
**State of California
The Resources Agency
Department of Water Resources**

LAND MANAGEMENT

DRAFT INTERIM REPORT

SP-L2

**Oroville Facilities Relicensing
FERC Project No. 2100**



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The Resources Agency
Department of Water Resources**

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FERC Project No. 2100**

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REPORT SUMMARY

This Interim Draft Land Management Report, also known as the SP-L2 Study, has been conducted to assist the California Department of Water Resources (DWR) in describing land management conditions within the area FERC boundary and Study Area. The Study Area is defined as consisting of the area within the FERC boundary and the area within ¼ mile around the FERC boundary. The Interim Draft Report identifies the public agencies responsible for managing lands within the FERC boundary and Study Area, describes the management direction of these lands according to land use and resource management plans, and provides a discussion of the existing management practices of each responsible agency.

Lands, facilities, and recreational interests in the Study Area are managed and administered by a number of state and federal agencies, including DWR, the California Department of Parks and Recreation (DPR), the California Department of Boating and Waterways (DBW), the California Department of Fish and Game (DFG), the United States Department of Agriculture Forest Service (USFS), and the United States Department of Interior Bureau of Land Management (BLM). The properties and management responsibilities of each agency within the FERC boundary are detailed in a series of deeds, agreements, and transfers between the agencies involved. In addition to these land managers, two local jurisdictions, Butte County and the City of Oroville, are responsible for providing general planning direction for the remaining private lands within the Study Area.

The DWR was initially charged with management responsibility for approximately half of the 70,000-acre Study Area (the FERC boundary) on behalf of the State of California. In 1961, the California Legislature passed the Davis-Dolwig Act (State Water Code in 11900-11925), which made DWR responsible for acquiring land and planning for recreation and fish and wildlife enhancement as part of the State Water Project (SWP). The State of California holds fee-title ownership to all State lands within the FERC boundary and DWR is considered the “controlling” agency of these lands.

The Davis-Dolwig Act also identified three other State stakeholders: DPR, DFG, and DBW. To fulfill the Act’s mandate, DWR transferred management rights of the majority of State-owned land within the FERC boundary to these agencies under a “transfer of control and possession,” a legal document that basically gives the receiving agency an easement to carry out management and maintenance responsibilities. In total, DWR transferred recreational interests of approximately 28,800 acres to DPR and 12,000 acres to DFG. These lands primarily constitute the LOSRA and Oroville Wildlife Area (OWA). DPR and DFG are charged with managing public recreation facilities and fish and wildlife resources, respectively.

As a result of these real estate transfers, DWR now has primary management responsibilities for approximately 3 percent of the FERC boundary. However, the DWR

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does bear the ultimate responsibility under the current FERC license for ensuring funding, development, and management of current and additional recreation facilities. In addition, the Davis-Dolwig Act requires DWR to plan for and acquire land for recreation in conjunction with all State water projects. In keeping with its responsibility, DWR works with DPR and DFG to provide for recreational opportunities and funding throughout the Study Area.

The entities that manage lands in the Study Area have developed land management plans that control existing land uses and give direction to future land uses within their jurisdictions. The land management direction for most of the land within the FERC boundary encourages current and future recreation, natural resource conservation, and public facilities land uses. Lands adjacent to the FERC boundary within the Study Area are managed for different uses, such as agricultural/rural residential development, timber preserve, conservation, and recreation. Lands near the Diversion Pool, Thermalito Forebay, and near the City of Oroville are managed for uses such as residential, commercial, and agriculture. Careful evaluation of land management direction will be required in the Study Area to ensure coordinated land management efforts.

The Final Report SP-L2 report concludes with management opportunities and identifies those actions needed to maintain or enhance effective management. This evaluation will assist FERC in considering mitigation and enhancement opportunities for relicensing actions of the Oroville Dam.

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ACRONYMS

ADA	Americans with Disabilities Act
af	acre feet
ALP	Alternative Licensing Procedure
ARP	Amended Recreation Plan
BCAG	Butte County Association of Governments
BLM	Bureau of Land Management
CALFED	California and Federal (CALFED) Bay-Delta Program
CDF	California Department of Forestry and Fire Protection
cfs	cubic feet per second
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DBW	California Department of Boating and Waterways
DFG	Department of Fish and Game
DPR	Department of Parks and Recreation
DWR	Department of Water Resources
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
Forest Plan	Plumas National Forest Land and Resource Management Plan
Framework	Sierra Nevada Forest Plan Amendment
FRSA	Feather River Service Area
GP	General Plan
ISO	California Independent Systems Operator
LOSRA	Lake Oroville State Recreation Area
LRMP	Land and Resource Management Plan
LUDWG	Land Use, Land Management, and Aesthetics Work Group
maf	million-acre-feet
Management Plan	Oroville Wildlife Area Management Plan
MPO	Metropolitan Planning Organization
msl	mean sea level

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MW	megawatts
NGOs	non-governmental organizations
OWA	Oroville Wildlife Area
PM&E	Protection, mitigation, and enhancement
PWA	Pre-Fire Workload Analyzer
R&PP	Recreation and Public Purpose Act
R&PP	Recreation and Public Purpose Act
RAMS	Resource Area Manager
RRMP	Redding Resource Management Plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
SBF	State Board of Forestry
SP-L3	Comprehensive Plan Consistency Evaluation
SVRA	State Vehicle Recreation Area
SWP	State Water Project
TEA	Transportation Equity Act
The Regulation	California Regulation on Hunting and Other Public Uses on State and Federal Areas
USACE	U.S. Army Corps of Engineers
USFS	U.S. Forest Service

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1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

The Lake Oroville Hydroelectric Project is the keystone of the California State Water Project (SWP). The Project provides water supply, flood control, power generation, recreation, fish and wildlife enhancement, and salinity control to the State of California and is managed by the California Department of Water Resources (DWR). The Federal Energy Regulatory Commission (FERC) license for the Project expires in February 2007 (FERC Project No. 2100); therefore, a relicensing process was initiated by DWR in June 2000.

As part of project relicensing, DWR decided to use an Alternative Licensing Procedure (ALP) that involves a collaborative planning effort with local, State and Federal agencies with mandatory conditioning authority, Native American tribes, and local and regional recreation interests, which was initiated in December 2000. Work groups representing major resource categories (e.g., Environmental, Engineering and Operations) are assisting DWR decision-making regarding relicensing issues, the scope of resource studies, and ultimately, protection, mitigation and enhancement (PM&E) measures. The Land Use, Land Management, and Aesthetics Work Group (LUWG) is assisting DWR with developing the land use and aesthetics studies.

Currently, it is difficult to determine with accuracy what entities manage lands within the study area, or what the management directives/objectives are for those lands. It is also difficult to ascertain how effectively lands are being managed (in relationship to their management directives/objectives) and the factors that influence land management, such as funding and staffing. These types of information are important to acquire so that Project lands (and other resources) can be managed in a way that reflects what is occurring on nearby lands and vice-versa.

1.1.1 Statutory/Regulatory Requirements

DWR owns and operates the Oroville Facilities, a multipurpose water supply, flood control, power generation, recreation, fish and wildlife enhancement, and salinity control project on the Feather River in Butte County. The facilities currently operate under a license issued by FERC, which expires on January 31, 2007. DWR intends to submit an application for a new FERC license at least 2 years prior to the expiration of the current license. The proposed relicensing process is based on cooperation and collaboration with Federal and State resource agencies, Indian Tribes, local governments, non-governmental organizations (NGOs), and interested members of the

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public. Specific tasks of Relicensing Study L-2 – Land Management Report, are required by FERC under 18 CFR 4.51 (6)(iii) as part of the relicensing process.

The purpose of the L-2 study is to research, describe, and graphically display the management direction of study area lands and identify the entities that are responsible for managing those lands. FERC requires that DWR understand land management directives and the entities which regulate them in order to appropriately manage Project lands and operations. This also helps DWR plan for future activities that may influence lands, such as enhancement measures proposed by work groups.

Existing land management actions by jurisdictions and agencies in the study area is the baseline condition that will be used by DWR decision-making regarding relicensing issues and potential PME measures. Additionally, FERC requires that licensees cooperate with local, State, and Federal agencies regarding lands adjacent to the study area. Initially approved in July of 2002, this study is anticipated to be finalized by DWR in January 2004.

1.1.2 Study Area

The Study Area includes Lake Oroville, the lands and waters within and adjacent to the Project boundary, and adjacent (within ¼ mile of the Project boundary) lands, facilities, and areas with a clear Project nexus.

1.2 DESCRIPTION OF FACILITIES

The Oroville Facilities were developed as part of the SWP, a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants. The main purpose of the SWP is to store and distribute water to supplement the needs of urban and agricultural water users in northern California, the San Francisco Bay Area, the San Joaquin Valley, and southern California. The Oroville Facilities are also operated for flood management, power generation, to improve water quality in the Delta, provide recreation, and enhance fish and wildlife.

FERC Project No. 2100 encompasses 41,100 acres and includes Oroville Dam and Reservoir, three powerplants (Hyatt Pumping-Generating Plant, Thermalito Diversion Dam Powerplant, and Thermalito Pumping-Generating Plant), Thermalito Diversion Dam, the Feather River Fish Hatchery and Fish Barrier Dam, Thermalito Power Canal, OWA, Thermalito Forebay and Forebay Dam, Thermalito Afterbay and Afterbay Dam, and transmission lines, as well as a number of recreational facilities. An overview of these facilities is provided on Figure 1.2-1. The Oroville Dam, along with two small

saddle dams, impounds Lake Oroville, a 3.5-million-acre-feet (maf) capacity storage reservoir with a surface area of 15,810 acres at its normal maximum operating level.

The hydroelectric facilities have a combined licensed generating capacity of approximately 762 megawatts (MW). The Hyatt Pumping-Generating Plant is the largest of the three power plants with a capacity of 645 MW. Water from the six-unit underground power plant (three conventional generating and three pumping-generating

Insert Figure 1.2-1. Oroville Facilities FERC boundary.

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Insert back of Figure 1.2-1. Oroville Facilities FERC boundary.

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units) is discharged through two tunnels into the Feather River just downstream of Oroville Dam. The plant has a generating and pumping flow capacity of 16,950 cfs and 5,610 cfs, respectively. Other generation facilities include the 3-MW Thermalito Diversion Dam Powerplant and the 114-MW Thermalito Pumping-Generating Plant.

Thermalito Diversion Dam, four miles downstream of the Oroville Dam creates a tail water pool for the Hyatt Pumping-Generating Plant and is used to divert water to the Thermalito Power Canal. The Thermalito Diversion Dam Power Plant is a 3-MW power plant located on the left abutment of the Diversion Dam. The power plant releases a maximum of 615 cubic feet per second (cfs) of water into the river.

The Thermalito Power Canal is a 10,000-foot-long channel designed to convey generating flows of 16,900 cfs to the Thermalito Forebay and pump-back flows to the Hyatt Pumping-Generating Plant. The Thermalito Forebay is an off-stream regulating reservoir for the 114-MW Thermalito Pumping-Generating Plant. The Thermalito Pumping-Generating Plant is designed to operate in tandem with the Hyatt Pumping-Generating Plant and has generating and pump-back flow capacities of 17,400 cfs and 9,120 cfs, respectively. When in generating mode, the Thermalito Pumping-Generating Plant discharges into the Thermalito Afterbay, which is contained by a 42,000-foot-long earth-fill dam. The Afterbay is used to release water into the Feather River downstream of the Oroville Facilities, helps regulate the power system, provides storage for pump-back operations, and provides recreational opportunities. Several local irrigation districts receive water from the Afterbay.

The Feather River Fish Barrier Dam is downstream of the Thermalito Diversion Dam and immediately upstream of the Feather River Fish Hatchery. The flow over the dam maintains fish habitat in the low-flow channel of the Feather River between the dam and the Afterbay outlet, and provides attraction flow for the hatchery. The hatchery was intended to compensate for spawning grounds lost to returning salmon and steelhead trout from the construction of Oroville Dam. The hatchery can accommodate an average of 8,000 adult fish annually.

The Oroville Facilities support a wide variety of recreational opportunities. They include: boating (several types), fishing (several types), fully developed and primitive camping (including boat-in and floating sites), picnicking, swimming, horseback riding, hiking, off-road bicycle riding, wildlife watching, hunting, and visitor information sites with cultural and informational displays about the developed facilities and the natural environment. There are major recreation facilities at Loafer Creek, Bidwell Canyon, Spillway, North and South Thermalito Forebay, and Lime Saddle. Lake Oroville has two full-service marinas, five car-top boat launch ramps, ten floating campsites, and seven dispersed floating toilets. There are also recreation facilities at the Lake Oroville Visitor's Center and the Oroville Wildlife Area (OWA).

The OWA comprises approximately 11,000-acres west of Oroville that is managed for wildlife habitat and recreational activities. It includes the Thermalito Afterbay and surrounding lands (approximately 6,000 acres) along with 5,000 acres adjoining the Feather River. The 5,000 acre area straddles 12 miles of the Feather River, which includes willow and cottonwood lined ponds, islands, and channels. Recreation areas include dispersed recreation (hunting, fishing, and bird watching), plus recreation at developed sites, including Monument Hill day use area, model airplane grounds, three boat launches on the Afterbay and two on the river, and two primitive camping areas. California Department of Fish and Game's (DFG) habitat enhancement program includes a wood duck nest-box program and dry land farming for nesting cover and improved wildlife forage. Limited gravel extraction also occurs in a number of locations.

1.3 CURRENT OPERATIONAL CONSTRAINTS

Operation of the Oroville Facilities varies seasonally, weekly and hourly, depending on hydrology and DWR objectives. Typically, releases to the Feather River are managed to conserve water while meeting a variety of water delivery requirements, including flow, temperature, fisheries, recreation, diversion and water quality. Lake Oroville stores winter and spring runoff for release to the Feather River as necessary for Project purposes. Meeting the water supply objectives of the SWP has always been the primary consideration for determining Oroville Facilities operation (within the regulatory constraints specified for flood control, in-stream fisheries, and downstream uses). Power production is scheduled within the boundaries specified by the water operations criteria noted above. Annual operations planning is conducted for multi-year carry over. The current methodology is to retain half of the Lake Oroville storage above a specific level for subsequent years. Currently, that level has been established at 1,000,000 acre-feet (af); however, this does not limit draw down of the reservoir below that level. If hydrology is drier than expected or requirements greater than expected, additional water would be released from Lake Oroville. The operations plan is updated regularly to reflect changes in hydrology and downstream operations. Typically, Lake Oroville is filled to its maximum annual level of up to 900 feet above mean sea level (msl) in June and then can be lowered as necessary to meet downstream requirements, to its minimum level in December or January. During drier years, the lake may be drawn down more and may not fill to the desired levels the following spring. Project operations are directly constrained by downstream operational constraints and flood management criteria as described below.

1.3.1 Downstream Operation

An August 1983 agreement between DWR and DFG entitled, "Agreement Concerning the Operation of the Oroville Division of the State Water Project for Management of Fish

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& Wildlife,” sets criteria and objectives for flow and temperatures in the low flow channel and the reach of the Feather River between Thermalito Afterbay and Verona. This agreement: (1) establishes minimum flows between Thermalito Afterbay Outlet and Verona which vary by water year type; (2) requires flow changes under 2,500 cfs to be reduced by no more than 200 cfs during any 24-hour period, except for flood management, failures, etc.; (3) requires flow stability during the peak of the fall-run Chinook spawning season; and (4) sets an objective of suitable temperature conditions during the fall months for salmon and during the later spring/summer for shad and striped bass.

1.3.1.1 Instream Flow Requirements

The Oroville Facilities are operated to meet minimum flows in the Lower Feather River as established by the 1983 agreement (see above). The agreement specifies that Oroville Facilities release a minimum of 600 cfs into the Feather River from the Thermalito Diversion Dam for fisheries purposes. This is the total volume of flows from the diversion dam outlet, diversion dam power plant, and the Feather River Fish Hatchery pipeline.

Generally, the instream flow requirements below Thermalito Afterbay are 1,700 cfs from October through March, and 1,000 cfs from April through September. However, if runoff for the previous April through July period is less than 1,942,000 af (i.e., the 1911-1960 mean unimpaired runoff near Oroville), the minimum flow can be reduced to 1,200 cfs from October to February, and 1,000 cfs for March. A maximum flow of 2,500 cfs is maintained from October 15 through November 30 to prevent spawning in overbank areas that might become de-watered.

1.3.1.2 Temperature Requirements

The Diversion Pool provides the water supply for the Feather River Fish Hatchery. The hatchery objectives are 52°F for September, 51°F for October and November, 55°F for December through March, 51°F for April through May 15, 55°F for last half of May, 56°F for June 1-15, 60°F for June 16 through August 15, and 58°F for August 16-31. A temperature range of plus or minus 4°F is allowed for objectives, April through November.

There are several temperature objectives for the Feather River downstream of the Afterbay Outlet. During the fall months, after September 15, the temperatures must be suitable for fall-run Chinook. From May through August, they must be suitable for shad, striped bass, and other warmwater fish.

The National Marine Fisheries Service has also established an explicit criterion for steelhead trout and spring-run Chinook salmon. Memorialized in a biological opinion on

the effects of the Central Valley Project and SWP on Central Valley spring-run Chinook and steelhead as a reasonable and prudent measure; DWR is required to control water temperature at Feather River mile 61.6 (Robinson's Riffle in the low-flow channel) from June 1 through September 30. This measure requires water temperatures less than or equal to 65°F on a daily average. The requirement is not intended to preclude pump-back operations at the Oroville Facilities needed to assist the State of California with supplying energy during periods when the California ISO anticipates a Stage 2 or higher alert.

The hatchery and river water temperature objectives sometimes conflict with temperatures desired by agricultural diverters. Under existing agreements, DWR provides water for the Feather River Service Area (FRSA) contractors. The contractors claim a need for warmer water during spring and summer for rice germination and growth (i.e., 65°F from approximately April through mid May, and 59°F during the remainder of the growing season). There is no obligation for DWR to meet the rice water temperature goals. However, to the extent practical, DWR does use its operational flexibility to accommodate the FRSA contractor's temperature goals.

1.3.1.3 Water Diversions

Monthly irrigation diversions of up to 190,000 (July 2002) af are made from the Thermalito Complex during the May through August irrigation season. Total annual entitlement of the Butte and Sutter County agricultural users is approximately 1 maf. After meeting these local demands, flows into the lower Feather River continue into the Sacramento River and into the Sacramento-San Joaquin Delta. In the northwestern portion of the Delta, water is pumped into the North Bay Aqueduct. In the south Delta, water is diverted into Clifton Court Forebay where the water is stored until it is pumped into the California Aqueduct.

1.3.1.4 Water Quality

Flows through the Delta are maintained to meet Bay-Delta water quality standards arising from DWR's water rights permits. These standards are designed to meet several water quality objectives such as salinity, Delta outflow, river flows, and export limits. The purpose of these objectives is to attain the highest water quality, which is reasonable, considering all demands being made on the Bay-Delta waters. In particular, they protect a wide range of fish and wildlife including Chinook salmon, Delta smelt, striped bass, and the habitat of estuarine-dependent species.

1.3.2 Flood Management

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The Oroville Facilities are an integral component of the flood management system for the Sacramento Valley. During the wintertime, the Oroville Facilities are operated under flood control requirements specified by the U.S. Army Corps of Engineers (USACE). Under these requirements, Lake Oroville is operated to maintain up to 750,000 af of storage space to allow for the capture of significant inflows. Flood control releases are based on the release schedule in the flood control diagram or the emergency spillway release diagram prepared by the USACE, whichever requires the greater release. Decisions regarding such releases are made in consultation with the USACE.

The flood control requirements are designed for multiple use of reservoir space. During times when flood management space is not required to accomplish flood management objectives, the reservoir space can be used for storing water. From October through March, the maximum allowable storage limit (point at which specific flood release would have to be made) varies from about 2.8 to 3.2 maf to ensure adequate space in Lake Oroville to handle flood flows. The actual encroachment demarcation is based on a wetness index, computed from accumulated basin precipitation. This allows higher levels in the reservoir when the prevailing hydrology is dry while maintaining adequate flood protection. When the wetness index is high in the basin (i.e., wetness in the watershed above Lake Oroville), the flood management space required is at its greatest amount to provide the necessary flood protection. From April through June, the maximum allowable storage limit is increased as the flooding potential decreases, which allows capture of the higher spring flows for use later in the year. During September, the maximum allowable storage decreases again to prepare for the next flood season. During flood events, actual storage may encroach into the flood reservation zone to prevent or minimize downstream flooding along the Feather River.

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2.0 NEED FOR STUDY

Specific tasks of the SP-L2 study are required by FERC under 18 CFR 4.51 (6)(iii) as part of the relicensing process. The purpose of the SP-L2 study is to research, describe, and graphically display the management direction of Study Area lands and identify the entities that are responsible for managing those lands. FERC requires that DWR understand land management directives and the entities which regulate them in order to appropriately manage Project lands and operations. This also helps DWR plan for future activities that may influence lands, such as enhancement measures proposed by work groups.

Existing land management actions by jurisdictions and agencies in the Study Area is the baseline condition that will be used by DWR decision-making regarding relicensing issues and potential PME measures. Additionally, FERC requires that licensees cooperate with local, state, and federal agencies regarding lands adjacent to the Study Area.

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3.0 STUDY OBJECTIVE(S)

3.1 APPLICATION OF STUDY INFORMATION

The application of the Interim Draft Report will assist in identifying the entities that manage the lands within the Study Area. In addition, the study will identify the policies and objectives used to manage those lands. The information presented in this Report will also be used in the Preliminary Draft Environmental Assessment to evaluate the effects of alternatives on the management of land within and abutting the FERC boundary.

There are no known studies that address the issue of land management for the entire Study Area. Information from entities that have compiled land management data related to the Study Area, such as Butte County, the City of Oroville, the California DWR, DPR, DFG, the United States Forest Service and BLM has been gathered and utilized as part of this study.

3.1.1 Other Studies

Preparation of the Interim Draft SP-L2 Report required extensive coordination with other studies that have or are being prepared as part of the Project relicensing effort. Study SP-L2 has and will require coordination with Studies SP-L1 (Land Use), SP-L3 (Comprehensive Plans), SP-L4 (Aesthetics), SP-R4 (Assess Relationship of Fish/Wildlife Management and Recreation), SP-R5 (Assess Recreation Areas Management), SP-T6 (Interagency Wildlife Management Coordination and Wildlife Plan Development), SP-F5 (Project Effect of FERC Project Fisheries Management Plans on a Balanced Fishery of Resident and Anadromous Fish), and SP-C3 (Cultural Resource Management).

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4.0 METHODOLOGY

4.1 STUDY DESIGN

This study consisted of evaluating land management responsibilities and plans within the Study Area, interviewing planners and managers from relevant land and resource management entities, and reviewing relevant literature.

FERC has identified relevant comprehensive plans to be considered during Project review. Other relevant land use oriented comprehensive and resource management plans that were known to staff or identified by the LUWG were also obtained and reviewed. Resource Area Managers (RAMS) from other work groups identified and described additional relevant land management oriented comprehensive or resource management plans that were included in this evaluation. Relevant policy and management directives from these plans were evaluated and used as the basis for questionnaires with land managers.

Interviews were conducted with personnel from land management agencies and jurisdictions to assess whether management plans were up-to-date or if changes to plans were anticipated, and to identify new plans or policies. Planned and/or potential development activities of the entity that could influence the management direction of lands within the Study Area were reported. In addition, land managers identified the current challenges they face (such as budgetary, staffing, coordination, conflicts) which may influence existing and/or potential Study Area land management. Land management issues were also solicited from the Environmental and Land Use and Aesthetics Work Group members. From these discussions, lands within the Study Area were evaluated and their land management directives described.

Maps were developed to display land management responsibilities and management patterns within the Study Area. GIS layers from sources such as Butte County, USFS, DWR, and the BLM along with information from hard copy maps were added to a GIS database to allow the research team to develop management maps of the entire Study Area. The maps display the lands, their associated management entities, management classifications, and overall management direction. After the preliminary maps were completed, management agency staff and Environmental and Land Use work group members reviewed them to ensure that they were up-to-date and accurate.

Researchers will use this data in the Draft Final Report to conduct an opportunity and constraints analysis to evaluate the cause and effect of land management limitations within the Study Area and to create approaches for resolving land management conflicts associated with the Project in the future.

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5.0 LAND MANAGEMENT IN THE STUDY AREA

5.1 INTRODUCTION

This chapter describes the public and private entities that manage lands within the Study Area, identifies the management direction of these lands according to land use and resource management plans, and provides a discussion of the existing management practices of each responsible agency.

Lands, facilities, and recreational interests in the Study Area are managed and administered by a number of state and federal agencies, including the California Department of Water Resources (DWR), the California Department of Parks and Recreation (DPR), the California Department of Fish and Game (DFG), the California Department of Boating and Waterways (DBW), the United States Department of Agriculture Forest Service (USFS), and the United States Department of Interior Bureau of Land Management (BLM). (Because the DBW oversees water activities rather than land management in the Study Area, the DBW management responsibilities are not specifically addressed in this report. Refer to Resource Report R-4 for additional information on the DBW management conditions.) The management responsibilities of each agency and the property conditions are detailed in a series of deeds, agreements, and transfers between the agencies involved. Figure 5.1-1 provides a summary of the existing public facilities and jurisdictional boundaries within the Oroville vicinity for the purpose of this discussion.

Table 5.1-1 provides a summary of the amount of land managed by each entity within both the FERC boundary and Study Area. Figure 5.1-2 illustrates the geographical location of these areas by land managers. Prior to 1961, the DWR managed approximately half of the 70,000-acre Study Area on behalf of the State of California, all of which is located within the FERC boundary. In 1961, the California Legislature passed the Davis-Dolwig Act (State Water Code in 11900-11925), which made the DWR responsible for acquiring land and planning for recreation and fish and wildlife enhancement as part of the SWP. The State of California holds fee-title ownership to all State lands within the FERC boundary. DWR is considered the “maintaining” or “controlling” agency of these lands.

The Davis-Dolwig Act also identified three other State stakeholders: DPR, DFG, and DBW. DPR and DFG have land management authority within the Study Area. To fulfill the Act’s directive, DWR transferred management rights of the majority of State-owned land within the Study Area to these agencies under a “transfer of control and possession,” a legal document that gives the receiving agency an easement to carry out management and maintenance responsibilities. In total, DWR transferred recreation interests of approximately 23,000 acres to DPR and approximately 12,000 acres to

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DFG. These lands primarily constitute the LOSRA and Oroville Wildlife Area (OWA), respectively. The transfer of these interests is in addition to and consistent with the statewide management responsibilities of the DPR and DFG. In general, DPR is charged with statewide management of public recreation facilities and DFG is charged with statewide management of fish and wildlife habitats / associated recreation facilities. (Several exceptions to the general state agency management roles occur within the Study Area and are discussed further in Section 5.3.)

As a result of the transactions that occurred under the Davis-Dolwig Act, DWR now has primary management responsibilities for approximately 3 percent of the Study Area, including several recreation facilities within the Thermalito Afterbay. Despite the DPR and DFG management and maintenance responsibilities, DWR does bear the ultimate responsibility under the current FERC license for ensuring funding, development, and management of current and future recreation facilities. In addition, the Davis-Dolwig Act requires DWR to plan for and acquire land for recreation in conjunction with all State water projects. In keeping with its responsibility, DWR works with DPR and DFG to provide for recreational opportunities and funding throughout the Study Area. In doing so, agency management roles may overlap. Section 5.3 discusses the relationship between these agencies in detail.

Table 5.1-1. Summary of Public Entity Land Management.

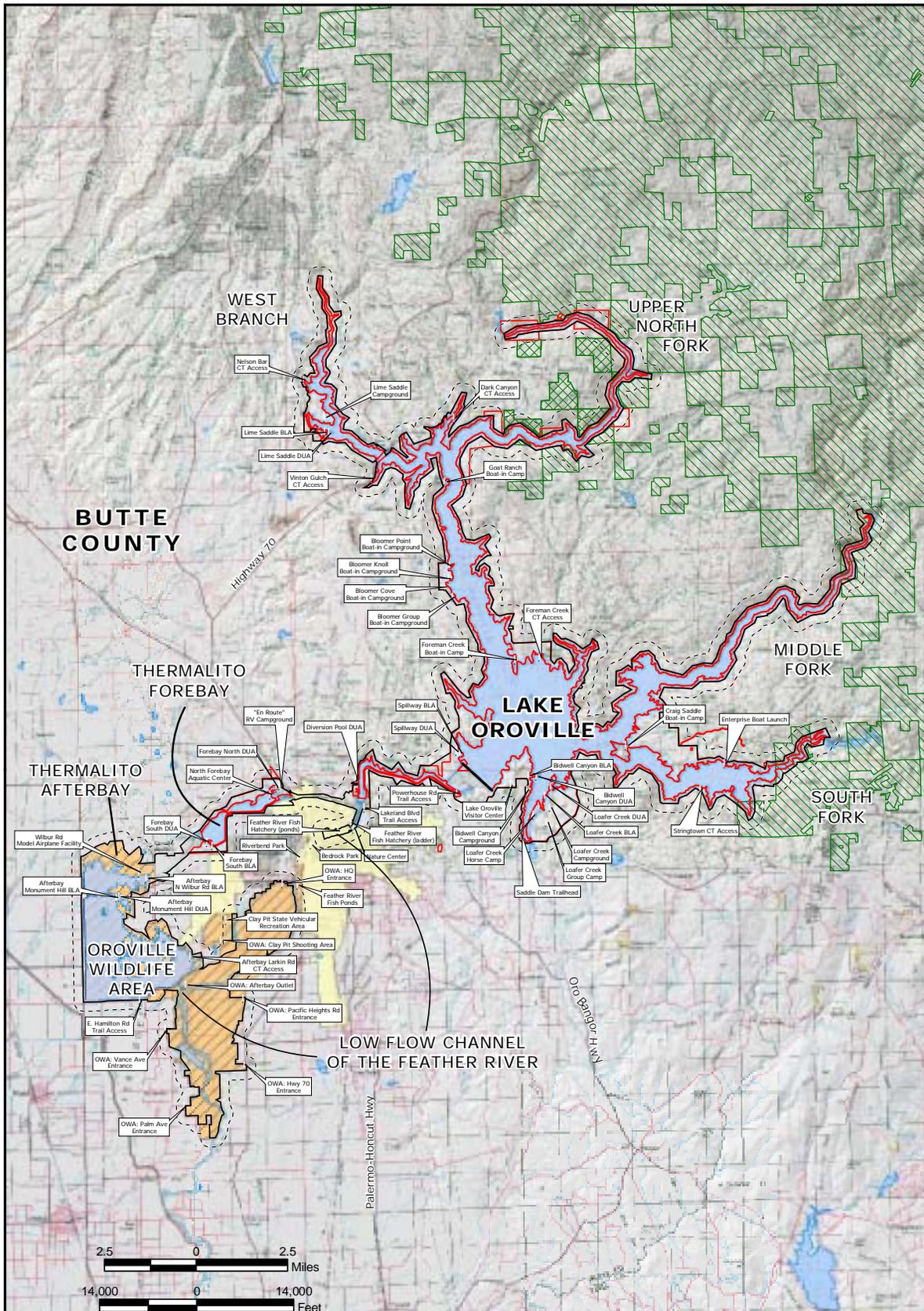
PUBLIC ENTITIES	ACRES OF MANAGEMENT			
	Inside FERC Boundary	Inside Study Area/Outside FERC Boundary	TOTAL	Percent of Total
Federal				
Forest Service*	2,039	2,755	4,794	7%
Bureau of Land Management	3,852	2,021	5,873	8%
Bureau of Indian Affairs	0	0	0	0%
Other	0	0	0	0%
Subtotal Federal (Public)	5,891	4,776	10,667	
State				
CA Dept. of Water Resources	1,954	252	2,206	3%
CA Dept. of Parks and Recreation	22,069**	873	22,942	32%
CA Dept. of Fish and Game	11,228	838	12,066	17%
Other	0	0	0	0%
Subtotal State (Public)	35,251	1,963	37,214	
Local Jurisdictions	Private/Local Lands Subject to Local Land Management			
Butte County	0	21,574	21,574	31%
City of Oroville	0	1,147	1,147	2%
Subtotal Local (Private)	0	22,721	22,721	
TOTAL	41,142	29,460	70,602**	100%

Source: Butte County 2003, staff review of acreage totals from USFS, BLM, DWR, DPR, DFG, and City of Oroville, EDAW 2003.

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Note: *Includes all management authority except for recreation and law enforcement, which was transferred to DPR. **Acreage summaries under evaluation.

Insert Figure 5.1-1. Oroville Relicensing Study Area



LEGEND

- (Existing Facility
- Lake Oroville State Recreation Area (LOSRA)
- Oroville Wildlife Area (OWA)
- City of Oroville
- Plumas National Forest
- Lassen National Forest
- Water Bodies
- FERC Boundary
- FERC Study Area

Sources: DWR 2003, BLM 2003, USFS 2003, EDAW 2003

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3

**FIGURE 5.1-1
OROVILLE RELICENSING
STUDY AREA**



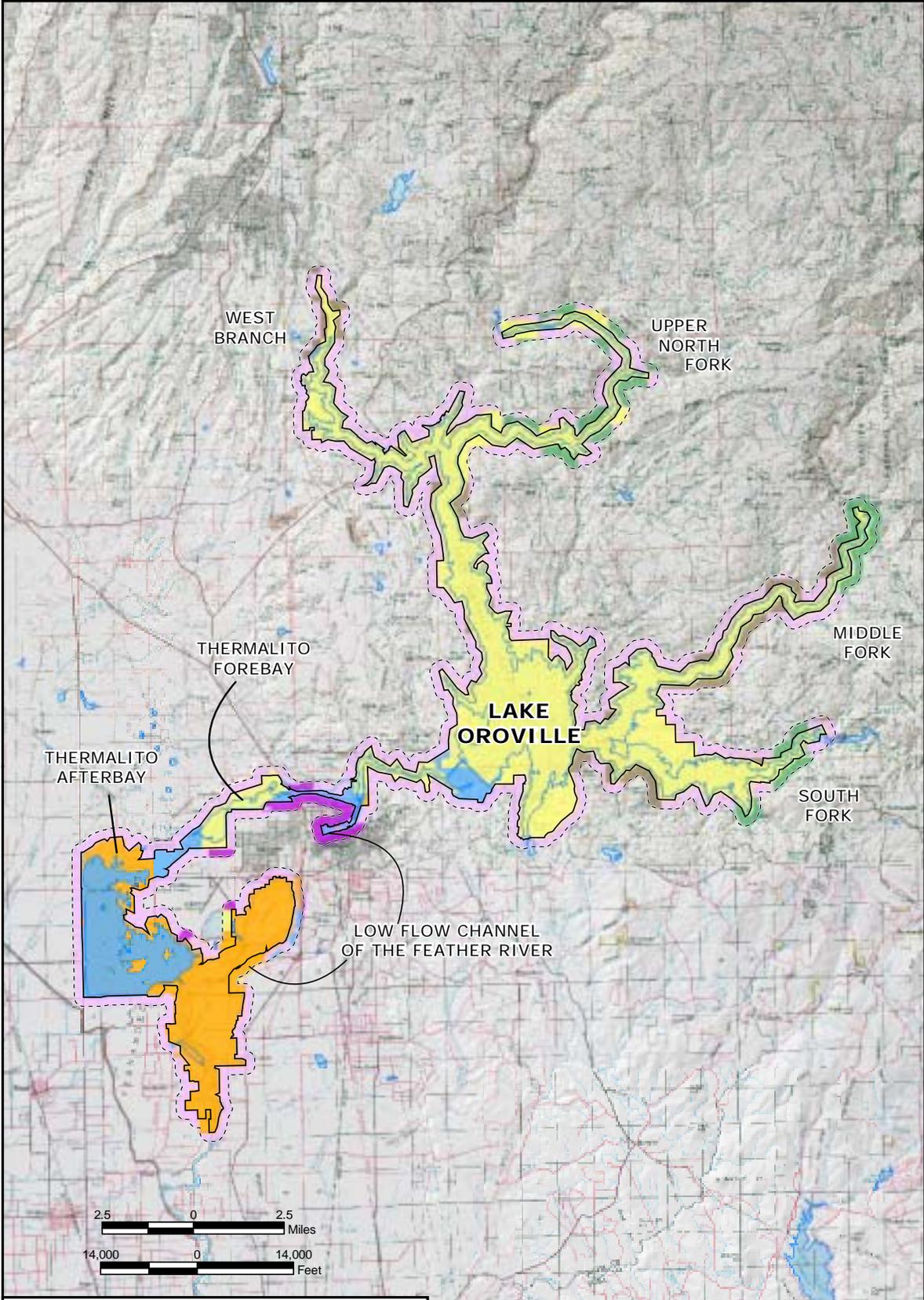
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Insert back of Figure 5.1-1. Oroville Relicensing Study Area

insert Figure 5.1-2 . Land Management Responsibility in the Oroville Relicensing Study Area by Jurisdiction



LEGEND

CA Department of Parks and Recreation	City of Oroville/Private
CA Department of Fish and Game	County of Butte/Private
CA Department of Water Resources	Water Bodies
US Forest Service	FERC Boundary
US Bureau of Land Management	FERC Study Area

Sources: DWR 2003, BLM 2003, USFS 2003, EDAW 2003

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3 FIGURE 5.1-2
PRIMARY
LAND MANAGEMENT
RESPONSIBILITY



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Insert back of Figure 5.1-2 Land Management Responsibility in the Oroville Relicensing Study Area by Jurisdiction

DPR and DFG are responsible for managing approximately 32 and 17 percent of the Study Area, respectively (Table 5.1-1). As indicated in Figure 5.1-1, other public entities manage significantly less land within the Study Area. The federal agencies, USFS and BLM, are responsible for managing approximately 7 and 8 percent of the lands within the Study Area, respectively. The remaining 33 percent of the Study Area, which is located outside of the FERC boundary, is in private ownership. These lands are located within Butte County and the City of Oroville and receive land management direction under County and/or City zoning.

The following sections provide a detailed overview of the existing land management conditions within the FERC boundary and Study Area by management entity. A description of the primary land managers within the Study Area, illustrations of geographic locations and acreages of managed lands, and the direction identified in existing resource management prescriptions or zoning districts is provided.

5.2 LAND MANAGED BY FEDERAL AGENCIES

The federal government owns approximately 11,000 acres, or approximately 16 percent, of the total Study Area. (A detailed discussion of land ownership is provided in Resource Report L-1.) The federal agencies of the USFS and BLM manage approximately 11,000 acres of land combined in the Study Area, or approximately 15 percent of the total Study Area (Figure 5.1-2). National Forest System lands are part of the Plumas and Lassen National Forests. BLM lands consist of scattered, noncontiguous parcels that are managed under the direction of the Redding Resource Management Plan (RRMP). Federal agency management direction and conditions over Study Area lands are described in detail below.

5.2.1 National Forest System Lands

The USFS is an agency of the United States Department of Agriculture. The agency's mission statement is: "To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations" (USFS Website). The USFS manages approximately 2,600 acres of land located in the Upper North Fork, the Middle Fork, and South Fork of the Feather River within both the FERC boundary and the Study Area. Approximately 95 percent of these lands are within the Plumas National Forest and the remainder, located in the Upper North Fork, fall within the Lassen National Forest (Figure 5.1-2).

5.2.1.1 USFS Management Direction

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As mentioned previously, National Forest System lands in the Study Area are part of the Plumas and Lassen National Forests. Both Forests are managed under the 1988 Plumas National Forest Land and Resource Management Plan (Forest Plan) (USFS 1988). In addition, management of these lands is influenced by the more recent Sierra Nevada Forest Plan Amendment (Plan Amendment). Management of these lands is also influenced by the more recent 2001 Sierra Nevada Forest Plan Amendment (Framework). The Forest Plan establishes the management goals and policies that direct the management of the Forest over 10 to 15 years (the “planning period”) and helps meet long term objectives over a 50 year period (the “planning horizon”). The Forest Plan also prescribes management practices for specified areas and time periods needed to obtain these objectives. The policies for the lands in the areas near the Project primarily emphasize resource conservation, provision of high quality recreational opportunities, and protection of visual resources.

In general, most of the National Forest System lands within the Study Area are located within the Feather River Ranger District of the Plumas National Forest. These lands have minimal management direction due to the unproductive or unsuitable nature of these properties (USFS 1988). Several exceptions to this direction exist within each of the three river branches. In the Upper North Fork, a small portion of lands are to be managed for intensive timber production. In the Middle Fork within or in close proximity to the Feather Falls Scenic Area, lands are to be managed as special interest areas and have been withdrawn from production. A small portion of National Forest System lands along the South Fork are prescribed for visual retention and are to be managed for low intensity timber production (Figure 5.2-1A through 5.2-1C).

The Forest Plan has assigned management areas to all Forest lands, including lands within the Study Area and within the FERC boundary. There are four management areas for Forest lands near the Project. Each management area has general guidelines for achieving resource objectives along with standards and guidelines for managing the various resources such as recreation, visual resources, wildlife, and timber. Lands within each management area have been assigned a management prescription, which prescribes the specific management direction for all resources and land within the management area.

Each management prescription has a different management emphasis. Along with specific standards and guidelines, the management prescriptions also contain general guidelines for achieving resource objectives within the management area. Figure 5.2-1A through 5.2-1C illustrates the USFS management direction for these properties by management area and management prescriptions.

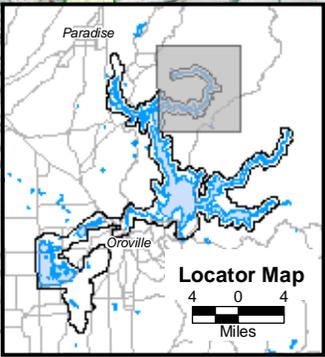
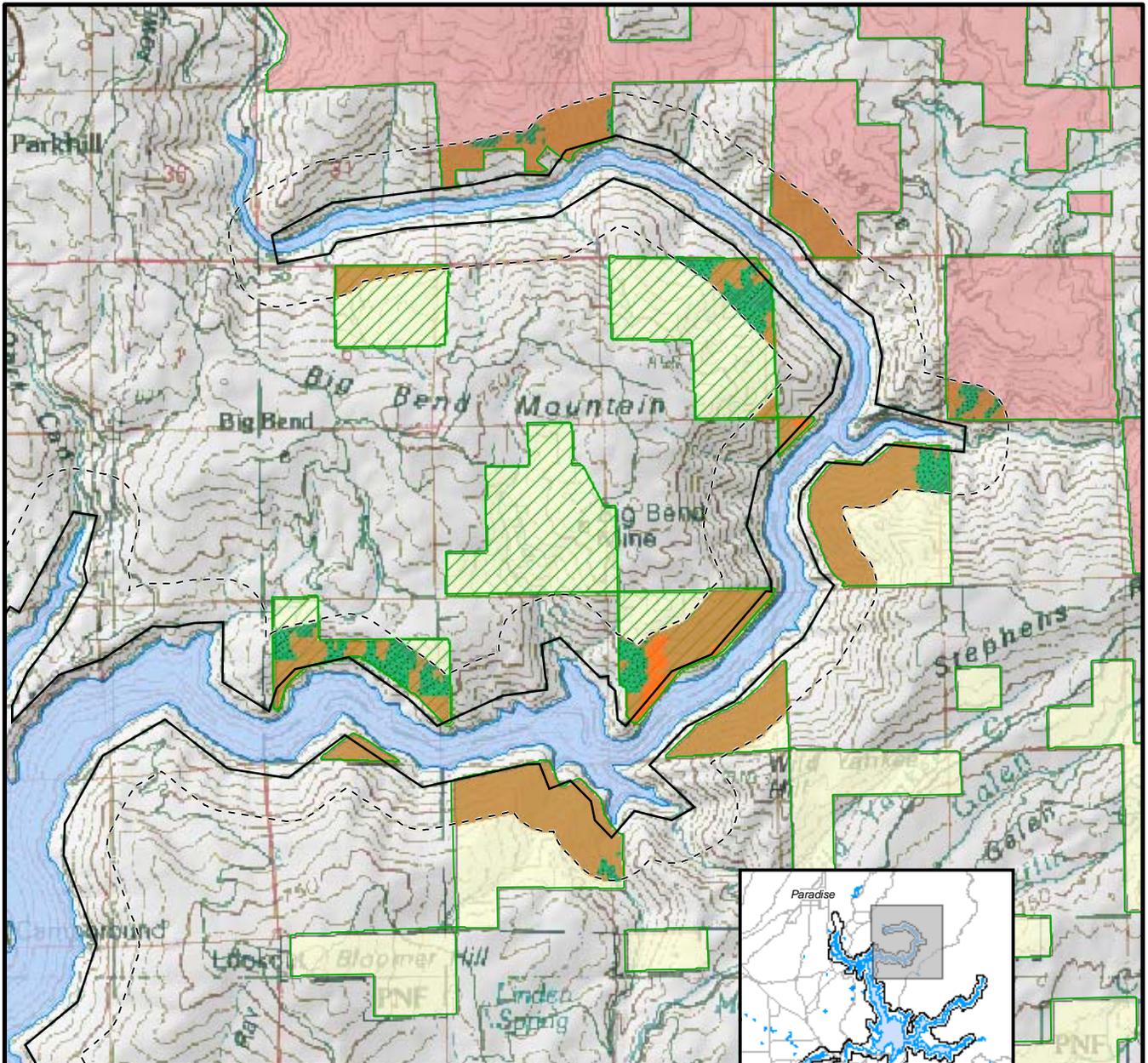
As indicated in Figure 5.2-1A through 5.2-1C, the French Creek Management Area overlaps with the Study Area along the northeastern bank of the Upper North Fork near the confluence of French Creek with the Upper North Fork. The Galen Management

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Area overlaps with the Study Area along the southern bank of the Upper North Fork near the confluence with French Creek, then along both banks of the Upper North Fork from the confluence of French Creek to the National Forest boundary approximately 4.5 miles downstream. National Forest System lands located in the far eastern reaches of

Insert Figure 5.2-1A. USFS Management Prescription in the Oroville Relicensing Study Area
11x17

Insert Back of 5.2-1. USFS Management Prescription in the Oroville Relicensing Study
Area
11x17



LEGEND

USFS Management Areas

- French Creek
- Galen

USFS Management Prescriptions

- Non-Forest Vegetation (Minimal Management-Rx7, Intensive Range-Rx16)
- Timber Regulation Class I (Timber Intensive-Rx16)
- Timber Regulation Class II (Visual Partial Retention-Rx14)
- Timber Regulation Class III (Visual Partial Retention-Rx10, Developed Recreation-Rx6, Riparian-Rx9)
- Minimal Management-Rx7 (Unproductive, Unregulated, or Unsuitable)

Water Bodies

Plumas National Forest

Lassen National Forest

FERC Boundary

FERC Study Area



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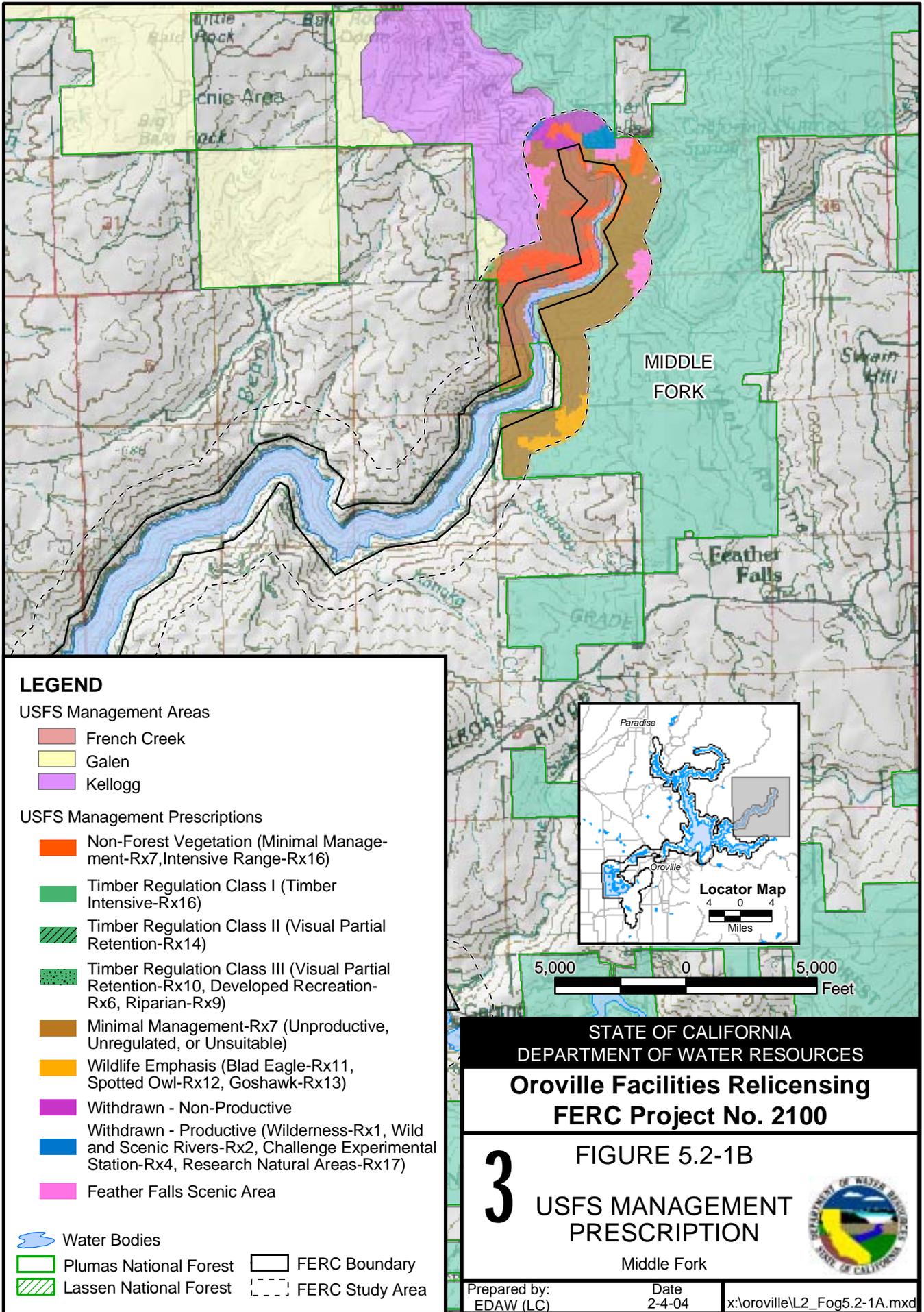
3 **FIGURE 5.2-1A**
**USFS MANAGEMENT
PRESCRIPTION**
Upper North Fork



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Sources: USFS 1994, EDAW 2003

Insert Figure 5.2-1B. USFS Management Prescription in the Oroville Relicensing Study Area
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USFS Management Areas

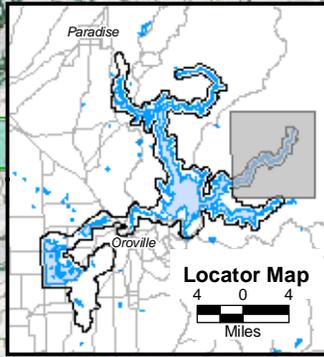
- French Creek
- Galen
- Kellogg

USFS Management Prescriptions

- Non-Forest Vegetation (Minimal Management-Rx7, Intensive Range-Rx16)
- Timber Regulation Class I (Timber Intensive-Rx16)
- Timber Regulation Class II (Visual Partial Retention-Rx14)
- Timber Regulation Class III (Visual Partial Retention-Rx10, Developed Recreation-Rx6, Riparian-Rx9)
- Minimal Management-Rx7 (Unproductive, Unregulated, or Unsuitable)
- Wildlife Emphasis (Blad Eagle-Rx11, Spotted Owl-Rx12, Goshawk-Rx13)
- Withdrawn - Non-Productive
- Withdrawn - Productive (Wilderness-Rx1, Wild and Scenic Rivers-Rx2, Challenge Experimental Station-Rx4, Research Natural Areas-Rx17)
- Feather Falls Scenic Area

Water Bodies

- Plumas National Forest
- FERC Boundary
- Lassen National Forest
- FERC Study Area



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3 **FIGURE 5.2-1B**

**USFS MANAGEMENT
PRESCRIPTION**

Middle Fork

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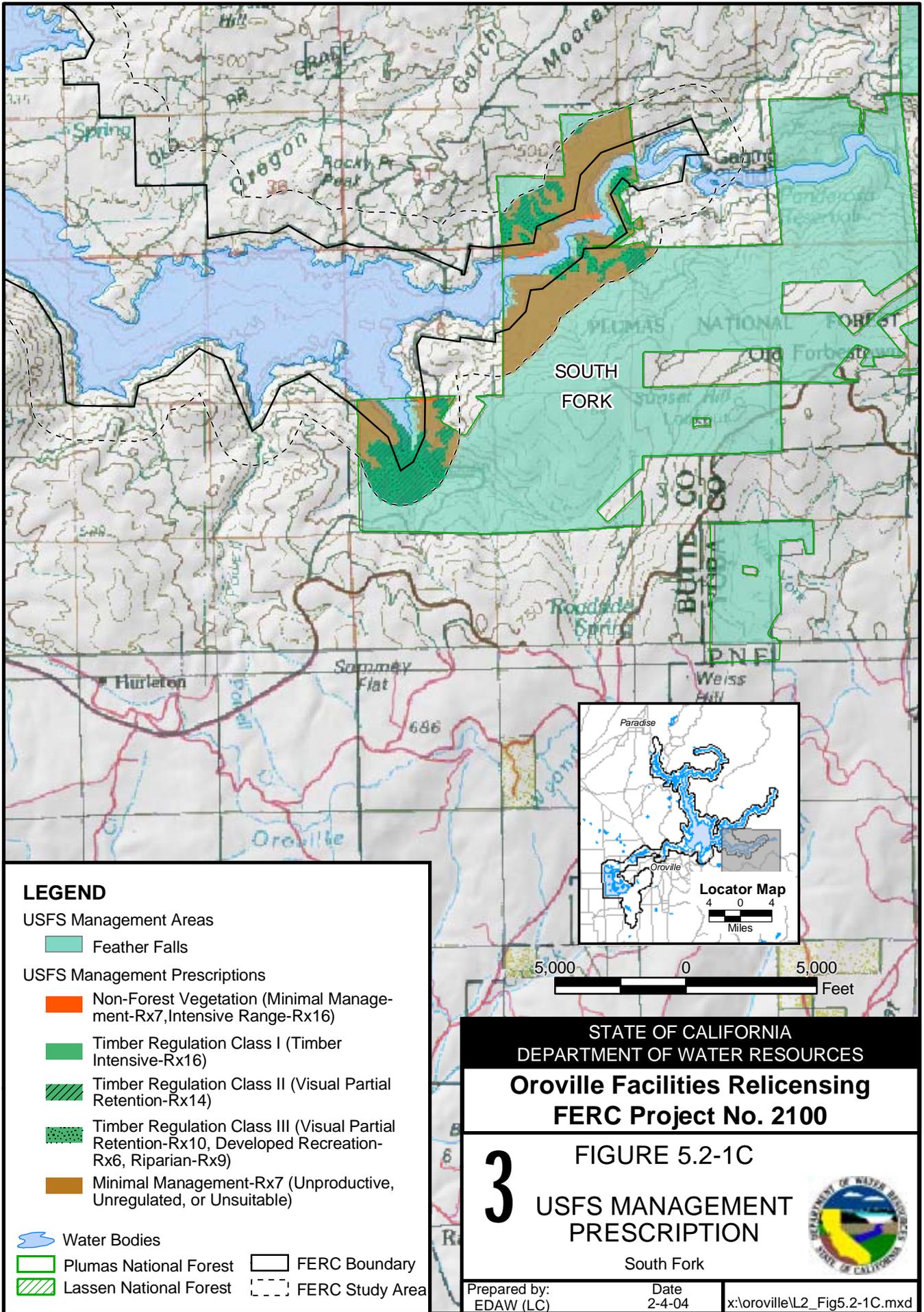
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Sources: USFS 1994, EDAW 2003

Insert Back of 5.2-1B. USFS Management Prescription in the Oroville Relicensing Study Area
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Insert Figure 5.2-1C. USFS Management Prescription in the Oroville Relicensing Study Area
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Insert Back of 5.2-1C. USFS Management Prescription in the Oroville Relicensing Study Area
11x17

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the Middle Fork with proximity to the Feather Falls Scenic Area are administered within the Kellogg Management Area. The Feather Falls Management Area also overlaps with the Study Area proximate to the Feather Falls Scenic Area, as well as National Forest System lands outside the FERC boundary along the South Fork. The Middle Fork Feather Wild and Scenic River also influences the management direction of National Forest System lands. Refer to Figures 5.2-1A through 5.2-1C for a visual depiction of the location of these areas in context of the FERC boundary.

These management areas, and their standards and policies as they relate to Lake Oroville, are summarized as follows:

- € French Creek Management Area – The French Creek Management Area is located between the North Fork of the Feather River, the Pulga-Four Trees Road, and the Oroville-Quincy Road. This management area is primarily within the watershed of French Creek, which flows into the North Fork of the Feather River within Lake Oroville. Appendix A lists the standards and guidelines for the French Creek Management Area and Management Prescriptions, as applicable to the Project.
- € Galen Management Area – The Galen Management Area extends easterly from Big Bend on the North Fork to the canyon of the Middle Fork of the Feather River. This 8,719-acre management area is bounded on the north by a segment of the North Fork Feather River and the Oroville-Quincy Road through the Brush Creek Work Center and on the south by the Forest boundary. Instability is a problem in the steep North Fork Canyon. Dispersed recreation is light due to the lack of recreational attractions and abundance of private lands. Appendix A lists the standards and guidelines for the Galen Management Area and Management Prescriptions, as applicable to the Project.
- € Kellogg Management Area – The Kellogg Management Area is a 1 to 2 mile wide corridor along the north side of the Middle Fork of the Feather River Canyon from Oroville Reservoir to near Bear Creek. Appendix A lists the primary standards and guidelines for the Kellogg Management Area and Management Prescriptions.
- € Feather Falls Management Area – The Feather Falls Management Area within the FERC Study Area extends from the Feather Falls Scenic Area in the Middle Fork south to National Forest System lands along the South Fork. Appendix A lists the primary standards and guidelines for Feather Falls Management Area and Management Prescriptions.

The Forest Service and the Department of Parks and Recreation have an agreement in place concerning management of National Forest System lands located within the Project FERC boundary. The agreement, dated March 16, 1978, allows DPR to conduct law enforcement activities on National Forest land. The Forest Service retains all other authorities. In the agreement, the Forest Service "transferred interest" in

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National Forest System lands " within project boundaries shown in Exhibit K of the FERC license No. 2100 to permit the Department of Parks and Recreation to use, and protect said lands in a manner necessary to administer them for recreation purposes and, to the extent permissible, to enforce all applicable laws and regulations thereon." The Forest Service is not interested in changing or terminating the agreement at this time, but will reevaluate the agreement during the next Forest Plan revision (pers. comm., Mike Taylor, 2004).

5.2.1.2 Existing USFS Management Conditions

Many of the existing Forest lands within the Study Area are unproductive or unsuitable for timber harvesting due to difficult terrain and/or access. These areas receive minimal management activity (USFS 1988). As a result, the majority of these National Forest System lands were managed in the past as defacto resource conservation lands. Under current National Forest fuel management direction, these lands are being considered for management if they could be a threat to nearby urbanized areas. This direction is also the result of the lack of financial resources needed to actively implement the Forest Plan (pers. comm., Mike Taylor, 2003).

The Study Area contains small parcels of scattered, noncontiguous USFS lands within the French Creek Mangement Area (in the Upper North Fork) and within the Feather Falls Management Area (in the South Fork) that are prescribed for timber production. Activities in these areas primarily include fishing, mining, and a limited amount of primitive camping (USFS 1988). Recreation in areas falling within the LOSRA boundary is managed by DPR (pers. comm., Woody Elliot, 2003).

The USFS does not actively manage facilities or activities on most lands within the Study Area. Currently, any development planned in conjunction with the Oroville Project on National Forest System lands, including construction of any facilities or infrastructure, within the National Forest must be approved by USFS prior to implementation (pers. comm., Tricia Humphreys, 2003). One portion of the Study Area that does receive active USFS management is the Feather Falls Scenic Area. Funded by the National Forest System Funds, the USFS maintains roads, trails and campgrounds within the Scenic Area (pers. comm., Mike Taylor, 2003).

The Forest Service provides law enforcement to address illegal activities that take place on National Forest System lands within the Study Area. Some of these activities include illegal dumping of trash and drug production lab debris as well as vandalism of cultural resource sites. At times, law enforcement is made difficult by the geographic extent of federal lands. Fire prevention personnel make contact with forest visitors during the fire season and assist with other public service activities as needed (pers. comm., Mike Taylor, 2003).

5.2.2 BLM Lands

The BLM, an agency of the United States Department of the Interior, operates with the mission “to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.” BLM manages approximately 2,000 acres of land in scattered, noncontiguous parcels located along the West Branch, the Lower North, Middle, and South Forks of the Feather River outside of the FERC boundary but within Study Area. Of the total acres of BLM administered public lands within the Study Area, approximately half are submerged under Lake Oroville. The rest is located above the waters of the lake. Figure 5.2-2 illustrates the locations of these lands within the Study Area.

5.2.2.1 BLM Management Direction

BLM is responsible for scattered lands managed under the direction of the 1993 Redding Resource Management Plan (RRMP). The RRMP directs the management of public lands and Federal mineral estates that are administered by the BLM within the Redding Resource Area (RRA) of north central California. Lands managed by BLM in and around the Study Area are designated as "undeveloped public lands." The four main land use issues addressed in the RRMP are land tenure adjustment, recreation management, access, and forest management.

The RRA consists of more than a thousand individual parcels of public land, scattered through five counties in northern California. To adequately address management issues in such a large geographic area, the RRA is divided into seven geographically distinct management areas, including: Scott Valley, Klamath, Trinity, Shasta, Sacramento River, Ishi, and Yolla Bolly. The Study Area is located within the Ishi Management Area.

The Ishi Management Area is divided further into seven sub-areas, which include: Battle Creek, Deer Creek, Forks of Butte Creek, Minnehaha Mine, Upper Ridge Nature Preserve, Baker Cypress, and the Remainder of the Management Area. The Study Area lands are located within the Remainder of the Management Area sub-area, which consists of scattered BLM lands. Within each sub-area are numbered resource condition objectives which indicate how lands in the sub-areas are to be managed. The resource condition objectives for the Remainder of the Management Area sub-area that apply to the Project are listed below (by number from the RRMP).

- (1) Enhance the resource management efficiency and public service mission of local, state, and Federal agencies via transfer of specific public lands from BLM.

- (2) Enhance the ability to acquire high value resource lands within the Redding Resource Area by disposal of scattered public land interests within the Ishi Management Area.
- (5) Transfer via the Recreation and Public Purpose Act (R&PP) or exchange to a qualified state/local agency or non-profit organization administrative responsibility of six parcels of public land encompassing approximately 800 acres in the West Branch Feather River (between Magalia Reservoir and Lake Oroville).
- (7) Transfer via exchange or R&PP to the State of California all surface and submerged public lands, which encompasses approximately 6,900 acres within and adjacent to the LOSRA (approximately 3,900 acres within LOSRA and 3,000 acres immediately adjoining LOSRA are available for transfer to the State of California). All lands identified by California or BLM as excess to park needs will be offered for exchange to any party after 2 years from approval of the Final RMP.
- (8) 200 acres of public land near the Middle Fork Feather River are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional support is unavailable, offer for exchange to any party after 5 years from the approval of the Final RMP.

BLM lands within the Study Area are designated for transfer to the State of California to “Enhance the resource management efficiency and public service mission of local, state, and Federal agencies via transfer of specific public lands from BLM” (BLM, 1993). Transfer is planned to occur via an application under the R&PP of 1926 (as amended) or via an exchange of title for surplus State of California lands based on an appraisal of fair market value. Interest exists in transferring the surplus BLM public lands via Federal legislation since the acreage involved exceeds the annual limit permissible under the R&PP Act. BLM began this process by transferring roughly 300 acres to the State under the R&PP (pers. comm., Eric Ritter, 2003).

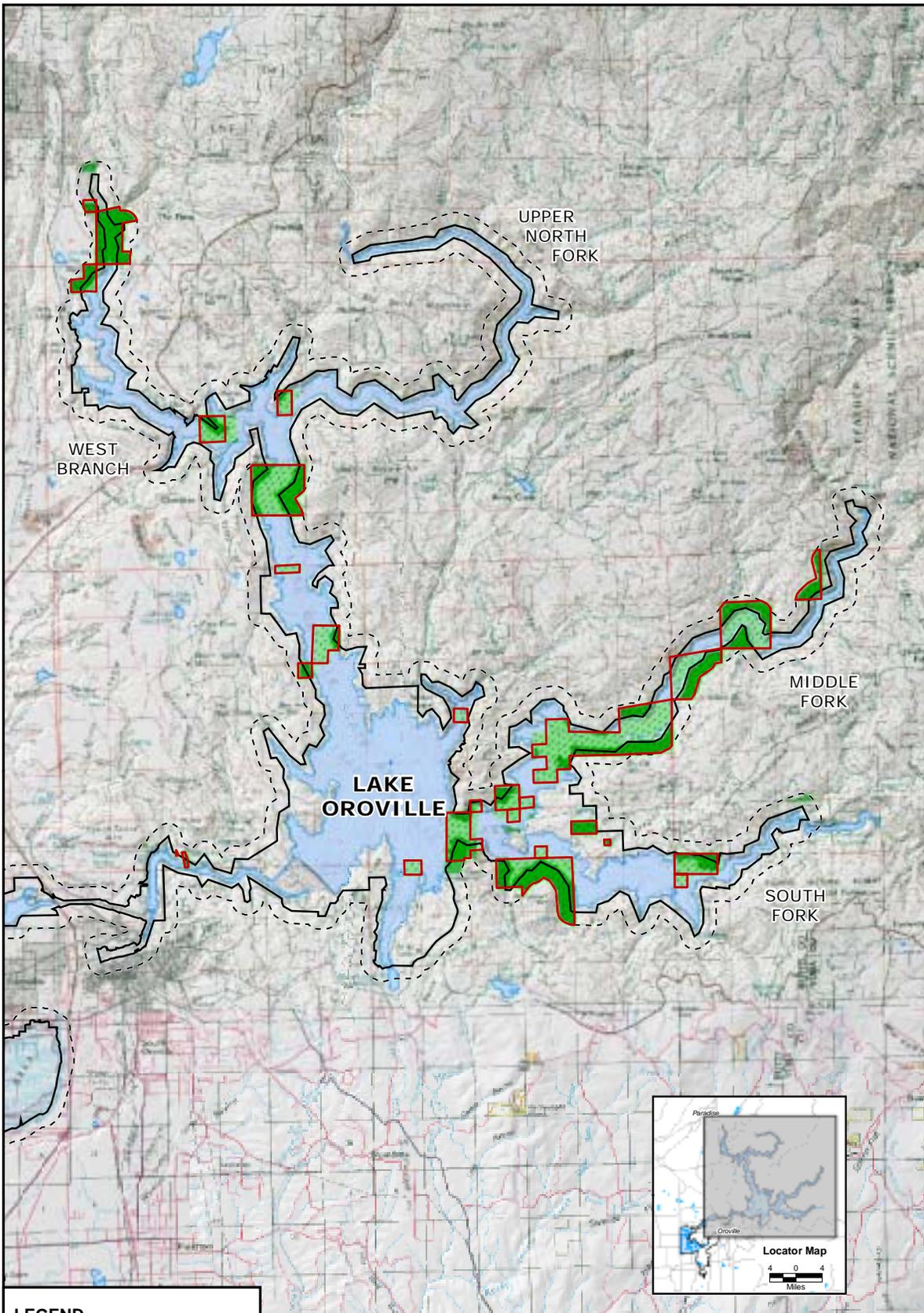
No statutes contravene the management decision to transfer the surplus Federal lands. Prior to transfer under R&PP, exchange or, legislative mandate, BLM must comply with the National Environmental Policy Act, Endangered Species Act, the National Historic Preservation Act and the American Indian Religious Freedom Act, as appropriate, to: disclose the environmental consequences of the action, consider impacts to critical habitat or special status species, assess effects to cultural resources considered eligible for inclusion in the National Register of Historic Places and provide for free expression of traditional religious practices respectively. Some or all of these requirements could be lessened or waived, e.g. resource inventories, depending on agreement(s) between the State of California and the United States or the specifics of legislation, if applicable, regarding the proposed transfer(s).

5.2.2.2 Existing BLM Management Conditions

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In general, the BLM lands in the Study Area contain semi-primitive roads with views of Lake Oroville. Surplus public lands in the Study Area receive very little active management by BLM (BLM 1993). Recreation use of these lands is managed by DPR as part of the LOSRA (pers. comm., Kelly Williams, 2003).

Insert Figure 5.2-2



LEGEND

- BLM Lands Considered for Potential Transfer
- BLM Lands Considered for Potential Transfer in Water
- BLM Lands Within Study Area
- Water Bodies
- FERC Boundary
- FERC Study Area

Sources: BLM 1993, BLM 2003, EDAW 2003



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FIGURE 5.2-2

BLM LAND
MANAGEMENT AREAS

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No management agreements between BLM and the State agencies exist within the Study Area. The lands within the FERC boundary, primarily within the LOSRA, have been withdrawn from entry under a variety of public land laws due to a reservation for the reservoir project (pers. comm., Francis Berg, 2003).

At an operational level, BLM has prioritized the following management objectives for lands in and near the Study Area (pers. comm., Francis Berg, 2003):

1. Identify what lands are of specific interest to the State of California within the FERC Study Area;
2. Design the mechanism(s) to effect transfer of surplus federal lands to the State of California; and
3. Complete transfer.

BLM has expressed its need to surplus properties with public agencies. The DPR and the U.S. Bureau of Indian Affairs (on behalf of four federally recognized tribes) have submitted applications to the BLM for land transfer sites within the Study Area in the vicinity of Stringtown Mountain along the South Fork of the Feather River. This area is of great cultural interest to the four recognized tribes in the Oroville area.

Cultural issues are the largest management issues facing the BLM today (pers. comm., Howard Matzat, 2003). As previously mentioned, several public and private groups are interested in the Martin Cemetery and Stringtown Mountain vicinity where cultural resources are known to exist. Martin Cemetery is an approximately 10 acre parcel located within the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 35, T20N, R5E (MDBM) and is an historic and contemporary graveyard. The cemetery and sacred sites proximate to Stringtown Mountain are used by local Koncow-Maidu descendents (pers. comm., Ilene Emery, 2003; Francis Berg, 2003).

The Redding Field Office employs two rangers that are responsible for covering the entire RRA. Two specific security issues associated with BLM public lands have arisen. The agency attempts to respond to service calls associated with trespassing and illegal dumping on BLM lands within the Study Area as well as the raiding of known sacred Koncow-Maidu tribal sites. However, the agency's ability to respond is compromised by the distance of these lands to field offices and existing work load demands (pers. comm., Francis Berg, 2003).

5.3 LAND MANAGED BY STATE AGENCIES

The State of California owns and manages approximately 43,000 acres of land in the Study Area, or 68 percent of the total Study Area (see Table 5.1-1). DWR, DPR and DFG manage lands, facilities, and recreational interests in this area. Pursuant to the 1961 Davis-Dolwig Act (State Water Code Sections 11900-11925), the properties and management responsibilities of each agency are detailed in a series of deeds, agreements, and transfers between the agencies (refer to Section 5.1 for further detail).

DWR transferred approximately 23,000 acres of recreation interests to DPR and approximately 12,000 acres of fish and wildlife management interests to DFG to fulfill the mandate of the Davis-Dolwig Act. These lands primarily constitute the LOSRA and Oroville Wildlife Area (OWA) respectively. DPR and DFG are charged with designing, constructing, operating, and maintaining public recreation facilities and managing fish and wildlife resources respectively. DWR currently plans and manages public recreation and fish and wildlife preservation and enhancement in connection with State water projects, including acquisition of all lands and location and construction of all works and project features so as to allow for fish and wildlife enhancement and recreational uses following completion of the Project.

The following sections summarize state agency plans and information that pertains to the Study Area. Each agency has developed management plans to guide management activities within the Study Area and beyond.

5.3.1 California Department of Water Resources Lands

DWR manages approximately 2,200 acres of land in noncontiguous parcels east of Oroville Dam and along the banks of the Thermalito Power Canal in specific areas inside and outside of the FERC boundary. Figure 5.3-1 illustrates the locations of these lands and the facilities with which they are associated in the Study Area.

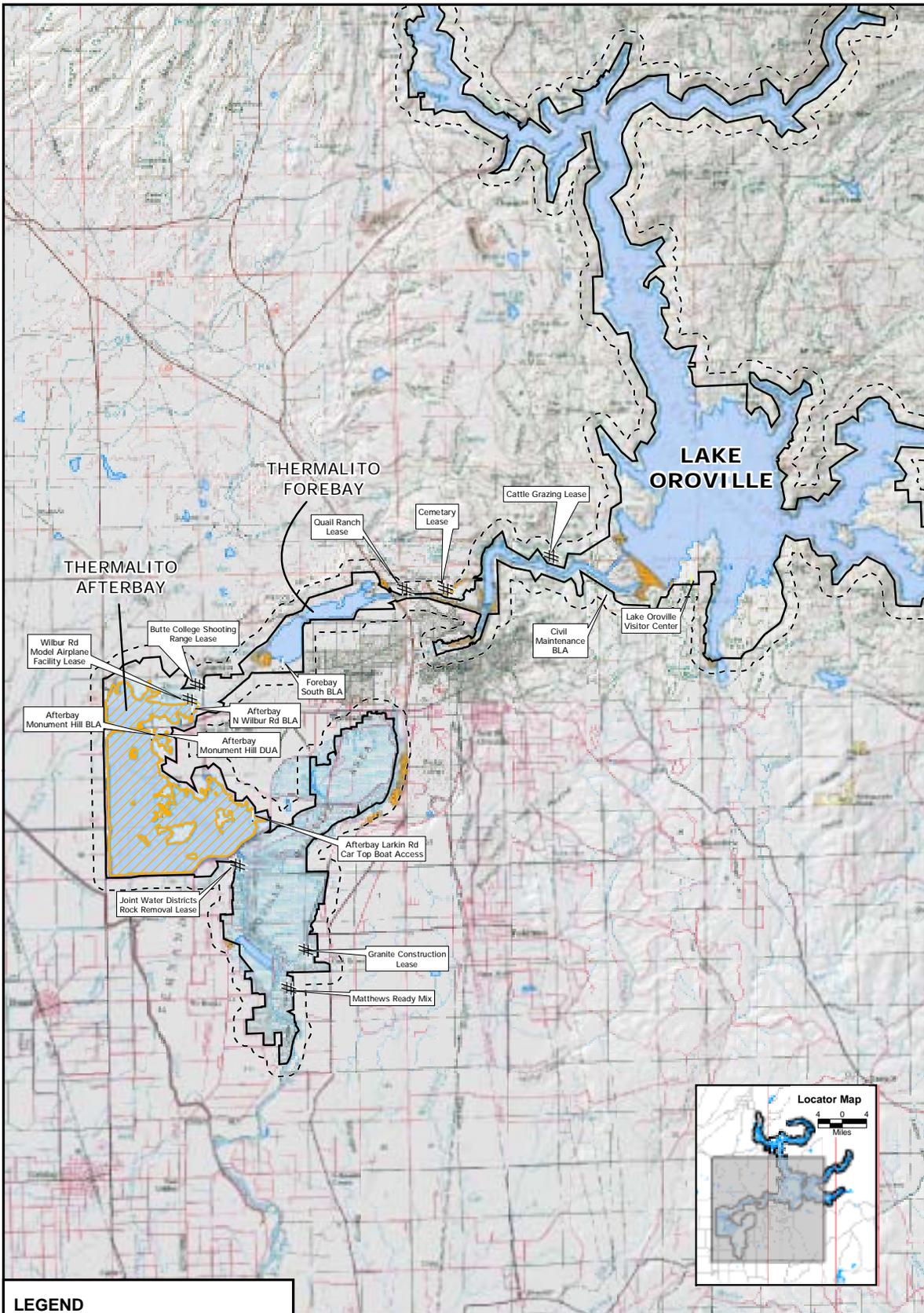
5.3.1.1 DWR General Management Direction

General Management Direction for State Water Project Facilities

The mission of the DWR is “To manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments.” Following are summaries of DWR's major responsibilities (DWR website).

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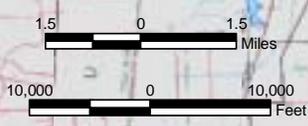
Goal 1 - Prepare and update the California Water Plan to guide development and management of the State's water resources.
Insert Figure 5.3-1 DWR Management Map



LEGEND

- (Facilities Managed by DWR
- (Facilities Co-Managed by DWR/DPR
- # DWR Lands and Facility Leases
- ▨ Lands Managed by DWR
- ▨ Recreation Management by DWR
- Water Bodies
- FERC Boundary
- FERC Study Area

Sources: DWR 2003, EDAW 2003



STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

**Oroville Facilities Relicensing
FERC Project No. 2100**

3 FIGURE 5.3-1

DWR LAND
MANAGEMENT



Prepared by: EDAW (LC) Date: 2-3-04 X:\oroville\L2_Fig5.3-1.mxd

Insert back of Figure 5.3-1 DWR Management Map

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Goal 2 - Plan, design, construct, operate, and maintain the State Water Project to supply good quality water for municipal, industrial, agricultural, and recreational uses and for fish and wildlife protection and enhancement.

Goal 3 - Protect and restore the Sacramento-San Joaquin Delta by controlling salinity and providing water supplies for Delta water users, planning long-term solutions for environmental and water use problems facing the Delta, and administering levee maintenance reimbursements and special flood control projects.

Goal 4 - Regulate dams, provide flood protection, and assist in emergency management to safeguard life and property by supervising design, construction, operation, and maintenance of more than 1,200 jurisdictional dams; encouraging preventive floodplain management practices; maintaining and operating Sacramento Valley flood control facilities; cooperating in flood control planning and facility development; and providing flood advisory information.

Goal 5 - Educate the public on the importance of water and its proper use; and collect, analyze, and distribute water-related information to the general public and to the scientific, technical, educational, and water management communities.

Goal 6 - Serve local water needs by providing technical assistance; cooperating with local agencies on water resources investigations; supporting watershed and river restoration programs; encouraging water conservation; exploring conjunctive use of ground and surface water; facilitating voluntary water transfers; and, when needed, operating a State drought water bank.

DWR manages lands within the FERC boundary as a component of the SWP which provides water for municipal, industrial, agricultural, recreational, and environmental uses while meeting the six goals. Specific goals of the agency are guided by plans established to provide direction for Lake Oroville fisheries habitat and the recreational use of the LOSRA. DWR adopted the Lake Oroville Fisheries Habitat Improvement Plan in 1995 to improve fish habitat and establish a schedule for implementation. The Plan provides a template for long-term habitat enhancement plans for fisheries with the objective to increase the productivity of fisheries within specific areas of Lake Oroville, the Thermalito Forebay and Afterbay, and the Feather River.

In addition, the DWR prepared the Amended Recreation Plan (ARP) in 1993 as the recreation plan for the LOSRA. This ARP is covered in further detail below.

Management Direction for the LOSRA

In compliance with the FERC Order of October 1, 1992, the DWR prepared the ARP in 1993 as the recreation plan for the LOSRA. The ARP was adopted by the FERC Order of September 22, 1994 and superseded the 1966 Plan, Bulletin 117-6. DWR developed

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the ARP for the LOSRA to address public concerns associated with the recreation development association with the Project. The 1993 ARP describes a number of improvements and the commitments of DWR to construct specific facilities and take actions to address the fisheries and recreation needs at the Project; additional improvements and actions deemed necessary by FERC were included in the September 22, 1994 Order. The 1993 ARP also detailed the time frame for the completion of additional proposed recreational facilities. The DWR acknowledges in the ARP that as the licensee, they are responsible for funding specific improvements. The ARP describes the fish and wildlife resources, facilities, local area, user patterns, operation of LOSRA and OWA facilities, economic considerations, recreation plan, and the fisheries management plan.

The ARP acknowledges that recreation activities and preferences have changed over time (1966 to 1993). There is an increased demand for equestrian, bike, and hiking trails while the number of fishing licenses issued has decreased over time. Another finding was that use patterns in 1993 have changed due to low water levels and temporarily inaccessible or seasonally unusable facilities. The ARP puts forth recommendations for facility expansion and modification in light of these findings. These recommendations have since been implemented.

In terms of Lake Oroville fisheries, ARP goals include developing a multi-species fishery in Lake Oroville that makes optimum use of the available habitat and forage base while sustaining the existing fisheries above current levels. This development could include management of the bass fishery to achieve the California Fish and Game Commission's designation of Lake Oroville as a "Trophy Black Bass Water."

The ARP states that Lake Oroville recreational facilities must be responsive to fluctuating water levels, topography that restricts uses during low water, temperatures that deter use during the peak summer period, a highway system that is conducive to local or destination-type uses, and reasonable user costs. The facilities recently developed at Lake Oroville have taken these factors into consideration, while incorporating cost effective development focusing on areas that would receive high usage. For example, facilities around the Thermalito Afterbay (such as Monument Hill) have been developed to mitigate low pool elevations that restrict usage on Lake Oroville. Recreation facilities on Lake Oroville (Bidwell Lime Saddle, Bidwell Lagoon, and Spillway) have been upgraded to take into account periods of low pool elevations, such as extending the length of boat launch ramps.

5.3.1.2 Existing DWR Management Conditions

Management of Oroville Facilities

DWR manages lands within the FERC boundary for the operation of the Oroville Facilities of the SWP—including the Oroville Dam and Reservoir, Edward Hyatt

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Hydroelectric Powerplant, Thermalito Powerplant, Thermalito Diversion Dam and Powerplant, Thermalito Forebay and Afterbay, Fish Barrier Dam, and Thermalito Power Canal. DWR currently operates and manages the Oroville Facilities to maximize its benefit to the SWP, with the primary focus on water supply. The SWP was developed to conserve and distribute water to supplement the needs of urban and agricultural users throughout the State. Power produced by the Oroville Facilities helps meet power demands associated with water conveyance, reducing the need to purchase power and producing reliable power that is sold to the power grid to reduce the net cost of water delivery. The Oroville Facilities, designed and constructed by DWR in the 1960s, are a critical part of the SWP and provide significant water collection and storage, flood management, and power production capabilities.

DWR is also responsible for managing its Oroville Field Division-Civil Maintenance (OFD-CM) boat launch site on Lake Oroville and boat launch sites on the Afterbay, as indicated on Figure 5.3-1 (pers. comm., Dennis Babb, 2004).

Third-Party Leases

DWR promotes the active management of lands within the FERC boundary. DWR finds that on-site land management provides superior accountability than off-site management and therefore supports entering into third party leases with private land managers. Agency Order #6 provides the legislative authority needed for DWR to enter into a lease with a third party with an approval condition of the primary land manager. Under the authorization of this order, the DWR has leased several small acreages to private groups or individuals in locations where the DWR is the primary management authority, as well as in locations within the OWA and LOSRA. Table 5.3-1 provides a summary of known third-party lease arrangements with the DWR. These leases are generally located on scattered noncontiguous parcels west of the Oroville Dam and within the OWA.

A wide variety of activities occur on leased lands, including but not limited to: cattle grazing, cemetery use, rifle and clay pigeon shooting ranges, model airplane activities, game bird farming, and aggregate mining (Figure 5.3-1). Either verbal or documented approval was provided to DWR by DPR and DFG for lease arrangements within their management jurisdictions. Lease arrangements are on file with DWR, with the exception of those that remain unaccounted for due to the historical nature of the agreement. One lease, the Campbell grazing lease, will come to term in 2004 and will have opportunity for renegotiation. The other leases have different expiration dates (pers. comm., Maria Chin, 2003).

Table 5.3-1. DWR Third Party Leases.

Lessee	Location	DWR Parcel Nos.	Acres	Purpose	Term
John Campbell	Adjacent to Diversion Pool & Spillway; Portion within TPC to DPR, approx 50+ acres in DWR property only	ORO 64,65,66,67, 68,462,463,464	417	Cattle Grazing	10-01-99 to 9-30-04
Feather River Rec. & Park District	Just west of HWY 70, North of Nelson Ave	TC&F 36A	44	Soccer / basketball complex, concessions, restrooms, etc	11-01-97 to 10-31-15
*Cemetery	North of Thermalito Forebay and east of K & L Quail Ranch	[Need info]	[Need info]	Cemetery	[Need info]
Model Airplane Facility	West of Wilbur Road, north of Thermalito Afterbay	[Need info]	[Need info]	Site for flying model airplanes	[Need info]
Butte College	West of Wilbur Road, north of Thermalito Afterbay	TPP&A 8,9,10	9	Shooting Range	08-15-01 to 08-14-16
Joint Water Districts Board	Within OWA: East of Feather River, South of Thermalito Afterbay	ORO B-22	10	Rock Removal	04-26-88 to 04-26-18
Mathews Ready Mix	Within OWA; Adjacent to Feather River, East of HWY 70	ORO B-83	50	Gravel Extraction	06-22-87 to 06-22-37
Granite Construction	Within OWA; Adjacent to Feather River, East of HWY 70	ORO 34-C, 34-D,36-A, 83-B	100	Gravel Extraction	06-18-91 to 06-18-41
*K & L Quail Ranch	Outside FERC boundary; End of Thompson Flat Road, North of Thermalito Power Canal	ORO 9D, 9H, 9J, 10C, 11C	77	Game Bird Raising	05-01-97 to 04-30-07

Note: * Outside FERC boundary within the ¼ mile Study Area.

Source: Maria Chin, DWR Division of Land and Rights-of-Way November 2003.

Funding and Oversight of Recreational and Fish and Wildlife Preservation Programs

DWR also funds many of the recreational and fish and wildlife preservation and enhancement facilities associated with the Oroville Project, including the Feather River Fish Hatchery, which are operated by other agencies. In general, DWR does not manage the lands that cater to these uses in the Study Area, with the exception of the Thermalito Afterbay. DWR supplements DFG management of the OWA by fulfilling the primary recreation management role at Thermalito Afterbay. DWR has constructed and funded recreation facilities in the OWA, including Afterbay access at the Monument Hill, Wilbur Road, and Larkin Road use areas. DWR is also responsible for the maintenance of these facilities and security in these areas. DWR contracts with the Butte County Sheriff's Office to provide continued patrol on the Afterbay and at Afterbay use areas and access points (pers. comm., Andy Atkinson, Doug Rischbieter 2003).

In addition, DWR is responsible for implementing a variety of recreation-related projects and improvements throughout the LOSRA. FERC Orders regarding DWR's

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responsibility to carry out improvement projects, fishery studies and fish stocking programs, hatchery operations, and other recreation related tasks have been added as conditions of DWR's license to operate the Oroville Facilities. DWR therefore works closely with other agencies, including DPR and DFG, to both fund and implement the programs and improvements required by FERC. Though in many cases DWR is not directly involved in the implementation of recreation improvements and programs, it is ultimately DWR's responsibility to ensure that all required studies and improvements are properly carried out.

5.3.2 California Department of Parks and Recreation Lands

The official mission statement of the DPR, also a department of the California Resources Agency, is "To provide for the health, inspiration and education of the people of California by helping to preserve the State's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation" (DPR Website). DPR manages approximately 22,000 acres of land within the FERC boundary and approximately 1,000 acres outside of the FERC boundary within the Study Area or 32 percent of the total Study Area. Figure 5.3-2 illustrates the locations of these lands within the Study Area. As indicated in the figure, most of this area is surface water managed for recreational use within the LOSRA and inside the FERC boundary. The LOSRA includes all lands within the FERC boundary in the West Branch, Upper North Fork, Lower North Fork, Middle Fork, South Fork, and the Main Basin. Several isolated DPR properties, totaling approximately 250 acres, are located in the Upper North Fork of the Feather River where DPR is the "controlling" agency. These parcels fall outside the FERC boundary but within the Study Area (Figure 5.3-2).

5.3.2.1 DPR Management Direction

Following the completion of the Oroville Facilities, the recreational interest for lands within what is now the LOSRA were deeded by DWR to DPR in 1966 under the Agreement for Transfer to Department of Parks and Recreation of Interest in Certain Real Property at Oroville Division of State Water Project.

The LOSRA General Plan (GP) was developed by the DPR in 1973, and is still in use today. An Amendment adopted in 1988 details additional development in the Lime Saddle Area. The GP describes allowable recreational uses and intensities for various areas around the lake, such as Bidwell Canyon, Lime Saddle, Goat Ranch, and others. Recreational use intensities described in the GP are primarily tied to slope and resource protection constraints. The GP also describes the existing and proposed recreational development (as of 1973) within 15 areas of the LOSRA, including Bidwell Canyon, Loafer Creek, Spillway Launching Ramp, Lime Saddle, Thermalito Forebay, and other areas. These developments include overnight facilities (camping sites, group camps,

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cabins, and lodges), day-use facilities (parking, picnic units, and swimming beaches), and boating facilities (launching lanes, car/trailer parking, and marina slips).

Management policies contained in the GP emphasize that lands and resources at LOSRA are to be managed to provide recreational opportunities and facilities in a natural or quasi-natural setting. The purpose of the GP is to "...perpetuate, enhance, and make available to the public the recreational opportunities afforded by Lake Oroville, Thermalito Forebay, and adjacent land and water areas and to protect all environmental amenities so that they make an optimum contribution to public enjoyment of the area."

The Northern Buttes District of DPR has been the most prominent recreation management agency in the Study Area, managing and operating the LOSRA. DPR designs, constructs, manages, operates, and maintains many of the associated recreational facilities and opportunities associated with the LOSRA. The Lime Saddle Campground, designed and constructed by DWR, is the exception.

As allowed under the California Public Resources Code (Section 5019.56), the Northern Buttes District has undertaken improvements to provide for a number of recreational activities, including camping, picnicking, swimming, hiking, bicycling, horseback riding, and boating and water sports. Recreation management in the LOSRA is discussed further below.

5.3.2.2 Existing DPR Management Conditions

DPR is the primary agency responsible for recreation management in the LOSRA. These duties include addressing a variety of issues such as safety, facilities maintenance, and overall visitor management for all recreational activities, although DPR does coordinate with DWR, California Department of Boating and Waterways (DBW), DFG, CDF, Butte County, California Highway Patrol, volunteer organizations, and other groups and agencies, DPR is the primary agency responsible for managing the LOSRA as specified under the Public Resources Code. DPR also manages most of the recreational resources associated with the Project, as specified under the Davis-Dolwig Act (Water Code 11910-11925). See Sections 5.3.2.1 for a list of recreation facilities at the Project that DWR is responsible for managing. Ongoing DPR management duties include the following:

- € Park equipment and facilities maintenance
- € Aquatic maintenance
- € Systems maintenance
- € Safety and enforcement, on both land and water
- € Project management
- € Volunteer management
- € Concession management
- € Resource management
- € Park administration
- € Interpretive activities

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