape.

Table 6.11-1 identifies all of the above-ground MFP facilities by area, and their designated VQOs. Figure 6.11-1, which consists of five sheets, shows the designated USDA-FS VQOs with respect to all of the MFP facilities.

6.11.3 Description of Existing Conditions

The MFP facilities are situated in the foothills and mountainous uplands of the western slope of the central Sierra Nevada, within the TNF and ENF. The bypass streams located downstream of MFP facilities, flow from elevations ranging from a high of approximately 5,200 feet (ft) above mean sea level (msl) at the French Meadows Reservoir and Duncan Creek Diversion to approximately 1,100 ft msl at the Ralston Afterbay. The surrounding ridges reach elevations as high as 7,000 ft msl.

The Middle Fork American River Watershed (Watershed) is characterized by steep canyons and rugged terrain with dense forests and woodlands. Aesthetic resources in the Watershed include alpine lakes, rivers, streams, general forested areas, Wilderness areas, and scenic trails and roadways. The Watershed is primarily managed for timber, grazing, fish and wildlife habitat, recreation, and hydropower generation.

The land encompassing the MFP facilities and bypass streams is considered rural in nature. There are no residential or commercial developments in the immediate vicinity of the Project. The nearest population center is Foresthill (population 1,791), located approximately four miles west-northwest of Ralston Afterbay. Several paved county roads provide the primary access to the MFP vicinity. These include: Mosquito Ridge Road, Ralston Ridge Road, Blacksmith Flat Road and Soda Springs Riverton Road. Access to more remote locations in the Watershed is possible using ancillary roads and trails associated with either the Forest Service Transportation System or the Auburn State Recreation Area (Auburn SRA), located downstream of Ralston Afterbay.

The following describes the above-ground Project facilities, organized by area, and their associated VQOs. Additional information regarding the Project facilities is included in the Project Description (Section 5.0). Note that the MFP includes a system of tunnels; however, the tunnels are not discussed because they are located underground and are therefore not visible.

6.11.3.1 Duncan Creek Area

The primary Project facilities in the Duncan Creek area are the Duncan Creek Diversion Dam and Duncan Creek Diversion Pool. These facilities are located on Duncan Creek, a tributary to the Middle Fork American River. The Duncan Creek Diversion Dam is a 32 foot-high, 165 foot-long, concrete gravity structure with a crest elevation of 5,275 ft msl. The dam impounds Duncan Creek and forms the Duncan Creek Diversion Pool, which has a gross storage capacity of approximately 20 acre-feet (ac-ft) and a maximum surface area of approximately 3 acres. Other Project facilities located in the Duncan Creek are identified on Table 6.11-1 and shown on Figure 6.11-1 (Sheet 1 of 5).

The topography in the Duncan Creek area is moderately steep. Predominant aspects are northwest and southeast. The Duncan Creek watershed is dominated by mixed conifer and pine species, including Douglas-fir and ponderosa pine, annual grasses and forbs, and California black oak, particularly near the confluence with the Middle Fork American River. Riparian species are found along the stream channel. The stream valley and side slopes are comprised of Paleozoic marine deposits and andesite, respectively. Rock outcrops can be seen along the immediate perimeter of the Duncan Creek Diversion Pool.

In 2001, the Red Star Fire consumed 17,500 acres of forest on the ENF and TNF and private lands. Large portions of the burned area resulted in greater than 75% stand mortality (USDA-FS 2004; USDA-FS 2003). This fire burned in the immediate vicinity of the Duncan Creek Diversion Dam destroying many of the trees and vegetation on the side slopes near the dam and altering the visual character of the landscape.

Access to the Duncan Creek area is extremely limited due to the steep terrain and dense vegetation. The Duncan Creek Diversion Dam can be accessed by taking Mosquito Ridge Road and then Duncan Creek Diversion Road. None of the Project facilities in the Duncan Creek area are visible from any primary travel routes.

The Duncan Creek Diversion Dam and associated Project facilities are situated on land managed by the TNF. As shown on Figure 6.11-1 (Sheet 1 of 5), the majority of the above-ground Project facilities in the Duncan Creek area lie within an area with a designated VQO of Modification. One exception is a small portion of a Project road in an area with a designated VQO of Retention.

The Project facilities in the Duncan Creek area lie within a Management Area (MA) identified in the TNF-LRMP as “Sunflower”. Additional standards and guidelines regarding VQOs in this management area are contained in the TNF-LRMP, as follows:

- Retention in foreground as viewed from the Western States Trail between Robinson Flat and the junction with Duncan Creek. This includes the portion of the trail through Little Robinson Valley and Little Duncan Canyon.

- Partial Retention in the immediate foreground of the Western State Trail from the junction with Duncan Creek to the boundary with MA089 (French Meadows MA).

- Partial Retention for the foreground as viewed from the Tevis Cup Trail.

- Retention in semi-primitive non-motorized area south of Little Robinson Valley and in the Duncan Creek Stream Management Zone upstream from the Western States Trail.

- Modification in all other areas.

The Western States Trail and Tevis Cup Trail are the same trail in the Duncan Creek area. This trail crosses Duncan Creek about one mile upstream of the Duncan Creek

Diversion Dam. None of the above-ground Project facilities in the Duncan Creek area are visible in the foreground of the Western States Trail/Tevis Cup trail. Similarly, none of the Project facilities in the Duncan Creek area are visible from the Duncan Creek Stream Management Zone upstream from the trail.

6.11.3.2 French Meadows Area

The primary Project facilities in the French Meadows area are the French Meadows Dam and Reservoir, located on the Middle Fork American River. French Meadows Dam (also referred to as LL Anderson Dam) is a 231 foot-high, 2,700 foot-long rock and gravel filled structure with a crest elevation of 5,273 ft msl. The French Meadows Dam impounds the Middle Fork American River forming the French Meadows Reservoir, which provides 134,993 ac-ft of gross storage. The maximum surface area is about 5,262 ft and the minimum operating surface area is about 5,125 ft. Other Project facilities located in the French Meadows area are identified on Table 6.11-1 and shown on Figure 6.11-1 (Sheet 1 of 5).

The landscape surrounding French Meadows Reservoir is characterized by moderately steep hillsides which are densely vegetated with mixed conifer forest, interspersed with small areas dominated by white fir and huckleberry oak. Upper montane chaparral species are also present on the surrounding side slopes. The reservoir and surrounding side slopes include intermittent exposure of granitic bedrock.

Hundreds of acres of forest west of the dam were consumed in the Red Star Fire in 2001, leaving the area burned and scarred. Most of the burned area consists of a few patches of forest with large areas of exposed bedrock and soil. The burned area is clearly visible from the French Meadows Dam and Mosquito Ridge Road.

The French Meadows area is accessible via Mosquito Ridge Road (FS Road 96), a two-lane paved access road. The dam and reservoir are clearly visible from Mosquito Ridge Road and from ancillary USDA-FS roads.

The French Meadows Dam, Reservoir and associated Project facilities are situated within the boundaries of the TNF. As shown on Figure 6.11-1 (Sheet 1 of 5), all of the above-ground Project facilities in the French Meadows area lie within an area with a designated VQO of Retention.

The Project facilities in the French Meadows area lie within a MA identified in the TNF-LRMP as “French”. Additional standards and guidelines regarding VQOs in this management area are contained in the TNF-LRMP, as follows:

- Foreground Retention is established from the following viewpoints;

  - Western States Trail;
  - Middle Fork American River;
  - Forest Highway 96 to Junction of Road 51, Road 51 to Talbot Campground; and

- Campgrounds viewing out.

- Partial Retention within the developed sites.

- Partial Retention of developed sites when viewed as middleground from travel routes and other occupancy sites.

6.11.3.3 Hell Hole Area

The primary Project facilities in the Hell Hole area include the Hell Hole Dam and Reservoir, located on the Rubicon River. The Hell Hole Dam is a 410 foot-high, 1,570 foot-long rock fill structure with a crest elevation of 4,650 ft msl. The dam impounds the Rubicon River and Five Lakes Creek to form Hell Hole Reservoir. Hell Hole Reservoir has a gross storage capacity of 207,590 ac-ft and a maximum surface area of 4,630 ft, and a minimum operating surface area of 4,340 ft. Other above-ground Project facilities in the vicinity of Hell Hole Dam and Reservoir are identified on Table 6.11-1 and shown on Figure 6.11-1 (Sheet 2 of 5).

The Hell Hole Reservoir is located in the rugged Rubicon River Canyon. The surrounding landscape is characterized by steep and rocky slopes, which are covered with brush and mixed-conifer forest. The vegetation is sparse compared to the French Meadows area, consisting of California black oak and various conifers, pines, and firs. Vegetation near Hell Hole Dam is comprised of upper montane chaparral species, huckleberry oak, and annual grasses and forbs. The upper hillsides are dominated by red fir and white fir, with upper montane mixed shrub species and huckleberry oaks interspersed. Willow species also occur along side drainages. The reservoir and surrounding side slopes are primarily composed of granite with areas of glacial deposits on the surrounding side slopes. The upper reaches of the reservoir transition into a river canyon environment.

Several developed recreational facilities are located along the perimeter of the southwest end of the reservoir. A gravel road leading to a boat ramp is located at the south end of the reservoir, near Hell Hole Dam. The Hell Hole area can be accessed from the north by USDA-FS Road 24 (Chipmunk Ridge Road) or from the west via USDA-FS Road 2 (also referred to as the Soda Springs Riverton Road). The dam and reservoir are clearly visible from the primary travel routes.

The Project facilities in the Hell Hole area lie within the boundaries of the ENF. As shown on Figure 6.11-1 (Sheet 2 of 5), all of the above-ground Project facilities in the Hell Hole Reservoir area lie within an area with a designated VQO of Retention. A small portion of the FERC Project boundary falls within an area with a designated VQO of Modification. The ENF classified the USDA-FS lands surrounding the entire reservoir as Semiprimitive Motorized in the LRMP. These management areas are essentially undisturbed and land altering practices are limited in scope and duration. The ENF-LRMP provides directives specific to energy-related licenses and permits in Management Practice 98. The General Direction of Management Practice 98

recommends special design techniques for the construction and maintenance of project features so they are subdued in the landscape.

6.11.3.4 Long Canyon Area

The primary Project facilities in the Long Canyon area are the North Fork Long Canyon Diversion Dam and the South Fork Long Canyon Diversion Dam. The North Fork Long Canyon Diversion Dam is a 10 foot-high, 120 foot-wide concrete gravity structure with a crest elevation of 4,720 ft msl. The dam impounds the North Fork Long Canyon Creek and forms a small diversion pool with less than one ac-ft of storage. The South Fork Long Canyon Dam is a 27 foot-high, 145 foot-long concrete gravity structure with a crest elevation of 4,650 ft msl. The dam impounds the South Fork Long Canyon Creek and forms a diversion pool with less than 1 ac-ft of storage. Other above-ground Project facilities in the vicinity of these diversion dams are identified on Table 6.11-1 and shown on Figure 6.11-1 (Sheet 3 of 5).

The landscape in the vicinity of the two diversion dams is characterized by U-shaped valleys created by glaciers. Vegetation along the North and South forks of Long Canyon Creek is dominated by mixed conifer, fir, and pine species, interspersed with small areas dominated by red fir, white fir, Jeffrey pine, mixed Douglas-fir and ponderosa pine, and California black oak. Riparian species are found along the stream channel. The North and South Forks of Long Canyon Creek are composed primarily of andesite, with granite within the stream valley near their confluence. The side slopes are comprised of andesite to the divides.

The North Fork Long Canyon Diversion Dam is accessible via a spur road that extends off Mosquito Ridge Road or from North Fork Long Canyon Access Road, a Project access road. The North Fork Long Canyon Diversion Dam is not visible from the primary travel route, Mosquito Ridge Road. The South Fork Long Canyon Diversion Dam is accessible via a short access road off Mosquito Ridge Road, and is visible from Mosquito Ridge Road. The Middle Meadows Campground is not visible from Mosquito Ridge Road. The South Fork Diversion Dam is not visible from Middle Meadows Campground.

The Project facilities in the Long Canyon area lie within the boundaries of the ENF. As shown on Figure 6.11-1 (Sheet 3 of 5), all of the above-ground Project facilities lie within an area with a designated VQO of Partial Retention. The diversion dams are within the boundaries of the ENF in a management area classified as wildlife/spotted owl. Specific management direction for these areas was updated as part of the Sierra Nevada Forest Plan Amendment (USDA-FS 2004). In general, the management direction is designed to eliminate disturbance and protect old growth forests in these areas. The Standards and Guidelines included in Management Practice 98 designate this as an avoidance area for transportation-utility corridors.

6.11.3.5 Interbay Area

The primary Project facility in the Interbay area is the Interbay Dam, located on the Middle Fork American River. Interbay Dam is a 70.5 foot-high, 233 foot-long concrete gravity structure with a crest elevation of 2,535.5 ft msl. The dam impounds the Middle Fork American River forming the Middle Fork Interbay, where water is diverted into the Middle Fork-Ralston Tunnel. Middle Fork Interbay has a maximum operating surface area of about seven acres and a gross storage capacity of 175 ac-ft. Other above-ground facilities in the vicinity of the Interbay Dam are identified on Table 6.11-1 and shown on Figure 6.11-1 (Sheet 4 of 5).

The landscape in the vicinity of Middle Fork Interbay is moderately steep, entrenched, and confined by narrow V-shaped valleys. The vegetation is comprised of communities dominated by mixed conifer and pine species, including Douglas-fir and ponderosa pine. Canyon live oak, lower montane chaparral species, and California black oak also occur on the surrounding hillsides. Riparian species occur along the stream channel. The valley and side slopes surrounding Middle Fork Interbay are underlain by Paleozoic marine deposits, with andesite rocks along the southern upper side slopes.

Middle Fork Interbay is situated within a remote area of the Middle Fork American River Canyon but can be accessed by taking Mosquito Ridge Road to Interbay Dam Road, a Project access road. Middle Fork Interbay is not visible from any primary travel route.

The Middle Fork American River in the vicinity of Interbay Dam forms the boundary between the ENF and the TNF. The Project facilities on the north side of the river are located within the TNF and the facilities on the south side of the river are located in the ENF. As shown on Figure 6.11-1 (Sheet 4 of 5), most of the above-ground Project facilities lie within an area with a designated VQO of Modification. The exception is one short portion of the Interbay Dam access road, which cross areas with designated VQOs of Retention and Partial Retention and a microwave reflector station located in an area with a designated VQO of Partial Retention.

In the ENF, the Project facilities lie within three management areas referred to as Visual Foreground Partial Retention, Visual Middleground Retention, and Visual Middleground Partial Retention. Management emphasis in this area is to “maintain a high level of visual quality.” The Standards and Guidelines included in Management Practice 98 call for minimal impacts on visual quality.

In the TNF, the Project facilities lie within the “End of the World” MA. Additional standards and guidelines regarding VQOs in this management area are contained in the TNF-LRMP, as follows:

- Foreground Retention and middle ground Partial Retention as seen from French Meadows Dam.

- Partial Retention for the semi-primitive motorized (SPM) area along the Middle Fork of the American River and modification for remainder of the management area. Maximum modification will be permitted on a case-by-case basis.

6.11.3.6 Ralston Area

The primary Project facilities in the Ralston Area include the Ralston Afterbay and Ralston Afterbay Dam and Reservoir. Ralston Afterbay Dam is an 89 foot-high, 560 foot-long concrete gravity structure with a crest elevation of 1,189 ft msl. The dam is located on the Middle Fork American River, about three quarters of a mile downstream of the Rubicon River confluence. The dam impounds water from the Rubicon River and the Middle Fork American River to form Ralston Afterbay, which diverts water into the Middle Fork - Ralston Tunnel and re-regulates flows at the lower end of the MFP. Ralston Afterbay has a gross storage capacity of 2,782 ac-ft and a maximum surface area of approximately 68 acres. Other Project facilities in the Ralston area are identified in Table 6.11-1 and are shown on Figure 6.11-1 (Sheet 5 of 5).

The landscape in the Ralston Area is characterized by sloping hillsides with vegetation comprised of mixed Douglas-fir and ponderosa pine, with areas dominated by ceanothus species and lower montane chaparral species. The valley and side slopes surrounding Ralston Afterbay are underlain by Paleozoic marine deposits.

Ralston Afterbay can be accessed by taking Mosquito Ridge Road to Ralston Ridge Road, which traverses the north side of the Afterbay. Except for a few instances, neither the Ralston Afterbay Dam nor Ralston Afterbay are visible from Mosquito Ridge Road until near its intersection with Ralston Ridge Road. The reservoir is visible from Ralston Ridge Road, as is the Ralston Powerhouse and Switchyard, which is located immediately adjacent to the road.

Ralston Dam and Afterbay are located within the boundaries of the TNF in the north and the ENF in the south. As shown on Figure 6.11-1 (Sheet 5 of 5), all of the above-ground Project facilities lie within areas with designated VQOs of either Retention or Partial Retention.

The Project facilities in the Ralston area that are located on the TNF are within a MA identified as “Little Oak”. Additional standards and guidelines regarding VQOs in this MA are contained in the TNF-LRMP, as follows:

- Partial Retention for foreground as viewed from Ralston Recreation Site and Oxbow Reservoir (Ralston Afterbay) and Retention for the semi-primitive nonmotorized area. Modification for remainder of area.

- Maximum Modification will be allowed on a case-by-case basis in areas that have a Modification or Maximum Modification initial VQO and have been assigned the Modification VQO.

The Project facilities in the Ralston area that are located on the ENF are within a MA identified as “Wild and Scenic River”. According to the ENF-LRMP this is a preliminary administrative recommendation for the Rubicon River that will receive further review and possible modification. Management practices 14 through 19 provide additional direction, standards and guidelines regarding VQOs in this MA. The Standards and Guidelines included in Management Practice 98 states that this is an exclusion area for transportation-utility corridors.

6.11.4 References

United States Department of Agriculture Forest Service (USDA-FS). 1973. Visual Resource Management Guides: Visual Quality Standard Determination and Application. Region 5.

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TABLES

Table 6.11-1. Middle Fork Project Facilities and Associated Visual Quality Objectives (VQOs)

	Facility Type	VQO*			Comments
		M	PR	R	
Duncan Creek Area					
Duncan Creek Diversion Dam	Small Dam	X			
Duncan Creek Diversion Pool	Small Diversion Pool	X			
Duncan Creek Gatehouse and Shaft	Water Conveyance	X			
Duncan Canyon Creek below Diversion Dam near French Meadows Gage (USGS No. 11427750)	Stream Gage and Weir	X			
Duncan Canyon Creek near French Meadows Gage and Weir (USGS No. 14427700)	Stream Gage and Weir	X			
Duncan Creek Diversion Road	Project Road	X		X	Southwest 875 ft is in Retention
Duncan Creek Diversion Upper Gage Access Trail	Project Trail	X			
Duncan Creek Diversion Lower Gage Access Trail	Project Trail	X			
Duncan Creek Gatehouse Access Trail	Project Trail	X			
French Meadows Area					
French Meadows Dam	Large Dam			X	
French Meadows Reservoir	Large Reservoir			X	
French Meadows-Hell Hole Gatehouse and Shaft	Water Conveyance			X	
Duncan Creek-Middle Fork Tunnel Portal	Water Conveyance			X	
Middle Fork American River at French Meadows Gage and Weir (USGS No. 11427500)	Stream Gage and Weir			X	
French Meadows Reservoir Gage (USGS No. 11427400)	Reservoir Gage			X	
French Meadows Dam Leakage Weir #1	Leakage Weir			X	
French Meadows Dam Leakage Weir #2	Leakage Weir			X	
French Meadows Dam Leakage Weir #3	Leakage Weir			X	
French Meadows Dam Leakage Weir #4	Leakage Weir			X	
French Meadows Dam Leakage Weir #5	Leakage Weir			X	
French Meadows Dam Leakage Weir #6	Leakage Weir			X	
French Meadows-Hell Hole Tunnel Gatehouse Road	Project Road			X	
French Meadows Dam Outlet Access Road	Project Road			X	
French Meadows Dam Gage Access Road	Project Road			X	
Middle Fork American River at French Meadows Gage and Weir Access Trail	Project Trail			X	
Ahart Campground	Recreational Facility			X	
Coyote Group Campground	Recreational Facility			X	

Table 6.11-1. Middle Fork Project Facilities and Associated Visual Quality Objectives (VQOs)

	Facility Type	VQO*			Comments
		M	PR	R	
French Meadows Boat Ramp	Recreational Facility			X	
French Meadows Campground	Recreational Facility			X	
French Meadows Picnic Area	Recreational Facility			X	
Gates Group Campground	Recreational Facility			X	
Lewis Campground	Recreational Facility			X	
McGuire Boat Ramp	Recreational Facility			X	
McGuire Picnic Area	Recreational Facility			X	
Poppy Campground	Recreational Facility			X	
Hell Hole Area					
Hell Hole Dam	Large Dam			X	
Hell Hole Reservoir	Large Reservoir	X		X	Far east end of reservoir in Modification
Hell Hole-Middle Fork Gatehouse and Shaft	Water Conveyance			X	
French Meadows Powerhouse Penstock and Butterfly Valve House	Water Conveyance			X	
French Meadows Powerhouse and Switchyard	Powerhouse			X	
Hell Hole Powerhouse	Powerhouse			X	
Rubicon River below Hell Hole Dam Gage and Weir (USGS No. 11428800)	Stream Gage and Weir			X	
French Meadows Power Plant near Meeks Bay Gage (at USGS No. 11427200)	Diversion Gage			X	
Hell Hole Reservoir Gage (USGS No. 11428700)	Reservoir Gage			X	
Hell Hole Dam Leakage Weir	Leakage Weir			X	
Communication/Powerline – French Meadows Powerhouse and Switchyard to French Meadows Butterfly Valve House	Communication and Powerlines			X	
Communication/Powerline – French Meadows Powerhouse and Switchyard to Hell Hole-Middle Fork Tunnel Gatehouse and Shaft to Dormitory Facility and Camp to Hell Hole Powerhouse	Communication and Powerlines			X	
Powerline – Hell Hole Powerhouse to Hell Hole Substation	Powerline			X	
Hell Hole Substation	Substation			X	
Operator Cottages and Shop	Buildings			X	
Dormitory Facility	Buildings			X	
French Meadows-Hell Hole Tunnel Portal Road	Project Road			X	
French Meadows Powerhouse Access Road	Project Road			X	
Hell Hole-Middle Fork Tunnel Inlet/Gatehouse Access Road	Project Road			X	
Hell Hole Dormitory Access Road	Project Road			X	
Hell Hole Powerhouse/Gage and Weir Access Road	Project Road			X	

Table 6.11-1. Middle Fork Project Facilities and Associated Visual Quality Objectives (VQOs)

	Facility Type	VQO*			Comments
		M	PR	R	
Rubicon River below Hell Hole Dam Gage Weir Access Trail	Project Trail			X	
Big Meadows Campground	Recreation Facility			X	
Hell Hole Boat Ramp	Recreation Facility			X	
Hell Hole Campground	Recreation Facility			X	
Hell Hole Vista	Recreation Facility			X	
Upper Hell Hole Campground	Recreation Facility			X	
Long Canyon Area					
North Fork Long Canyon Diversion Dam	Small Dam		X		
South Fork Long Canyon Diversion Dam	Small Dam		X		
North Fork Long Canyon Diversion Pool	Small Diversion Pool		X		
South Fork Long Canyon Diversion Pool	Small Diversion Pool		X		
North Fork Long Canyon Crossing/Removable Section	Water Conveyance		X		
North Fork Diversion Pipe/Shaft/Vent	Water Conveyance		X		
South Fork Diversion Pipe/Shaft/Vent	Water Conveyance		X		
North Fork Long Canyon Below Diversion Tunnel near Volcanoville Gage (USGS No. 11433085)	Stream Gage		X		
South Fork Long Canyon Below Diversion Tunnel near Volcanoville Gage (USGS No. 11433065)	Stream Gage		X		
North Fork Long Canyon Diversion Tunnel near Volcanoville Gage (USGS No. 11433080)	Diversion Gage		X		
South Fork Long Canyon Diversion Tunnel near Volcanoville Gage (USGS No. 11433060)	Diversion Gage		X		
North Fork Long Canyon Access Road	Project Road		X		
Spur Road to North Fork Long Canyon Diversion	Project Road		X		
Spur Road to South Fork Long Canyon Diversion	Project Road		X		
North Fork Long Canyon Crossing Access Road	Project Road		X		
Middle Meadows Group Campground	Recreational Facility		X		
Interbay Area					
Interbay Dam	Medium Dam	X			
Middle Fork Interbay	Medium Reservoir	X			
Hell Hole-Middle Fork Tunnel Surge Shaft and Tank	Water Conveyance	X			
Brushy Canyon Adit	Water Conveyance	X			
Middle Fork-Ralston Tunnel Intake Gatehouse	Water Conveyance	X			
Middle Fork Powerhouse Penstock and Butterfly Valve House	Water Conveyance	X			
Middle Fork Powerhouse and Switchyard	Powerhouse	X			

Table 6.11-1. Middle Fork Project Facilities and Associated Visual Quality Objectives (VQOs)

	Facility Type	VQO*			Comments
		M	PR	R	
Middle Fork American River/Interbay Dam Gage (USGS No. 11427770)	Stream Gage	X			
Middle Fork American River above Middle Fork Powerhouse near Foresthill Gage (USGS No. 11427760)	Stream Gage	X			
Middle Fork Powerhouse (4286 – 10) near Foresthill Gage (USGS No. 11428600)	Diversion Gage	X			
Communication/Powerline – Middle Fork Powerhouse to Penstock Butterfly Valve House and Microwave/Radio Repeater Station	Communication and Powerlines	X			
Powerline – Middle Fork Powerhouse to Middle Fork American River above Middle Fork Powerhouse near Foresthill Gage (Gage No. 11427760)	Powerlines	X			
Communication/Powerline – Interbay Dam to Middle Fork Powerhouse	Communication and Powerlines	X			
Passive Microwave Reflector Station above Interbay Reservoir	Microwave Reflector		X		
Radio Tower and Repeater near Hell Hole-Middle Fork Surge Shaft	Radio Tower	X			
Hell Hole-Middle Fork Tunnel Access Road	Project Road	X			
Hell Hole-Middle Fork Tunnel/Butterfly Valve House (14N55) Access Road	Project Road	X			
Middle Fork Powerhouse Penstock Access Road	Project Road	X			
Middle Fork Powerhouse Access Road	Project Road	X			
Middle Fork Powerhouse Switchyard Access Road	Project Road	X			
Interbay Dam Road	Project Road	X		X	Northern 2425 ft in Retention
Brushy Canyon Adit Access Road (FN 14N30)	Project Road	X			
Middle Fork American River Gage Access Trail	Project Trail	X			
Ralston Area					
Ralston Afterbay Dam	Medium Dam		X	X	North side in Partial Retention (Tahoe NF) and south side in Retention (ElDorado NF)
Ralston Afterbay	Medium Reservoir		X	X	Northern half in Partial Retention (Tahoe NF) and southern half in Retention (ElDorado NF)
Middle Fork-Ralston Tunnel Surge Shaft, Tank, and Storage Building	Water Conveyance		X		
Ralston-Oxbow Tunnel Intake Gatehouse	Water Conveyance		X		
Ralston Powerhouse Penstock	Water Conveyance		X	X	Southwest 325 ft in Retention
Ralston Powerhouse Penstock Butterfly Valve House	Water Conveyance		X		

Table 6.11-1. Middle Fork Project Facilities and Associated Visual Quality Objectives (VQOs)

	Facility Type	VQO*			Comments
		M	PR	R	
Oxbow Powerhouse and Switchyard	Powerhouse		X		
Ralston Powerhouse and Switchyard	Powerhouse			X	
Middle Fork American River near Foresthill Gage (USGS No. 11433300)	Stream Gage			X	
Middle Fork American River Ralston Powerhouse near Foresthill Gage (USGS No. 11427765)	Diversion Gage			X	
Oxbow Powerhouse Gage (USGS No. 14433212)	Diversion Gage		X		
Communication/Powerline – Ralston Powerhouse and Switchyard to Penstock Butterfly Valve House	Communication and Powerlines		X	X	Southwest 325 ft in Retention
Communication/Powerline –Ralston Powerhouse Penstock Butterfly Valve House to Middle Fork-Ralston Tunnel Surge Shaft, Tank, and Storage Building	Communication and Powerlines		X		
Communication Line – Ralston-Oxbow Tunnel Intake Gatehouse to Ralston Powerhouse and Switchyard	Communication Line		X	X	Eastern 1800 ft in Retention
Communication/Powerline – Ralston Afterbay Dam to Ralston-Oxbow Tunnel Intake Gatehouse	Communication and Powerlines		X		
Communication/Powerline – Ralston Afterbay Dam to Oxbow Powerhouse and Switchyard	Communication and Powerlines		X		
Passive Microwave Reflector Station above Ralston Afterbay	Microwave Reflector		X		
Ralston Afterbay Boat Ramp	Project Support Facility		X		
Middle Fork-Ralston Tunnel Surge Tank Access Road	Project Road		X		
Ralston-Oxbow Tunnel Inlet Access Rd	Project Road		X		
Oxbow Powerhouse Access Rd	Project Road		X		
Ralston Afterbay Boat Ramp Access Road	Project Road		X		
Ralston Picnic Area	Recreation Facility		X		

*VQOs are defined as follows:

M Modification: Management activities may visually dominate the original characteristic landscape while remaining compatible with the natural surroundings.

PR Partial Retention: Management activities remain visually subordinate to the characteristic landscape.

R Retention: Provides for management activities which are not visually evident.

FIGURES

Placeholder for Figures 6.11-1

Figure 6.11-1 (5 Sheets) Visual Quality Objectives in the Vicinity of the MFP

Non-Internet Public Information

These Figures have been removed in accordance with the Commission regulations at 18 CFR Section 388.112.

These Figures are considered Non-Internet Public information and should not be posted on the Internet. This information may be accessed from the Placer County Water Agency's (PCWA) Public Reference Room, but is not expected to be posted on PCWA's Website, except as an indexed item.

TABLE OF CONTENTS

List of Tables

List of Figures

6.14 SOCIOECONOMICS

This report provides a general description of the socioeconomic conditions in the vicinity of the Middle Fork American River Hydroelectric Project (MFP or Project). The Federal Energy Regulatory Commission's (FERC or Commission) content requirements for this report are specified in Title 18 of the Code of Federal Regulations (CFR) Chapter I § 5.6 (d) (3) (xi), as follows:

> ***Socio-economic resources****. A general description of socio-economic conditions in the vicinity of the project. Components of this description include general land use patterns (e.g., urban, agricultural, forested), population patterns, and sources of employment in the project vicinity.*

The primary information sources used to develop this report are described first, followed by a description of the existing conditions. The section on existing conditions begins with an overview of the socioeconomic setting in the immediate vicinity of the MFP, followed by a description of the socioeconomic conditions in Placer County. The MFP is located within the boundaries of Placer County. Therefore, the information presented in this report focuses on Placer County.

6.14.1 Information Sources

The information used for this socioeconomics report was obtained from several local, state, and federal sources. By level of government, major sources include the following:

County:

- Agricultural Commissioner reports and data.
- Treasurer and Tax Collector reports and data.
- Planning Department reports and data.

State

- Department of Finance reports on population and income.
- Economic Development Department reports on key industries and employment.
- Department of Food and Agriculture reports on crop and livestock production.

Federal

- Census Bureau data on population and housing.
- Commerce Department data on numbers of businesses and employees by industry.
- Department of Agriculture information from Census of Agriculture.

6.14.2 Description of Existing Conditions

Placer County is located in northern California, and generally encompasses, from west to east, the valley, foothill, and high country areas between the City of Sacramento and Lake Tahoe. The County covers about 961,800 acres including 898,820 acres of land and 62,980 acres of water (DOF 2005a). Placer County is bounded to the south by El Dorado and Sacramento counties, to the north by Nevada County, on the west by Sutter and Yuba counties, and to the east by the State of Nevada. There are six incorporated cities in Placer County, including Auburn, Colfax, Lincoln, Loomis, Rocklin, and Roseville. Approximately 66% of the population lives in the incorporated cities and 34% in unincorporated areas (DOF 2005b). In the last 20 years, the county economy has diversified and the population has increased more quickly than that of the state overall.

The MFP is situated in the eastern portion of Placer County, along the Middle Fork American River, the Rubicon River and their tributaries. The land surrounding the Project facilities and instream reaches located downstream of Project facilities is heavily forested, rural in nature and sparsely populated. The nearest population center is Foresthill, located approximately four miles west-northwest of Ralston Afterbay. There are no private residences in the immediate vicinity of any of the Project facilities. The Project facilities, and all of the land within the FERC Project boundary, are within the Eldorado and Tahoe National Forests. Land use within the FERC Project boundary is focused on hydropower generation and recreation. Land use outside of the FERC Project boundary is managed for recreation, timber harvest, grazing, natural resource protection, and to a lesser extent mining.

Given its rural nature, job opportunities in the vicinity of the Project are limited. Most of the work force in the immediate vicinity of the Project consists of California State Department of Recreation employees, Forest Service employees, concessionaires hired by the Forest Service to maintain and operate developed recreation facilities, and Placer County Water Agency (PCWA) employees and subcontractors. PCWA currently employs 173 full time employees, of which 18 are assigned to the Power Division in support of the MFP administration, engineering, operations and maintenance. Of the 18, 16 work out of PCWA's Foresthill office while two reside year-round at the operator cottages located near Hell Hole Reservoir.

The following sections describe the demographics of Placer County, key industries and employment opportunities in Placer County, and Placer County's government structure and fiscal resources.

6.14.2.1 Placer County Demographics

Key demographic variables considered in this report are population, housing, and income. Each is discussed below.

Population Trends

The growth of population and industry since 1980 has stimulated job growth and fostered the conversion of many rural areas in western and southern Placer County into

growing communities (North Fork Associates and AgResource Solutions 2002). The population of Placer County increased from 174,905 to 252,603 between July 1, 1990 and July 1, 2000 (see Table 6.14-1). The compound average rate of growth over the 10-year period was 3.74% per year. Between July 1, 2000 and July 1, 2005, the population of the county grew to 313,931, a compound average rate of growth of 4.44% per year. For the entire 15 year period, population in the county grew by 139,026, a compound average rate of 3.98% per year.

Population growth has been concentrated in Roseville and Rocklin. Between 1990 and 2000, Rocklin grew at a faster rate than the other incorporated cities in Placer County, at a compound rate of 6.5% per year. During that same period, Roseville grew at a compound annual rate of 5.2%, Lincoln at 2.9% per year, and Colfax by 1.4% per year. More recently, Lincoln has also expanded significantly. Since 2000, Lincoln has grown at a compound annual rate of 23.1%. Concurrently, Rocklin has grown at 7.5% annually, Roseville at 6.6% annually, and Colfax at 3.9% annually (see Table 6.14-2).

The median age of Placer County residents is greater than that for California overall. In 2000, the county median was 37 years, while that for the state was 32.3 years (U.S. Census Bureau 2000). In that year, the proportion of residents aged 35 years or younger was 7.7% higher in California than in Placer County. The proportion of residents aged 36-65 years was 5.3% higher in Placer County than in California.

Population in Placer County is projected to grow to 456,040 by 2020 and 657,385 by 2050 (DOF 2004). Relative to 2000, Placer County population is expected to grow at a compound 3.06% annual rate through 2020 and a 1.96% annual rate through 2050. The corresponding figures for California are 1.27% and 0.96%, respectively.

Housing

The stock of housing units in Placer County has grown along with population. Between 1990 and 2000, the total stock of housing in the county grew by 3.3% per year, including 5.1% annually in the incorporated areas and 1.5% in the unincorporated areas. The most rapid rate of increase among cities was in Rocklin, followed by Roseville, at compound annual rates of 6.7% and 5.7%, respectively. Between 2000 and 2005, the most rapid growth in the number of housing units was in Lincoln, 25.5% annually, followed by Rocklin and Roseville at compound annual rates of 6.5% and 6.3%, respectively (see Table 6.14-3).

Home prices in Placer County are considerably lower than those in the San Francisco Bay Area. In January 2006, the median price for all new and resold single family and condominium homes in the county was $462,000. The comparable median price in the San Francisco Bay Area was $607,000, or 31.3% higher than Placer County. January median prices in the incorporated cities of Placer County ranged from $525,000 in Auburn to $389,000 in Colfax (DataQuick 2006). The differential between prices in the county and in the Bay Area is likely an important cause of the rapid population growth in Placer County.

Income and Poverty

In 1999, Placer County median family income was $65,858 (in 1999 dollars), and 3.9% of families lived at or below the poverty level (DOF 2005c). The median family income was 24.2% higher than that for all of California, in which 10.6% of families lived at or below the poverty level.

In 2003, the most recent year for which data are available, total personal income in Placer County was $10.751 billion, and per capita personal income was $36,613 (USDOC 2006a). Per capita personal income in Placer County was 9.6% higher than that for California in 2003, which was $33,415.

6.14.2.2 Key Industries and Employment in Placer County

In 2004, the latest year for which annual average data are currently available, total public and private employment in Placer County was 134,000, a 119% increase from 1990 (EDD 2005). Total industry employment increased by 22,500 between 2000 and 2004. In 2004, the five largest employment sectors, in order, were retail trade; professional, scientific, and technical services; health care and social assistance; construction; and miscellaneous services. Since 1990, the greatest employment growth, by industry and in order, has been in professional and business services; construction, finance and real estate; and trade, transportation and utilities. Figures 6.14-1 and 6.14-2 show employment distribution by sector in 1990 and 2004, respectively.

Among the 8,493 business establishments in Placer County in 2003 (excluding government), the largest numbers were in construction, retail trade, professional and scientific and technical services, health care and social assistance, and accommodation and food services (see Table 6.14-4). Over 95% of industry employees in Placer County work in establishments employing fewer than 10 people (USDOC 2006b).

The largest private sector employers in Placer County are shown in Table 6.14-5. The businesses cover a variety of industries, from manufacturing to hospitals, amusement and recreation, transportation, and services. In 2005, Hewlett-Packard, with offices in Roseville and Rocklin, was the largest employer, with 4,000 employees.

Agriculture

Agriculture has been an integral part of Placer County for more than 150 years North Fork Associates and AgResource Solutions 2002. A combination of favorable climate and soils, availability of water, proximity to a transcontinental transportation network, and other factors have all contributed to the importance of the sector. While the dependence on agriculture within the county has declined over time, Placer County has indicated its commitment to maintaining agricultural land for both its commercial and non-commercial features. The 1994 General Plan lists as a goal for agricultural land use the designation of “adequate agricultural land” and the promotion of “development of agricultural uses to support the continued viability of Placer County’s agricultural economy (Placer County 1994).

In 2002, there were 1,438 farms in Placer County, with an average size of 91 acres and a median size of 16 acres (USDA 2002). In that year, the gross value of crop and livestock products from Placer County farms was $76,278,600 (Placer County 2003). In terms of production value, the most important products were field crops (primarily rice), livestock and poultry animals and products, and nursery products. Timber products represented about 13% of the total.

Much of the urban development in Placer County since the early 1980s has been on agricultural land. Between 1984 and 2002, 33,448 acres of agricultural land were converted to non-agricultural purposes. Urban and built-up land accounted for 23,590 of those acres, and "Other land" for 10,053 acres. Among the 33,448 acres, grazing land accounted for 22,412 and prime farmland and farmland otherwise unique or of statewide or local importance accounted for 11,036 acres.

6.14.2.3 Placer County Government

Structure

Placer County is governed by the Board of Supervisors (Board), which is a five-member legislative body elected by local citizens. There is one board member for each of the five supervisorial districts in the county: District 1 (Roseville), District 2 (Lincoln), District 3 (Auburn), District 4 (Granite Bay/Roseville), and District 5 (Meadow Vista). District supervisors are elected to four-year terms, which are staggered, i.e., two supervisors are elected in one general election and three supervisors in the next. The Board usually meets every other week in the City of Auburn, the county seat, with occasional meetings in North Lake Tahoe. Other key government personnel include the County Executive Officer, County Counsel, Assessor, Auditor-Controller, Clerk-Recorder-Registrar, District Attorney, Sheriff-Coroner-Marshal, and Treasurer-Tax Collector.

Budget and Fiscal Resources

Fiscal conditions in Placer County are directly related to the revenues it receives, mainly in the form of tax collections and intergovernmental transfers, and expenditures made to fund essential public services and other programs. Tables 6.14-6 and 6.14-7 summarize Placer County revenues and expenditures, respectively, over the past three fiscal years (FY).

Placer County revenues in FY 2004-05 totaled approximately $399.0 million (Placer County 2005). Of this total, roughly $118.4 million (or 30%) came from tax revenues, $188.7 million (47%) from intergovernmental transfers, and $91.9 million (23%) from other sources. Total county revenues have increased by about 127% compared to FY 1995-96 levels.

Property taxes, which are included in Table 6.14-6, play a large role in the county's revenue stream. As with all California counties, the baseline property tax rate in Placer County is 1%. Taking into account, local agency/district levies, the average property tax rate throughout the County in FY 2004-05 was 1.55%. This rate is applied to the assessed value of property. The total assessed value of the property tax roll was $39.8

billion in FY 2004-05 (Placer County 2005). After taking into account exemptions and other factors, actual property tax levies in Placer County during this period totaled $370.1 million, with $366.0 million in collections. This represents an approximate 146% increase in property tax collections relative to FY 1995-96 levels.

Sales taxes are another critical component of county tax revenues. Taxable sales in Placer County in 2004 totaled $6.6 billion, of which $4.8 billion occurred in incorporated cities (California State Board of Equalization 2004).

The fiscal revenues collected by Placer County described above are expended in a variety of ways as shown in Table 6.14-7. Total government expenditures in FY 2004-05 were $363.7 million (Placer County 2005). The largest source of government expenditures is public protection, which in fiscal year 2004-2005 account for $119.9 million (or 33%) of all expenditures. Other significant sources of expenditures include health and sanitation ($60.1 million) and general government ($55.7 million).

Public and Emergency Services

Placer County provides government services to those residents that live in the unincorporated areas of the county. For county residents who live in incorporated cities or towns, i.e., Auburn, Colfax, Lincoln, Loomis, Rocklin, and Roseville, the county also provides many services, including public safety and public health services, in addition to the services provided by the cities. Important public services provided by Placer County include law enforcement, fire protection and other emergency services, education, solid waste disposal, and utilities.

Law enforcement services in unincorporated areas are provided by the Placer County Sheriff's Department. The Sheriff's Department is served by a total of 482 assigned full-time staff, of which there is 149 sworn field operation staff (Placer County 2006). Law enforcement services are supplemented by local police departments that serve incorporated areas.

Fire protection in Placer County is provided by a wide range of paid and volunteer departments. The Placer County Fire Department (part of the County Office of Emergency Services), in conjunction with the California Department of Forestry and Fire Protection (CDF), primarily serve the unincorporated areas of the county.

Public education in Placer County is provided by numerous elementary, middle and high schools, as well as community colleges. Total school enrollment in 2004-05 was 82,455 students (Placer County 2005). Enrollment in elementary schools (outside of local unified school districts) totaled 27,274 during this period. An additional 35,858 students were enrolled in the five unified school districts (i.e., Placer High, Rocklin Unified, Roseville Joint Unified, Tahoe Truckee, and Western Placer). Sierra Community College served 19,353 students.

Placer County contracts with two companies to provide residential garbage pickup and disposal in the unincorporated areas of the county – Auburn Placer Disposal Service and Tahoe Truckee Sierra Disposal. The western portion of the county is served by one

major landfill, Western Regional Sanitary Landfill in Lincoln, and regional recycling facility, Materials Recovery Facility (MRF), both of which are owned and operated by the Western Placer Waste Management Authority. The estimated total permitted capacity at the landfill is 36.35 million cubic yards, with an estimated remaining capacity of 80% (California Integrated Waste Management Board 2006). The Eastern Regional Landfill is the disposal site for solid waste collected from eastern Placer County, including the Town of Truckee, the City of Colfax, and portions of El Dorado and Nevada counties.

Other utilities include electricity, natural gas, and water. Electrical power in the county is provided by the City of Roseville, Pacific Gas and Electric Company (PG&E), Sierra Pacific Power Company and Sacramento Municipal Utility District (SMUD). Hydroelectric stations generate a considerable quantity of the electricity in the region. Natural gas is available for commercial and residential uses in Placer County through PG&E. PCWA is a major provider of water to Placer County customers.

6.14.3 References

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TABLES

Table 6.14-1 Placer County Population and Growth Rates, 1990-2005.

Year	Population (July 1)
1990	174,905
1991	183,630
1992	190,810
1993	197,214
1994	202,786
1995	211,555
1996	218,502
1997	226,101
1998	233,298
1999	243,339
2000	252,603
2005	313,931
Compound Annual Growth Rates	
1990-2000	3.74%
2000-2005	4.44%
1990-2005	3.98%

Sources: California Department of Finance Demographic Research Unit, 2006, "E-6, California County Population Estimates and Components of Change by Year, July 1, 2000-2005; and 2005, "Updated E-6, Revised County Population Estimates and Components of Change by County, July 1, 1990-2000, Sacramento.

Table 6.14-2 Population and Population Growth Rates, Placer County Cities, 1990-2005.

Compound Annual Growth Rate						
City	**1990**	**2000**	**2005**	**1990-2000**	**2000-2005**	**1990-2005**
Auburn	10,653	11,391	12,849	0.7%	2.4%	1.3%
Colfax	1,306	1,504	1,822	1.4%	3.9%	2.2%
Lincoln	7,248	9,681	27,356	2.9%	23.1%	9.3%
Loomis	5,705	5,916	6,274	0.4%	1.2%	0.6%
Rocklin	18,806	35,226	50,494	6.5%	7.5%	6.8%
Roseville	44,685	74,234	102,191	5.2%	6.6%	5.7%

Sources: California Department of Finance Demographic Research Unit, 2006, "E-5, City and County Population and Housing Estimates, January 1, 2005;" and "E-5, City and County Population and Housing Estimates, 1990-2000," Sacramento.

Table 6.14-3 Housing Units, Placer County Cities and County Total, 1990-2005.

Compound Annual Growth Rate						
City	**1990**	**2000**	**2005**	**1990-2000**	**2000-2005**	**1990-2005**
Auburn	4,795	5,718	5,814	1.8%	0.3%	1.3%
Colfax	621	743	801	1.8%	1.5%	1.7%
Lincoln	2,602	3,830	11,930	3.9%	25.5%	10.7%
Loomis	2,030	2,253	2,353	1.0%	0.9%	1.0%
Rocklin	7,480	14,333	19,679	6.7%	6.5%	5.9%
Unin-corporated	42,562	49,587	52,10	1.5%	1.0%	1.4%
Total County	77,879	107,564	134,896	3.3%	4.6%	3.7%

Table 6.14-4 Placer County Establishments, 2003, by Number and Employment Size Class.

Number of Employees					
Industry	**No. Businesses**	**Under 10**	**10-99**	**100-499**	**500 or More**
Forestry, fishing, hunting	10	10	0	0	0
Mining, utilities	19	15	3	0	0
Construction	1,423	1,128	269	0	1
Manufacturing	307	177	116	25	1
Wholesale, retail trade	1,537	1,055	437	11	3
Transportation, warehousing	144	104	32	5	0
Information services	159	108	41	40	0
Finance, real estate	1,112	901	199	8	0
Professional service, management, admin support	1,376	1,107	240	10	0
Educational services	107	67	38	7	0
Health care	856	678	167	4	1
Arts, entertainment, related	128	87	36	6	0
Accommodations, food	648	302	331	3	1
Miscellaneous	667	560	100	17	2
Total	8,493	6,299	2,009	136	9

Table 6.14-5 Major Private Sector Employers in Placer County.

Name	City	Industry	Employment
Hewlett-Packard	Roseville, Rocklin	Computer Manufacturing	4,000
Kaiser Medical	Roseville	Hospital	2,707
Thunder Valley Casino	County	Casino	2,200
Sutter Medical	Roseville	Hospital	1,672
Squaw Valley Ski	Olympic Valley	Recreation	1,500
Union Pacific	Roseville	Railroad	1,200
Pride Industries	Auburn, Roseville	Individual, Family Services	1,050
SureWest	Roseville	Telecommunications	1,000
NEC Electronics	Roseville	Electronics	850
Sutter Auburn Faith Hospital	Auburn	Hospital	750

Source: Sacramento Regional Research Institute, 2004, "Placer County Economic and Demographic Profile 2005," prepared for County of Placer Office of Economic Development, Sacramento, p 55.

Table 6.14-6 Placer County General Government Revenues, by Source.

Fiscal Year	Taxes	Intergovernmental Transfers	Other[1]	Total Revenues
2002-2003	$95,244,103	$159,854,844	$87,450,384	**$342,549,331**
2003-2004	$105,647,190	$154,468,289	$78,324,977	**$338,440,456**
2004-2005	$118,407,215	$188,684,898	$91,875,495	**$398,967,608**

Source: Placer County, Comprehensive Annual Financial Report, 2005

[1] Other includes: licenses and permits; fines, forfeitures and penalties; use of money and property; charges for services; tobacco settlement; and miscellaneous.

Table 6.14-7 Placer County General Government Expenditures, by Function.

Fiscal Year	General Government	Public Protection	Public Assistance	Health & Sanitation	Public Ways & Facilities	Recreation & Cultural Services	Education	Other[1]	Total
2002-2003	$48,427,649	$104,450,568	$50,760,486	$50,564,834	$18,102,276	$431,133	$4,884,177	$29,770,310	$**307,391,434**
2003-2004	$54,577,767	$109,701,782	$50,005,393	$48,805,220	$19,389,573	$576,396	$3,931,553	$27,590,181	$**314,577,865**
2004-2005	$55,713,094	$119,944,506	$49,377,587	$60,094,352	$27,267,922	$338,254	$4,520,347	$46,429,091	$**363,685,153**

Source: Placer County, Comprehensive Annual Financial Report, 2005
[1] Includes capital outlays and debt service

FIGURES

Figure 6.14-1. Placer County Employment, by Sector, 1990.

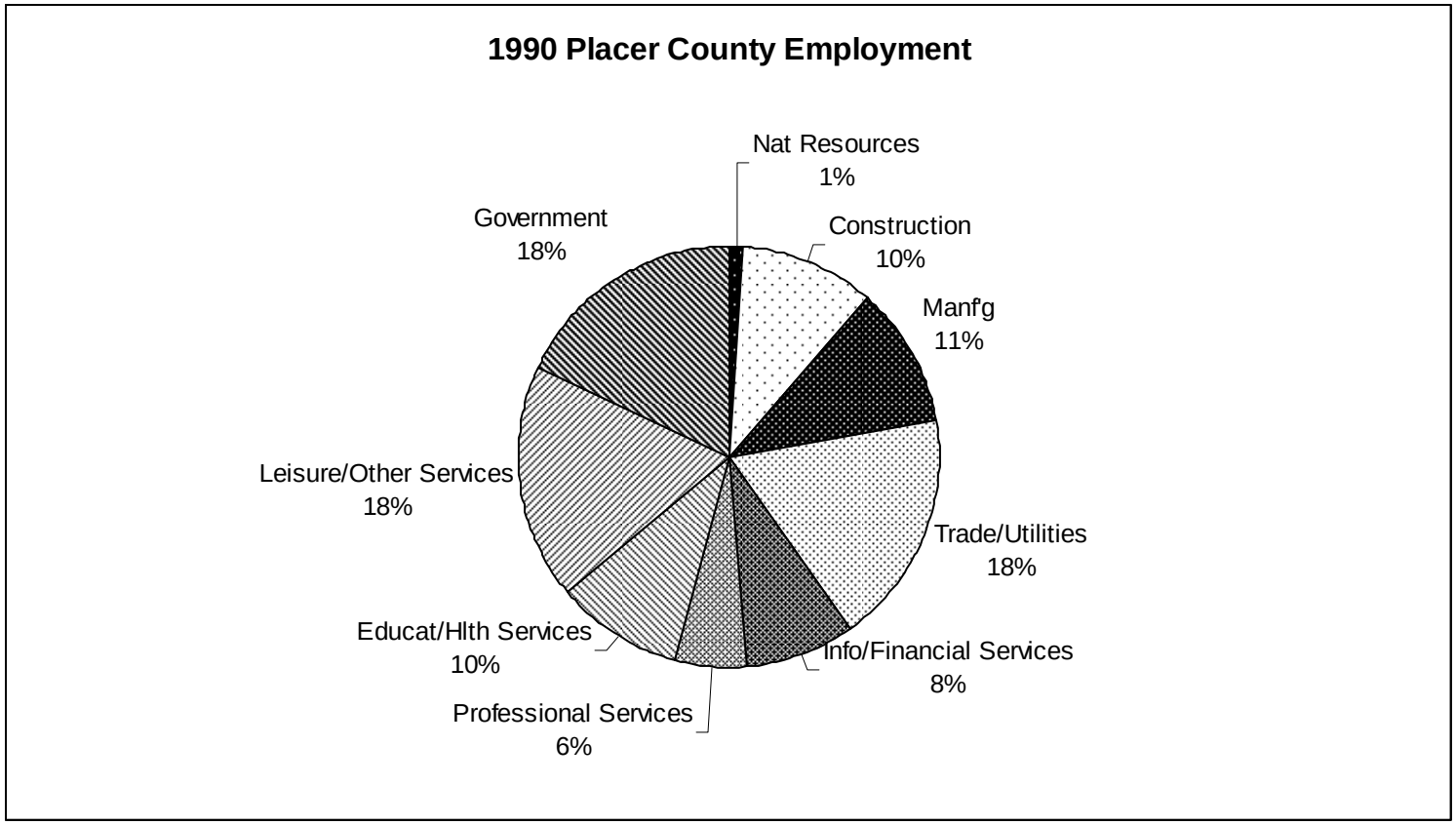

Figure 6.14-2. Placer County Employment, by Sector, 2004.

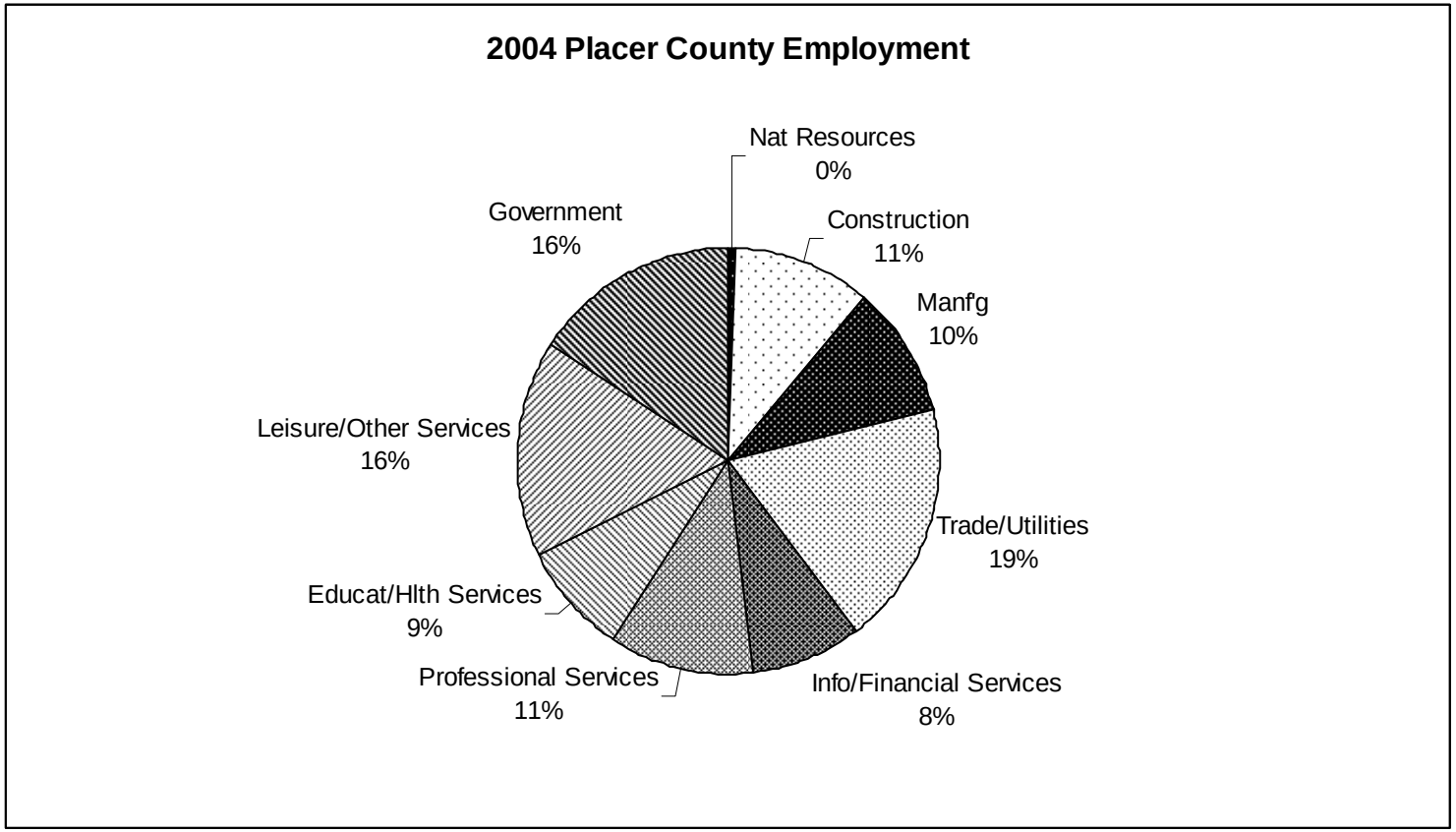

TABLE OF CONTENTS

Page

7.0 RELATIVE COMPREHENSIVE PLANS AND RESOURCE MANAGEMENT PLANS

Section 10(a)(2) of the Federal Power Act (FPA) requires the Federal Energy Regulatory Commission (Commission or FERC) to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, and conserving the waterways associated with the project. In addition, the FERC's regulations require that the Pre-Application Document (PAD) contain information about comprehensive plans. Title 18 of the Code of Federal Regulations (CFR) Part 5 § 5.6 (b)(2) states:

> *A potential applicant is not required to conduct studies in order to generate information for inclusion in the pre-application document. Rather, a potential applicant must exercise due diligence in determining what information exists that is relevant to describing the existing environment and potential impacts….Due diligence includes, but is not limited to, contacting appropriate agencies and Indian tribes that may have relevant information and review of Federal and state comprehensive plans filed with the Commission and listed on the Commissions Web site at http://www.ferc.gov.*

The following describes the comprehensive plans that are relevant to the relicensing of the Middle Fork American River Hydroelectric Project (MFP or Project), based on a review of the FERC's Revised List of Comprehensive Plans dated March 2006, and on other relevant documents.

7.1 DESCRIPTION OF PERTINENT COMPREHENSIVE PLANS

Relevant Plans from FERC's Revised List of Comprehensive Plans

The FERC's Revised List of Comprehensive Plans, dated March 2006, includes eleven planning documents relevant to the MFP. Each of these plans, as cited on the March 2006 list, is identified in the following. Note that in some cases more recent versions of the planning documents identified in the FERC's 2006 List of Comprehensive Plans are available and were used for this evaluation. These cases are identified with an asterisk (*****) and explained in the text, as appropriate.

- California Department of Fish and Game (CDFG). 1979. Rubicon River Wild Trout Management Plan. Sacramento, California.
- DPR. 1998. Public Opinions and Attitudes on Outdoor Recreation in California.*
- DPR. 1980. Recreation Outlook in Planning District 3: An Element of the California Outdoor Recreation Resources Plan. Sacramento, California.
- DPR. 1983. Recreation Needs in California. Sacramento, California.
- DPR. 1994. California Outdoor Recreation Plan - 1993. Sacramento, California.*

- California Department of Water Resources (DWR). 1983. The California Water Plan: Projected Use and Available Water Supplies to 2010. Bulletin 160-83. Sacramento, California.
- DWR. 1994. California Water Plan Update: Bulletin 160-93. Sacramento, California. Two volumes and executive summary.*
- California State Water Resources Control Board (SWRCB). 1995. Water Quality Control Plan Report. Sacramento, California. Nine volumes.*
- United States Department of Agriculture Forest Service (USDA-FS). 1988. Eldorado National Forest Land and Resource Management Plan. Placerville, California.
- USDA-FS. 1990. Tahoe National Forest Land and Resource Management Plan. United States Department of Agriculture. Nevada City, California.
- USDA-FS. 2004. Sierra Nevada Forest Plan Amendment, Final Supplemental Environmental Impact Statement and Record of Decision. Vallejo, California.

List of Other Applicable Plans

Eight additional planning documents that are not included on the FERC's 2006 List of Comprehensive Plans were also considered as part of this evaluation, as follows:

- United States Bureau of Reclamation (USBR). 1992. Auburn State Recreation Area Interim Resource Management Plan.
- USBR. 1993. American River Water Resources Investigation: Wild and Scenic River Eligibility Study and Preliminary Classification.
- USDA-FS. 1993. Granite Chief Wilderness Management Plan, Wilderness Implementation Schedule and Decision Notice.
- National Park Service (NPS). 2006. The Nationwide Rivers Inventory. U.S. Department of Interior.
- Placer County. 1994. Placer County General Plan: Countywide General Plan Policy Document.
- Placer County Planning Department. 2000. Placer Legacy: Open Space and Agricultural Conservation Program – Implementation Report.
- Placer County Planning Department. 2003. Foresthill Divide Community Plan: Placer County, California.
- United States Fish and Wildlife Service (USFWS). Undated. Fisheries USA: The Recreational Fisheries Policy of the United States Fish and Wildlife Service.

Each of these documents is briefly described below. Note that this report summarizes the content of each of these comprehensive plans and discusses their applicability to the MFP. The effects of MFP operations and maintenance activities will be evaluated with respect to each of these comprehensive plans as the relicensing studies proceed.

The purpose of the evaluation will be to ensure that operation and maintenance of the MFP is consistent with the goals and objectives outlined in the comprehensive plans.

7.1.1 Rubicon River Wild Trout Management Plan

In 1971 the CDFG established the California Wild Trout Program (Program) to protect and enhance wild trout fisheries. The primary purpose of the Program is to preserve attractive stream trout fisheries which are naturally sustained by wild strains of trout. The general management objectives of the Program are summarized as follows:

- To maintain wild trout populations at levels necessary to provide satisfactory recreational angling opportunities for wild trout.
- To maintain and enhance where possible the habitat required for optimum wild trout production.
- To preserve the natural character of the streamside environment.

Between 1971 and 1979, CDFG designated 18 streams as wild trout streams. The Rubicon River was included in the Program following the recommendations of the Eldorado National Forest (ENF). The designated wild trout section of the river extends from Hell Hole Dam to Ralston Afterbay.

In 1979, the CDFG Inland Fisheries Branch published the Rubicon River Wild Trout Management Plan (Plan) as required by the California Wild Trout Program. The Plan sets forth a detailed management program including goals, major assumptions, management direction, recommendations for nearby land management, a monitoring program, and a program implementation schedule. The Plan also includes a discussion of existing water development in the watershed including flow releases from Hell Hole Reservoir, future water development, and sedimentation from water development operations.

The updated policies of the Program are described on CDFG's website (http://fgc.ca.gov/html/compolcy.html#fish). According to this website, the Rubicon River remains a designated Wild Trout Stream (also referred to as wild trout water) from Hell Hole Reservoir to Ralston Afterbay. Designated wild trout waters are managed in accordance with the following stipulations:

- Domestic strains of catchable sized trout shall not be planted in designated wild trout waters.
- Hatchery-produced trout of suitable wild and semi-wild strains may be planted in designated waters, but only if necessary to supplement natural trout reproduction.
- Habitat protection is of utmost importance for maintenance of wild trout populations. All necessary actions, consistent with State law, shall be taken to prevent adverse impact by land or water development projects affecting designated wild trout waters.

The regulations cited on the CDFG website also note that the CDFG must prepare and periodically update a management plan for each designated wild trout water. However, the CDFG website did not identify that the Rubicon River Wild Trout Management Plan, first published in 1979, has been updated. Additional consultation with the CDFG did not identify an updated plan.

7.1.2 Public Opinions and Attitudes on Outdoor Recreation in California

The FERC's 2006 List of Comprehensive Plans cites the 1998 Public Opinions and Attitudes on Outdoor Recreation in California, which was published in March 1998 by the DPR. This survey has since been updated with data obtained in 2002 and a revised report was published in 2003. The following description relies on the most recent survey results.

Initially in 1987, and again in 1992, 1997, and 2002, the DPR has conducted telephone surveys of public opinions and attitudes towards outdoor recreation in California. For comparison purposes, the questions asked in each survey were kept as similar as possible. The data is used to track outdoor recreation trends, identify shifts in public attitudes and values and identify the demand for and participation in a variety of outdoor recreation activities. The 2002 survey addressed a broad range of topics, but in general it found that Californians believe outdoor recreation areas are important to their quality of life and most support protecting the natural environments within outdoor recreation areas. The 2002 telephone survey is included as an Element of the California Outdoor Recreation Plan (CORP).

7.1.3 Recreation Outlook in Planning District 3: An Element of the California Outdoor Recreation Resources Plan.

In 1980 the DPR published the "Recreation Outlook in Planning District 3" (Recreation Outlook). The MFP is located in Planning District 3, which includes the northeastern portion of central California and is made up of eight counties including Placer, El Dorado and Sacramento. Planning district studies are conducted as part of the California Outdoor Recreation Resources Planning (CORRP) process providing an in-depth look at recreation in California on a regional basis. The purpose of the CORRP is to coordinate and guide activities of state, local, and federal agencies, and the private sector, in planning, developing, operating, and maintaining outdoor recreation areas and facilities. The plan is also used to form the basis for obtaining grant funds and as a guide in allocating funds to state and local government agencies.

The Recreation Outlook describes the land ownership, recreation lands and resources, and adequacy of recreation lands in District 3. The Recreation Outlook also presents 17 bulleted findings, 15 bulleted recommendations and describes the management concerns in the region. Most of the findings are general to the entire District 3 planning area but some are specific to the foothill and Sierra Nevada regions. The study found that District 3, in general, is a prime tourist and recreation area with adequate total acreage of natural resource lands open to recreation to meet the foreseeable needs of residents and tourists. However, the study also found insufficient facilities for certain

recreation activities throughout the region, including boating access, wetland and waterfowl observation, and hunting.

The study findings and recommendations specific to the foothill and Sierra Nevada regions are summarized below.

The study found that the foothills have the potential to provide for expanded year-round recreation opportunities and there is a need to provide improved public transportation to the major foothill and Sierra Nevada recreation areas. An emphasis was placed on provision of services to heavily visited winter recreation areas.

The study recommended that various organizations work cooperatively to develop a Recreation Plan for the foothill area. The Recreation Outlook recommended that this Plan examine the possibility of increasing the recreational appeal of Highway 49.

The study found that the two most popular year-round sightseeing routes in District 3 follow Highway 50 and 80 from the Sacramento Valley to the Lake Tahoe area. Highway 49 is also noted as a popular route. The study notes that camping and picnicking are often associated with sightseeing, creating a strong demand for these facilities along these routes.

7.1.4 Recreation Needs in California

In 1983, the DPR published a report titled “Recreation Needs in California”. The DPR report summarizes a statewide recreation needs analysis conducted between 1976 and 1982 and recommends that the California legislature consider the following:

- To meet increasing demand for outdoor recreation, opportunities for activities such as camping, fishing, hiking, and nature appreciation need to be provided in and near metropolitan areas.
- Accelerated development of State Park System facilities and programs near metropolitan areas is necessary to keep pace with projected increases in demand for outdoor activities.
- Legislative action is needed to modify the Roberti-Z'berg Open Space and Recreation program criteria to reflect current needs analysis findings.
- Private recreation suppliers will need to assume a much larger role in satisfying recreation desires of California's urban residents. Studies need to be conducted by the legislature to develop incentives for the private sector to provide additional recreation services.
- The DPR needs to implement pilot programs to alleviate constraints to full and equitable access to recreation opportunities.

7.1.5 California Outdoor Recreation Plan - 1993

The FERC's 2006 List of Comprehensive Plans cites the 1993 CORP, which was published in 1994 by the DPR. This plan has since been updated with the 2002 CORP, published in 2003. The following description relies on the most recent update of the CORP.

The 2002 edition of the CORP provides a tool for statewide outdoor recreation leadership and actions for the next five years. The CORP is updated approximately every five years to reflect current and expected changes in California's large and complex population and economy. Each revised edition takes into consideration the current demographic, economic, political, and environmental conditions in California, and then explores and analyzes the outdoor recreation issues that will be of major concern to public agencies in the next five years.

The 2002 CORP provides a policy foundation, information source, and action guide for state and local recreation development and implementation. The CORP is based primarily on information collected from 2000 through 2002. The trends, policies, and proposed actions described in the CORP are very broad in scope and direction and include topics such as funding, public access, and pressure on natural resources. In general, the plan promotes recreation projects that create partnerships and seeks to mitigate trends that adversely affect resource conditions.

7.1.6 The California Water Plan and the California Water Plan Update

The FERC's 2006 List of Comprehensive Plans identifies two California water planning documents, the 1983 California Water Plan (DWR 1983) and the California Water Plan Update referred to as Bulletin 160-93 (DWR 1994). These documents are part of a series of documents that are periodically updated to accommodate California's changing water supply and demands. The most recent update entitled "California Water Plan: Update 2005" is available on the DWR website (DWR 2006). This evaluation relies on the 2005 update.

The 2005 California Water Plan Update details water use and supply and presents a recent appraisal of statewide water uses for various beneficial uses using a 2030 planning horizon, and identifies and analyzes options for improving water supply reliability. The 2005 Water Plan Update also provides a framework for water management in California and it includes a list of 14 recommendations to guide water managers for the next 25 years.

The majority of the 2005 California Water Plan Update focuses on California's consumptive water uses such as agriculture and urban use. Water management for instream uses is acknowledged in Chapter 9 entitled "Ecosystem Restoration". This chapter briefly addresses the future need to protect and enhance instream water uses such as fisheries, wildlife, aesthetics, and recreation. The plan update acknowledges that the data and analytical tools used to measure the adequacy of instream flows is insufficient to address ecosystem restoration and it provides a list of five

recommendations to improve water management for ecosystem restoration. These recommendations include:

- DWR, CDFG, and SWRCB should work together to publish comprehensive assessments of in-stream flow needs on California rivers, similar in scope to studies on the Feather and American rivers.

- The Resources Agency and CAL-EPA should work with their respective departments, boards, and commissions to ensure and promote use of independent science to inform their decision-making.

- The Resources Agency should continue to support development and use of statewide databases, analytical tools and evaluation criteria.

- The Resources Agency should support further scientific research on the relationship between flow dedication and water-independent actions to achieve desired restoration.

- The CDFG, with the Department of Conservation and DWR, should investigate and resolve key issues regarding long-term coarse sediment supplies for ecosystem needs.

7.1.7 Water Quality Control Plan (Basin Plan) – Central Valley Region, the Sacramento River Basin and San Joaquin River Basin

The FERC's 2006 List of Comprehensive Plans identifies a water-planning document entitled "Water Quality Control Plan Report" (SWRCB 1995). This report includes nine volumes, organized by region, that are periodically updated to reflect changes in policies and regulations. The most recent update is entitled "The Water Quality Control Plan (Basin Plan): Central Valley Region (Fourth Edition), the Sacramento River Basin and the San Joaquin River Basin" (RWQCB 1998). The updated 1998 version is available on the RWQCB website (2006). This discussion relies on the 1998 update.

The Basin Plan identifies eight beneficial uses that apply to the surface waters in the Middle Fork American River Watershed. These beneficial uses are defined as follows:

- Municipal and Domestic Supply – Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- Agricultural Supply – Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing.
- Hydropower Generation – Uses of water for hydropower generation.
- Water Contact Recreation – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

- Non-contact Water Recreation – Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Coldwater Freshwater Habitat – Uses of water that support coldwater ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Spawning, Reproductive, and/or Early Development – Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
- Wildlife Habitat – Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

7.1.8 Eldorado National Forest Land and Resource Management Plan

The Eldorado National Forest Land and Resource Management Plan (ENF-LRMP) was developed by the USDA-FS to direct the management of the ENF. The goal of this plan is to provide management direction that reflects a variety of activities, allows use and protection of Forest resources, and fulfills legislative requirements while addressing local, regional, and national issues. The ENF-LRMP describes the desired future state of the ENF, provides forestwide management direction and prescriptions for individual management areas, and includes management standards and guidelines. The ENF-LRMP applies to all National Forest System lands administered by the ENF.

The ENF-LRMP recognizes water management and recreation as two important beneficial uses of the ENF. The management guidelines that apply to Project recreation facilities are described as part of Management Area 9 of the ENF-LRMP. The management emphasis for developed recreation facilities focuses on providing recreation opportunities for the public, maintaining recreation facilities and preserving the natural forest setting surrounding these facilities. The protection of water quality is also emphasized through the implementation of Best Management Practices (BMPs).

In the early 1980s, as part of the preparation to develop the ENF-LRMP, the ENF conducted eligibility and suitability studies to determine if the Rubicon River met the requirements for designation as a national Wild and Scenic River (WSR). The full length of the Rubicon River was evaluated for eligibility. The upper Rubicon, above Hell Hole Reservoir was found not eligible, and the lower Rubicon, below Hell Hole Dam was found eligible. Subsequently, a suitability study was conducted along three segments of the Rubicon River extending from Hell Hole Dam to Ralston Afterbay. The study concluded that all three segments of the Rubicon River possessed “outstandingly remarkable values” (ORVs) that met the required WSR standards for “Scenic”, “Fish”,

and “Other” Values. Only one ORV is required to qualify a river segment for WSR eligibility.

The ENF- LRMP recommended all three segments of the lower Rubicon River between Hell Hole Dam and Ralston Afterbay for scenic river designation. However, the classification for the river in the ENF-LRMP was appealed, and in a subsequent decision by the Chief of the Forest Service, the two lower segments of the Rubicon River, from Ellicott Bridge to Ralston Afterbay were recommended for Wild classification in addition to Scenic classification. The upper segment, from 100 yards below the Hell Hole Dam to Ellicott Bridge, continues to have a Scenic classification (S. Rodman pers. comm.). The ENF formally recommended that Congress designate the Rubicon River under the Wild and Scenic Rivers system (S. Rodman pers. comm.). However, the United States Congress has not yet acted to officially designate the river. Regardless, the ENF manages the Rubicon River, and a ¼ mile corridor, to protect the ORV’s identified in their WSR eligibility study.

7.1.9 Tahoe National Forest Land and Resource Management Plan

As with the ENF-LRMP, the Tahoe National Forest Land and Resource Management Plan (TNF-LRMP) was developed by the USDA-FS to direct the management of the Tahoe National Forest (TNF). In general, the goals of this plan are similar to those contained in the ENF-LRMP, with some specific references to water resources as noted below.

The TNF-LRMP includes a discussion of a “water program” designed to address management direction for water resources and development. The purpose of the water program is described as follows:

> “To afford optimum protection to the water resources compatible with other program practices, including timber, wildlife, fisheries, range, recreation, engineering, and mining. Where opportunities arise, watershed improvement measures will be implemented and water quantities and timing of flow will be improved. The water program on the TNF has primarily served as a support function for other resource activities. The various types of support include planning, inventories, analyzing project proposals, monitoring and administration.”

As with the ENF-LRMP, a strong emphasis is placed on implementing BMPs to protect water quality.

In an amendment to the TNF-LRMP, the TNF Forest Supervisor concluded that the segment of the upper Rubicon River on the TNF above Hell Hole Reservoir is not eligible to be included in the National Wild and Scenic Rivers System. This decision is described in the report entitled, “Record of Decision: Twenty-two Westside Rivers Wild and Scenic Study Report and Final Environmental Impact Statement” (USDA-FS, TNF/Plumas National Forest Undated). This recommendation concurs with the findings of the ENF for the same river segment as described in Section 7.1.8. The Rubicon

River downstream of Hell Hole Dam is not within the TNF and therefore is not addressed in the TNF-LRMP.

7.1.10 Sierra Nevada Forest Plan Amendment, Final Supplemental Environmental Impact Statement (FEIS) and Record of Decision (ROD)

The FERC's 2006 List of Comprehensive Plans identifies the 2004 SNFPA including FEIS. This set of documents augments the previously published 2001 SNFPA, FEIS and ROD. This discussion relies on both amendments, which must be used in tandem.

The 2001 SNFPA augments the Pacific Southwest Regional Guide, the Intermountain Regional Guide, and LRMPs for National Forests in the Sierra Nevada and Modoc Plateau, including the ENF and TNF (USDA-FS 2001). The Forest Plan Amendment addresses the need to: 1) sustain the desired condition of old forest ecosystems; 2) protect and restore riparian, aquatic, and meadow ecosystems; 3) combat noxious weeds; 4) improve fire and fuels management; and 5) sustain desired conditions of lower west side hardwood ecosystems in the affected National Forests. The ROD was submitted with the FEIS and includes rationale regarding the decision basis for the preferred alternative. The preferred alternative applies a cautious approach for vegetation and fuels management in habitats for sensitive wildlife species, particularly those associated with old forest ecosystems, while recognizing the need to reduce the threat of fire to human communities.

The 2004 SNFPA and associated documents address in more detail three problem areas that were not adequately analyzed in the 2001 Forest Plan Amendment. These problem areas include: 1) old forest ecosystems and associated species; 2) aquatic, riparian and meadow ecosystems and associated species; and 3) fire and fuels management. The 2004 SNFPA adopts an integrated strategy for vegetation management designed to reduce the threat of wildfire to communities in the urban-wildland interface. It is also designed to modify fire behavior over the broader landscape. The 2004 SNFPA does not address all management activities on National Forest System land. For example, the 2004 SNFPA does not address recreation management or Wild and Scenic River management. These resource areas are addressed in the individual forest LRMPs.

7.1.11 Auburn State Recreation Area Interim Resource Management Plan

The Auburn State Recreation Area (Auburn SRA) is located downstream of Ralston Afterbay and includes approximately 42,000 acres along 40 miles of the North and Middle Forks of the American River. The Auburn SRA offers a wide variety of recreation opportunities to over 900,000 visitors a year (DPR Undated). Primary recreational activities include hiking, swimming, boating, fishing, camping, mountain biking, gold panning, and off-highway motorcycle riding. Whitewater recreation is also very popular along both forks of the river. Twenty-eight Class IV permits and 24 Class II permits were issued along the Middle Fork American River in 2005 in the Auburn SRA (B. Deitchman pers. comm. 2006).

In September 1992, the USBR published the Auburn SRA Interim Resource Management Plan (IRMP). The IRMP amends the 1978 General Plan for the Auburn Dam and Reservoir Project, which was designed to manage the area exclusively as a reservoir-based SRA. Although the 1992 IRMP assumes the Auburn Dam and Reservoir would be constructed, unlike the General Plan, it guides the use, development, and management of the Auburn SRA primarily as a river-based recreation area.

Development of the IRMP required a broad analysis of the recreation area including its resources, uses, problems and potentials. This analysis was accomplished through field studies, literature searches and extensive public and agency consultation. Specific management guidelines address such items as allowable land use, facilities design and construction standards, special events, camping, resource management, recreational mineral collection, and whitewater recreation.

The DPR, Gold Fields District, recently initiated a process to prepare an updated General Plan for the Auburn SRA (J. Michaels pers. comm. 2006). This General Plan will be developed over a two-year period starting in January 2006. The new General Plan will replace the existing 1978 General Plan and the 1992 IRMP.

7.1.12 American River Water Resources Investigation: Wild and Scenic River Eligibility Study and Preliminary Classification

In January 1993 the USBR published the report entitled, "American River Water Resources Investigation, Wild and Scenic Rivers Eligibility and Preliminary Classification" (USBR 1993). This study was conducted as part of a larger land and water resource planning effort known as the American River Water Resources Investigation (also known as the Auburn Dam Project). In this study, three segments on the North and Middle Forks of the American River were found "Eligible" for Wild and Scenic designation under the WSRA. One of these segments is located within the Middle Fork American River Watershed and is described in the USBR report as follows:

- Middle Fork American River: From Oxbow Dam to the confluence with the North Fork American River. Length is approximately 23 miles.

The study concluded that this segment possesses "outstandingly remarkable values" (ORVs) that meet the required WSRA standards for eight resource categories including Recreation, Scenic, Geologic, Wildlife, Fish, Ecological and Other Values and Cultural. Only one ORV is required to qualify a river segment for WSR eligibility. In order for the river segment to be considered eligible in this study, the ORVs must occur on federally administered lands.

The summary statement in the 1993 study indicated that the next step in the process would be a suitability study to determine if the eligible river segments are suitable for designation to the National Wild and Scenic River System. According to the USBR, a suitability study has not been conducted and there are no plans to conduct a suitability study at this time (R. Schroeder, pers. comm. 2006). The USBR and other State and

federal resource agencies are required to manage the river and the area within ¼ mile of the river to protect the ORVs until the suitability study is completed.

7.1.13 Granite Chief Wilderness Management Plan, Wilderness Implementation Schedule and Decision Notice

The Granite Chief Wilderness is located west of Lake Tahoe and south of Highway 80 along the crest of the Sierra Nevada. The Wilderness includes high elevation glaciated peaks, steep river canyons, and is bordered by the Rubicon River to the south. The natural environment is predominantly unmodified, providing outstanding opportunities for visitors to enjoy isolation and solitude. The MFP is situated immediately west of and just outside the Wilderness boundary. At its closest points, the Wilderness boundary is approximately 0.25 mile east of the Hell Hole Reservoir and approximately 4.5 miles east of French Meadows Reservoir. The Granite Chief Wilderness is administered by the TNF, Truckee and American River Ranger Districts, in accordance with the Wilderness Act of 1964.

In 1993, the USDA-FS adopted the Granite Chief Wilderness Management Plan (GCMP) and Wilderness Implementation Schedule (USDA-FS 1993). The GCMP amends the TNF-LRMP providing specific direction for management of the Granite Chief Wilderness. The GCMP strongly emphasizes sustaining and enhancing the natural ecosystem.

The GCMP does not specifically address land management activities outside the Wilderness boundary. However, Forest Service Wilderness management objectives generally consider activities on lands contiguous to the Wilderness boundary.

7.1.14 The Nationwide Rivers Inventory

The Nationwide Rivers Inventory (NRI) is a listing of more than 3,400 free-flowing river segments in the United States that are believed to possess one or more “outstandingly remarkable values” (ORVs) that are judged to be of more than local or regional significance. Under a 1979 Presidential directive and related Council on Environmental Quality procedures all federal agencies must seek to avoid or mitigate actions that would adversely affect one or more NRI segments (NPS 2006). The NRI is a source of information for statewide river assessments and federal agencies involved in stream-related projects.

In order to meet the criteria for “outstandingly remarkable”, a river value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale (NPS 2006). The eligibility criteria set minimum thresholds and are designed to foster greater consistency within federal river-administering agencies. There are nine eligibility criteria used to assess a river’s status, these include: Scenery(S), Recreation(R), Geology(G), Fish(F), Wildlife(W), Prehistory(P), History(H), Cultural(C), and Other Values(O).

The Middle Fork American River is not currently listed on the NRI, although portions of the Middle Fork American River were determined to be eligible for National Wild and

Scenic River Status by the USBR. The Rubicon River from the base of Hell Hole Dam to Ralston Afterbay is included on the NRI.

7.1.15 Placer County General Plan: Countywide General Plan Policy Document

The Placer County General Plan (Placer County 1994) includes information regarding land uses and transportation in the vicinity of the MFP. In addition, it provides management goals and policies relevant to the Middle Fork American River Watershed. In accordance with State law and case law, all zoning, subdivision approvals, and public works projects must be consistent with the General Plan.

The General Plan is designed to comply with various state regulations and policies for land use and development. As required, it addresses seven topics or "elements" including land use, circulation (transportation), housing, conservation, open space, noise, and safety. The General Plan consists of two types of documents: the Countywide General Plan and a set of more detailed community plans covering specific areas of the unincorporated county. The Foresthill Divide Community Plan, described in Section 7.1.17, is an example of a community plan that provides more detailed focus on a specific geographic region.

The Countywide General Plan provides an overall framework for development and protection of the county's natural and cultural resources. The goals and policies are applicable throughout the county, except to the extent that county authority is preempted by cities within their corporate limits.

7.1.16 Placer Legacy Open Space and Agricultural Conservation Program – Implementation Report

The Placer Legacy Open Space and Agricultural Conservation Program is managed by the Placer County. The Program is designed to protect and conserve open space and agricultural lands in Placer County in perpetuity. The Program was developed to implement the goals, policies and programs of the 1994 General Plan including the open space and conservation elements of the General Plan. Placer Legacy's 2000 Implementation Report takes a proactive approach to conserve open space and agricultural lands without eliminating opportunities for economic growth and expansion.

For planning and management purposes, the Implementation Report subdivides Placer County into 10 separate geographic regions or study areas. The MFP falls within two study areas: the "American River Canyon" and "West Slope Sierra". The Implementation Report describes each of these geographic regions. In addition, it analyzes the land management trends in each of these areas, including stressors and conflicts, and concludes with a detailed analysis of conservation opportunities for each study area.

7.1.17 Foresthill Divide Community Plan: Placer County, California

The Foresthill Divide Community Plan (Plan), in combination with the Placer County General Plan, is designed to satisfy the requirements of the California Planning and

Zoning Law by setting forth the goals, policies, assumptions, guidelines, standards, and implementation measures for the planning area. The Plan was adopted in August 2003 and provides overall direction for future growth in the Foresthill Divide to approximately the year 2022. The planning area comprises approximately 109 square miles including the northern portion of the Middle Fork American River Watershed (Watershed) in the Foresthill Divide region.

The Community Development Elements that are most relevant to the MFP include Public Facilities (e.g., Water Supply and Drainage/Water Quality) and Parks and Recreation (e.g., Auburn SRA and French Meadows/Hellhole Reservoir). The Goals and Policies described in these Elements address topics such as the availability of an adequate and safe water supply, the maintenance of high quality water in water bodies and aquifers used as sources of domestic supply, and providing recreation facilities/opportunities for the residents of the Plan area.

7.1.18 Fisheries USA, the Recreational Fisheries Policy of the USFWS

The National Recreational Fisheries Policy (National Policy) was adopted in 1988. The USFWS issued Fisheries USA to identify its responsibilities and role under the auspices of the National Policy (USFWS undated). Policy elements relevant to recreational fisheries associated with the MFP include the following:

Protect, restore, and enhance fish populations and their habitats.

Serve as an active partner with other Federal governmental agencies, States, Tribes, conservation organizations, and the public in developing recreational fisheries programs.

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