

RECLAMATION

Managing Water in the West

New Melones Lake Commercial Services Study and Financial Feasibility Evaluation (Final)



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Central California Area Office
Sacramento, California

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Contents

	Page
Chapter 1 Introduction.....	1-1
1.1 New Melones Lake Resource Management Plan	1-4
1.2 Public Involvement	1-4
1.3 Environmental Compliance	1-5
1.4 Reclamation Concessions Policy	1-5
1.5 Relationship to Concessions Prospectus	1-7
1.6 Outline of Report	1-7
Chapter 2 Overview of New Melones Lake	2-1
2.1 Management at New Melones Lake	2-1
2.1.1 Management Policies, Guidance, and Studies	2-1
2.1.2 New Melones Lake Management Areas	2-2
2.2 Recreation Resources at New Melones Lake	2-4
2.2.1 Recreation Activities.....	2-4
2.2.2 Recreation Areas.....	2-5
2.2.3 Recreation Facilities	2-7
2.3 Recreation Use and Visitation	2-15
2.4 Commercial Services and Concessions	2-15
2.4.1 New Melones Lake Marina.....	2-15
2.4.2 Other Commercial Services	2-19
Chapter 3 Regional Recreation Facilities and Commercial Services.....	3-1
3.1 Supply of Recreation Resources	3-1
3.1.1 Water-Based Recreation Facilities near New Melones Lake	3-1
3.1.2 Comparable Water-Based Recreation Facilities Statewide	3-9
3.1.3 Summary and Comparison of Facilities with New Melones Lake	3-14
3.1.4 Private Recreation-Oriented Businesses in Local Area	3-15
3.2 Demand for Recreation Resources.....	3-16
3.2.1 Measures of Existing Recreation Demand at New Melones Lake	3-17
3.2.2 Regional Recreation Demand	3-22
3.2.3 Trends in Recreation Use.....	3-24
3.2.4 Other Factors Influencing Recreation Demand	3-26
3.2.5 Conclusions Regarding Recreation Demand	3-28
Chapter 4 Review of Commercial Service Opportunities	4-1
4.1 Criteria for Evaluation	4-1
4.2 Commercial Service Opportunities Subject to Evaluation	4-2
4.2.1 Marina Services: Berths and Moorings	4-2
4.2.2 Marina Services: Dry Boat Storage	4-4
4.2.3 Marina Services: Boat Repair	4-5
4.2.4 Marina Services: Motorized Watercraft Rentals	4-5
4.2.5 Marina Services: Non-Motorized Watercraft Rentals	4-6
4.2.6 Food and Drink Service	4-6
4.2.7 Recreation Supply and Convenience Store.....	4-7
4.2.8 Lake Tours and Cruises	4-7

4.2.9	RV Park.....	4-8
4.2.10	Lodging.....	4-8
4.2.11	Horseback Riding Stables.....	4-8
4.2.12	Adventure Outfitter Guide Services	4-9
4.2.13	Event Venue.....	4-9
4.2.14	Mountain Bike Course or Park	4-10
4.2.15	Whitewater Rafting (Guided)	4-10
4.2.16	Fishing Guide Services	4-10
4.2.17	Seaplane School.....	4-11
4.2.18	OHV Course	4-11
4.2.19	Skeet & Target Shooting.....	4-11
4.2.20	Summary of Commercial Service Opportunities.....	4-11
4.3	Location of Potential Commercial Services	4-12
Chapter 5	Resource Opportunities and Constraints	5-1
5.1	GIS-Based Site Selection Analysis.....	5-1
5.2	Resource Opportunities and Constraints.....	5-1
5.3	Site Suitability.....	5-4
Chapter 6	Engineering Review	6-1
6.1	Field Condition Assessment	6-1
6.2	Cost Estimates.....	6-4
Chapter 7	Financial Feasibility Evaluation	7-1
7.1	Overview of Financial Feasibility Studies.....	7-1
7.1.1	Role of Financial Feasibility in Business Planning	7-1
7.1.2	Measures of Financial Feasibility	7-2
7.2	Financial Feasibility in the Commercial Service Planning Process.....	7-3
7.2.1	Key Factors Affecting Financial Feasibility	7-4
7.2.2	Financial Feasibility Framework	7-6
7.3	Financial Feasibility of Proposed Commercial Services at New Melones Lake	7-7
7.3.1	Analytical Assumptions.....	7-7
7.3.2	Marina Services	7-8
7.3.3	RV Park.....	7-12
7.3.4	Equestrian Stables.....	7-14
7.4	Sensitivity Analyses of Financial Feasibility.....	7-18
7.4.1	Variation in Operating Assumptions	7-18
7.4.2	Variation in Capital Cost Estimates.....	7-20
Chapter 8	Summary and Recommendations.....	8-1
8.1	Summary of Information.....	8-1
8.2	Recommendations for Commercial Services at New Melones Lake.....	8-1
8.2.1	Existing Commercial Services.....	8-1
8.2.2	New Commercial Services.....	8-1
8.2.3	Location of Commercial Services.....	8-2
8.2.4	Seasonal Considerations	8-2
8.2.5	Management of Commercial Services	8-3
Chapter 9	References.....	9-1

Tables

Table 2-1A. Recreation Facilities at New Melones Lake	2-9
Table 2-1B. Recreation Facilities at New Melones Lake	2-10
Table 2-1C. Recreation Facilities at New Melones Lake	2-11
Table 2-2. New Melones Lake Marina Approved Rates (2009).....	2-17
Table 2-3. New Melones Lake Marina Approved Rates (2009) – Houseboat Rentals.....	2-18
Table 3-1. Summary of Recreation and Commercial Facilities at Waterbodies within Approximately 30 Miles of New Melones Lake	3-3
Table 3-2. Recreation Visitation at New Melones Lake (2004-2008).....	3-17
Table 3-3. Average Recreation Visitation by Month at New Melones Lake (2004-2008).....	3-18
Table 3-4. Estimated Weekend and Weekday Recreation Facility Occupancy Rates at New Melones Lake by Season	3-19
Table 3-5. Population Projections in the Primary Market Area Serving New Melones Lake...	3-25
Table 4-1. Summary of Commercial Services and Recommendation	4-12
Table 6-1. Condition Assessment Summary	6-2
Table 6-2. Condition Assessment Detail	6-2
Table 7-1. Capital Investment Costs for Marina-Related Services.....	7-9
Table 7-2. Operating Revenues and Expenses for Marina-Related Services	7-10
Table 7-3. Cash-Flow Analysis for Marina-Related Services	7-11
Table 7-4. Results of the Financial Feasibility Analysis for Marina-Related Services	7-11
Table 7-5. Capital Investment Costs for RV Park	7-12
Table 7-6. Operating Revenues and Expenses for RV Park	7-13
Table 7-7. Cash-Flow Analysis for RV Park	7-14
Table 7-8. Results of the Financial Feasibility Analysis for RV Park.....	7-14
Table 7-9. Capital Investment Costs for Equestrian Riding Stables.....	7-15
Table 7-10. Operating Revenues and Expenses for Equestrian Riding Stables	7-16
Table 7-11. Cash-Flow Analysis for Equestrian Riding Stables	7-17
Table 7-12. Results of the Financial Feasibility Analysis for Equestrian Riding Stables	7-17
Table 7-13. Sensitivity Analysis of Financial Feasibility for Marina Services ^{1,2}	7-18
Table 7-14. Sensitivity Analysis of Financial Feasibility for RV Park ^{1,2}	7-19
Table 7-15. Sensitivity Analysis of Financial Feasibility for Equestrian Riding Stables ^{1,2}	7-20
Table 7-16. Sensitivity Analysis of Financial Feasibility for Marina Services (Capital Costs Only) ^{1,2}	7-21

Figures

Figure 1-1. Project Location	1-2
Figure 1-2. New Melones Planning Area Boundary	1-3
Figure 2-1. New Melones Management Areas	2-3
Figure 2-2. Recreation Areas and Zones	2-6
Figure 3-1. Water-Based Recreation Facilities in Proximity to New Melones Lake	3-2
Figure 3-2. Other Major Water Bodies in California	3-10
Figure 3-3. Water Elevations at New Melones Lake (1990-2009)	3-27
Figure 5-1. Opportunities in Site Selection Analysis	5-2
Figure 5-2. Constraints in Site Selection Analysis	5-3
Figure 5-3. Results of Site Selection Analysis	5-5

Appendices

Appendix A	Reclamation Guidance on Concessions Management
Appendix B	Engineering Review Technical Memorandum
Appendix C	Financial Feasibility Model – Analytical Assumptions
Appendix D	Financial Feasibility Model – Result Tables

Abbreviations and Acronyms

BLM	Bureau of Land Management
CORP	California Outdoor Recreation Plan
CSS	Commercial Services Study
CVP	Central Valley Project
EBIDTA	Earnings Before Interest, Depreciation, Taxes and Amortization
EBMUD	East Bay Municipal Utilities District
EIS	Environmental Impact Statement
FFE	Financial Feasibility Evaluation
IRR	Internal Rate of Return
NEPA	National Environmental Policy Act
NPV	Net Present Value
O&M	Operations and Maintenance
PG&E	Pacific Gas and Electric Company
RIR	Resource Inventory Report
ROI	Return on Investment
RMP	Resource Management Plan
SRA	State Recreation Area
USACE	U.S. Army Corps of Engineers
USFS	United States Forest Service
WROS	Water Resources Opportunities Spectrum

Chapter 1

Introduction

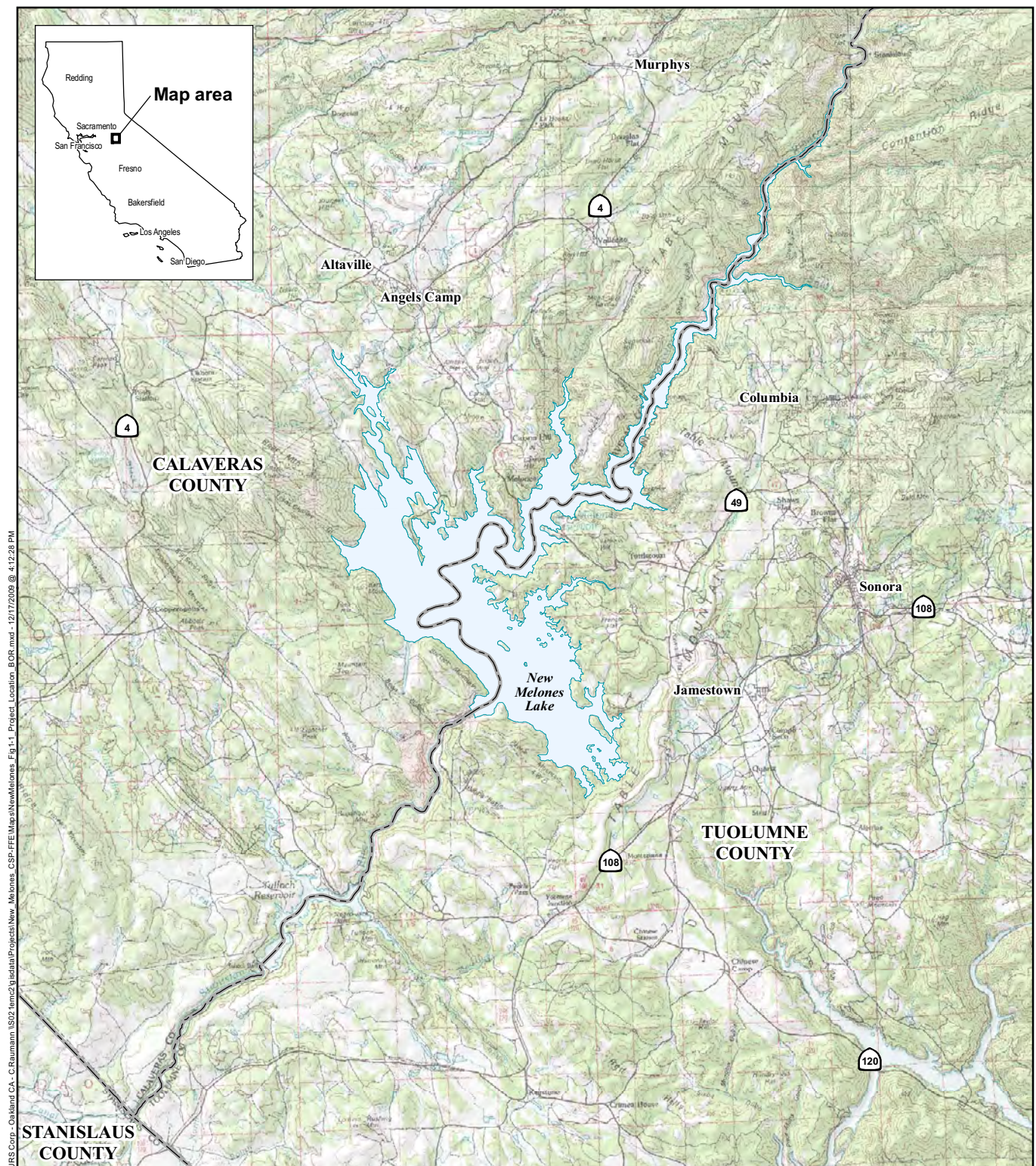
New Melones Lake is a reservoir located in the Sierra Nevada foothills of northern California and is operated for multiple purposes, including flood control, irrigation and municipal water supplies, hydroelectric production, recreation, water quality, and fish and wildlife enhancement (Figure 1-1). The Bureau of Reclamation (Reclamation) administers all aspects of reservoir operations, including the recreation opportunities provided throughout the New Melones Lake Planning Area,¹ hereafter referred to as “New Melones Lake” (Figure 1-2).

To enhance the visitor experience at New Melones Lake, Reclamation has prepared this Commercial Services Study (CSS) and associated Financial Feasibility Evaluation (FFE) that evaluates opportunities for a range of recreation-related commercial services at the reservoir. The primary purpose of the CSS is to identify commercial services and facilities that are determined to be necessary and appropriate for New Melones Lake based on a systematic review of potential opportunities. The FFE focuses on the financial viability of commercial services under consideration at New Melones Lake and serves as an important indicator of the long-term success of these commercial operations. Information from this study will be used to develop implementation actions to plan, authorize, and manage future commercial services at New Melones Lake in accordance with commercial service planning policies and directives administered by Reclamation.

For this study, the term commercial services is intended to cover all commercial operations under consideration at New Melones Lake, including concessions² (managed under contract) and other commercial activities (managed in accordance with the special use permit process). Reclamation will determine which commercial services would be subject to concessions contracts or special use permits at the appropriate time in the commercial services planning process.

¹ The Planning Area covers all Reclamation-administered lands associated with the New Melones Project in Tuolumne and Calaveras Counties, California.

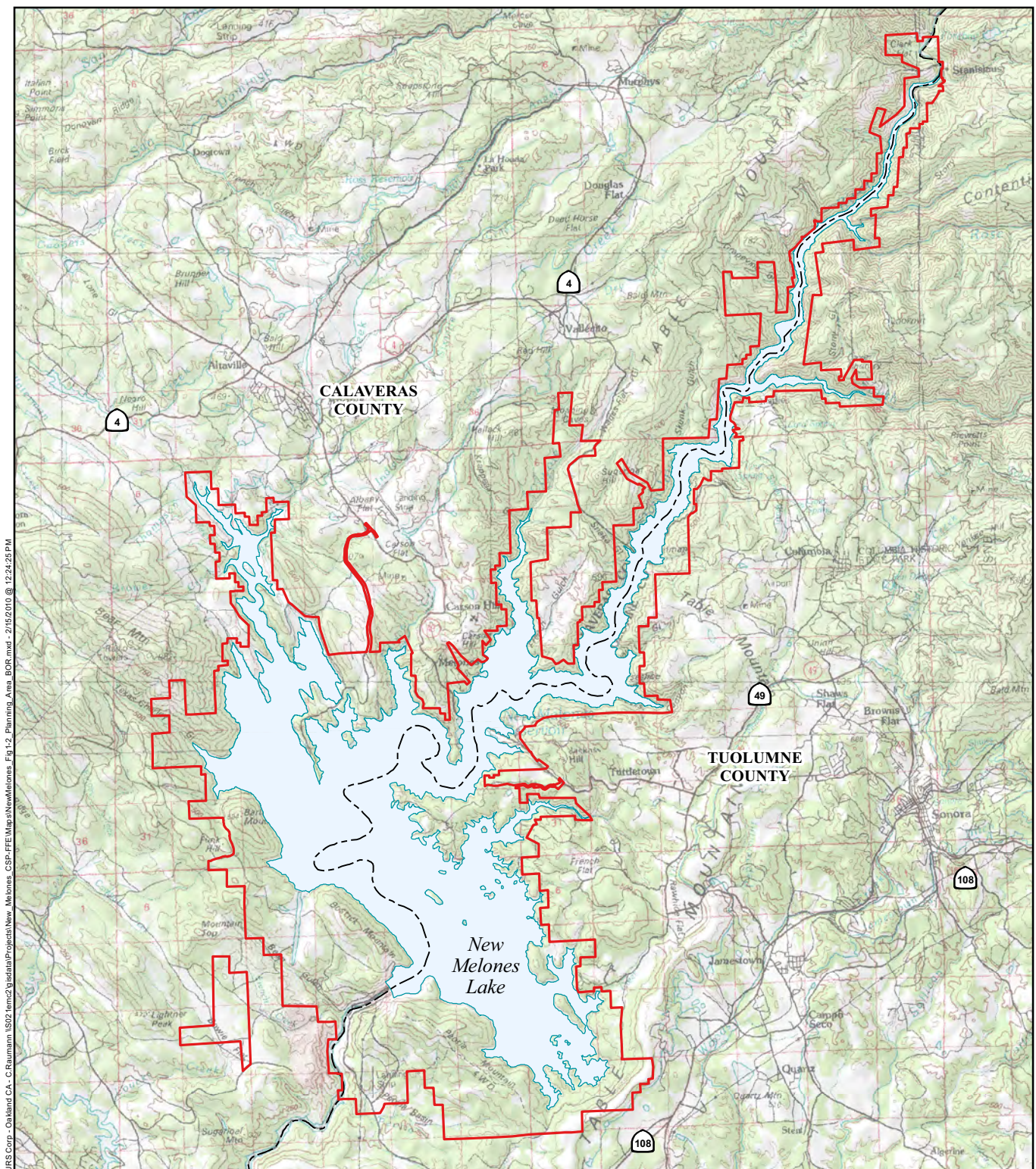
² A concession is a non-Federal commercial business that supports appropriate public uses and provides facilities, goods, or services for which revenues are collected. A concession involves the use of the Federal estate and usually involves the development of real property improvements.



Project Location

New Melones Lake Area, California
Central California Area Office

Figure 1-1



New Melones Planning Area Boundary

New Melones Lake Area, California
Central California Area Office

Figure 1-2

1.1 New Melones Lake Resource Management Plan

A comprehensive Resource Management Plan (RMP) and Environmental Impact Statement (EIS) have recently been prepared for New Melones Lake.³ The Draft RMP/EIS was released to the public in October 2009 and presents a range of alternatives for managing Reclamation-administered lands within the New Melones Lake Planning Area. The record of decision on the Draft RMP/EIS was signed in June 2010. The EIS presents an analysis of the environmental effects expected from implementing the actions defined in the RMP. More specifically, the Draft RMP/EIS addresses the interrelationships among the various resources in the planning area and provides management options to balance resource management goals in accordance with Reclamation's mission and authority with the public use of federal lands. The Draft RMP/EIS contained four management alternatives: Alternative A (No Action – Continue Current Management); Alternative B (Increased Use); Alternative C (Conservation); and Alternative D (Multiple Use). Alternative D balances management of recreational uses and natural and cultural resources, and was developed by combining aspects of the other three alternatives; it is the preferred alternative identified by Reclamation.

There are several links between the RMP/EIS and this study. First, the commercial service planning process is specifically referenced in the RMP, which notes that the results of the CSS process may affect the management alternatives, including land use allocations. Second, the RMP alternatives include a range of commercial service opportunities for New Melones Lake, albeit at a programmatic, rather than site-specific, level. Accordingly, the RMP provides initial direction for the commercial services planning process and provides the framework that can be used to determine consistency between the CSS and RMP. However, this CSS is based on a more detailed, independent analysis of commercial opportunities at the reservoir, recognizing the recreation management objectives proposed in the RMP Preferred Alternative.

1.2 Public Involvement

Public outreach associated with future commercial services at New Melones Lake was conducted as part of the public involvement process for the development of the RMP/EIS. As part of this process, Reclamation held several scoping meetings and alternatives development workshops to solicit issues and concerns from the public and to develop alternatives.⁴ The scoping meetings and alternatives workshops occurred in January 2007 and September 2007, respectively. Subsequently, open house meetings were held in September 2008 to solicit public input on initial portions of the Draft RMP/EIS.⁵ Most recently,

³ U.S. Bureau of Reclamation, 2009a

⁴ U.S. Bureau of Reclamation, 2007a

⁵ U.S. Bureau of Reclamation, 2008a

public meetings were held in December 2009 to obtain comments on Public Draft RMP/EIS that was released in October 2009. In addition, public input was solicited for several preliminary planning efforts leading up to the preparation of the RMP/EIS, including the Visitor Capacity study (2003); Water Resources Opportunity Spectrum (WROS) study (2002); and the Peoria Wildlife Management Area (WMA) Environmental Assessment (EA) (2007). Further, public input was obtained directly from on-site visitor and telephone surveys conducted in 2007.⁶ Lastly, input on the commercial service planning process came directly from telephone interviews with the existing concessionaire and operators of local businesses surrounding the reservoir between October 2009 and March 2010. Through these efforts, information was collected from the public that provided perspective on potential commercial services and the needs and desires of reservoir users, existing commercial operators, local communities, and other stakeholders. All of the public input obtained from these efforts was reviewed for relevance to the commercial services planning process at New Melones Lake.

1.3 Environmental Compliance

As a planning study, this CSS/FFE is not subject to environmental compliance requirements under the National Environmental Policy Act (NEPA). At the time that any prospective commercial service is considered for development, it will require the appropriate level of environmental compliance and documentation pursuant to NEPA and all other applicable regulations. To the extent that proposed commercial services are consistent with the range of alternatives considered in the New Melones Lake RMP/EIS, the environmental analysis presented in the RMP/EIS provides a programmatic level of compliance. However, when specific commercial service developments are proposed for implementation, a site-specific environmental analysis will be conducted and appropriate environmental document prepared prior to authorization from Reclamation for the implementation of any commercial service operation proposed at New Melones Lake.

1.4 Reclamation Concessions Policy

This CSS has been prepared in accordance with Reclamation's formal guidance on concessions management as outlined in its *Concession Management Guidelines* (Reclamation 2005) and the *Reclamation Manual* (including *Policies*⁷ and *Directives and Standards*⁸ related to the provision of concessions at Reclamation facilities). Relevant sections from these guidance documents are included in Appendix A.

⁶ U.S. Bureau of Reclamation, 2008b

⁷ Reclamation Manual Policy LND P02 (Concessions Management)

⁸ Reclamation Manual Directives and Standards LND 04-01 (Concessions Management by Reclamation) and LND 04-02 (Concessions Management by Non-Federal Partners)

Specifically, recreation opportunities provided by private commercial businesses under contract with Reclamation, e.g., concessions, may be authorized under Reclamation Manual Policy LND-04-01. That policy states that the issuance of concessions contracts is to be based on the results of a commercial services planning process that includes public involvement, financial feasibility, and environmental analysis. This process results in a CSS that: (1) determines the number, type, and duration of concessions necessary to meet the public demand for services and quality recreation opportunities; (2) evaluates the financial feasibility of the concessions considered; and (3) identifies locations for which such commercial services may be appropriate.

The following is a summary of key criteria required by Reclamation policy whenever commercial service planning is conducted and which serves as the basis for the analysis presented in this CSS:

- Facilities and services shall be necessary and appropriate to meet both current and future demand for broad spectrum public use and enjoyment.
- Commercial facilities shall not be developed or expanded on the federal estate if existing facilities, both on and off the federal estate, adequately meet current and projected needs.
- Facilities and services shall reflect the general public needs rather than the desires of a particular individual or group.
- Facilities and services shall be compatible with Reclamation project purposes.
- Facilities and services considered to be exclusive use shall not be allowed or considered.
- Potential impacts to natural and cultural resources shall be considered in the development of facilities and services.
- Facilities must be harmonious in form, line, color, and texture with the surrounding landscape.
- Consideration of whether existing concessions facilities should be relocated.
- Determination of whether the condition and useful life of existing facilities proposed to be retained as a part of any new concession are sufficient to last through the duration of a new contract period.

The Financial Feasibility Evaluation (FFE) assessed the financial viability of any proposed concession operations, proposed length of term of the concession agreement, and the underlying assumptions regarding concessionaire capital investment in the concession. Financial planning criteria considered included:

- Gross revenue by operating department.

- Operating expenses (i.e., direct expenses, unallocated expenses, general and administrative expenses, fixed expenses, and franchise fees).
- Earnings before interest, depreciation, taxes, and amortization (EBIDTA).
- Capital investment costs.
- Cash flow analysis.
- Other factors (e.g., length of season, seasonal rates, visitation, inflation, cost of capital and the appropriate return rate to the concessionaire).

1.5 Relationship to Concessions Prospectus

The information presented in this CSS/FFE will be used to develop a concessions prospectus that is designed to solicit proposals from interested parties on the next term of concession contracts for the development, operation, and maintenance of commercial services and facilities at New Melones Lake. The prospectus will outline one or more commercial service opportunities recommended at New Melones Lake based on the results of this study and will reflect all of Reclamation's policies and authorities relative to concessions management. The concessions prospectus will consider both possible continuation of existing concessions services offered at the reservoir, as well as new opportunities identified in this study.

The forthcoming concessions prospectus will likely differ from typical prospectuses, which normally provide little flexibility to offerors in regard to what will be the primary services, facilities, and core business offered at a particular location. Because the commercial service planning process may provide for both modifications to existing concessions operations and new businesses opportunities, the existing model for concessions contracts at New Melones Lake may not fully apply. Consequently, the prospectus will likely provide more flexibility than normal in the provision of commercial services and related business arrangements.

1.6 Outline of Report

This study is organized into seven sections. Following this Introduction, Chapter 2 presents a comprehensive overview of New Melones Lake, including key physical features and management characteristics relevant to commercial services planning. It also provides a detailed inventory of recreation resources and existing concessions at the lake. Chapter 3 describes the regional recreation environment, including the supply of available recreation resources in the region as well as information on recreation demand and trends. Chapter 4 provides a detailed review of prospective commercial service opportunities at New Melones Lake, based on key planning criteria developed for this study.

Based on this review, a set of commercial services are identified for further consideration. In Chapter 5, these opportunities are evaluated in the context of resource-based considerations specific to the planning area, and an engineering review of existing marina facilities is presented in Chapter 6. The financial feasibility of selected commercial service opportunities is presented in Chapter 7. Chapter 8 synthesizes the information from the preceding chapters into a set of recommended commercial services at New Melones Lake, with consideration of location, seasonality, contract duration, and other management factors.

Chapter 2

Overview of New Melones Lake

This section presents a general overview of New Melones Lake, particularly on recreation-related features which have a direct influence on commercial service opportunities in the planning area. Portions of the information presented here are based on the Resource Inventory Report (RIR) that was prepared in support of the RMP/EIS process.⁹

New Melones Lake is in the central Sierra Nevada foothills in Calaveras and Tuolumne counties. Nearby communities include Altaville, Angels Camp, Columbia, Springfield, Sonora, Copperopolis, and Jamestown. The climate is semi-arid, with hot, dry summers and cool, wet winters.

The reservoir has a capacity of approximately 2.4 million acre-feet at gross pool elevation (1,088 feet), with a surface area of about 12,500 acres and over 100 miles of shoreline at capacity. The reservoir was developed primarily for flood protection along the Stanislaus and Lower San Joaquin Rivers. However, it serves multiple purposes, including irrigation, municipal and industrial water supply, power generation, fishery enhancement, water quality improvement, and recreation.

2.1 Management at New Melones Lake

The New Melones Dam was constructed on the Stanislaus River by the U.S. Army Corps of Engineers. Construction was completed in 1978. Subsequently, management authority for the New Melones Unit was transferred from the U.S. Army Corps of Engineers (USACE) to Reclamation in 1979 for integration into the Central Valley Project (CVP). Reclamation maintains an administrative office at the reservoir for day-to-day operations, including administrative, planning, and operations and maintenance (O&M) functions.

2.1.1 Management Policies, Guidance, and Studies

Management at New Melones Lake follows Reclamation's mission, which is "to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public."¹⁰ In addition, all Reclamation lands are to be managed in accordance with the *Reclamation Manual*, which consists of a series of Policies and Directives and Standards, as well as applicable federal law, such as the

⁹ U.S. Bureau of Reclamation, 2007b

¹⁰ Reclamation website: (www.usbr.gov/main/about/mission.html)

Reclamation Recreation Management Act of 1992 (Public Law [P.L.] 102-575, Title 28 [2805(c)(1)(A)]).

Historic management on Reclamation-administered lands in the planning area has been based on the New Melones Lake Area Master Plan (Master Plan), approved in 1976 and subsequently amended. As described earlier, a Record of Decision was signed in June 2010 for a new RMP/EIS that supersedes the Master Plan and provides new management direction for New Melones Lake. Additional management guidance and planning studies specific to New Melones Lake, and incorporated by reference into this document, include:

- Final Peoria Wildlife Management Area Environmental Assessment¹¹
- Draft New Melones Lake Fire Management Plan¹²
- Vegetation Management Plan¹³
- Revised Cave Management Plan¹⁴
- New Melones Lake, Water Recreation Opportunity Spectrum, Inventory and Management Alternatives¹⁵
- Visitor Capacity Analysis, New Melones Lake Resource Area Management Area¹⁶

2.1.2 New Melones Lake Management Areas

The RMP/EIS establishes designated management areas that are used to help delineate management actions applicable to distinct parts of the planning area. In total, the planning area is organized into the following 18 management areas (Figure 2-1):

¹¹ Reclamation 2007c

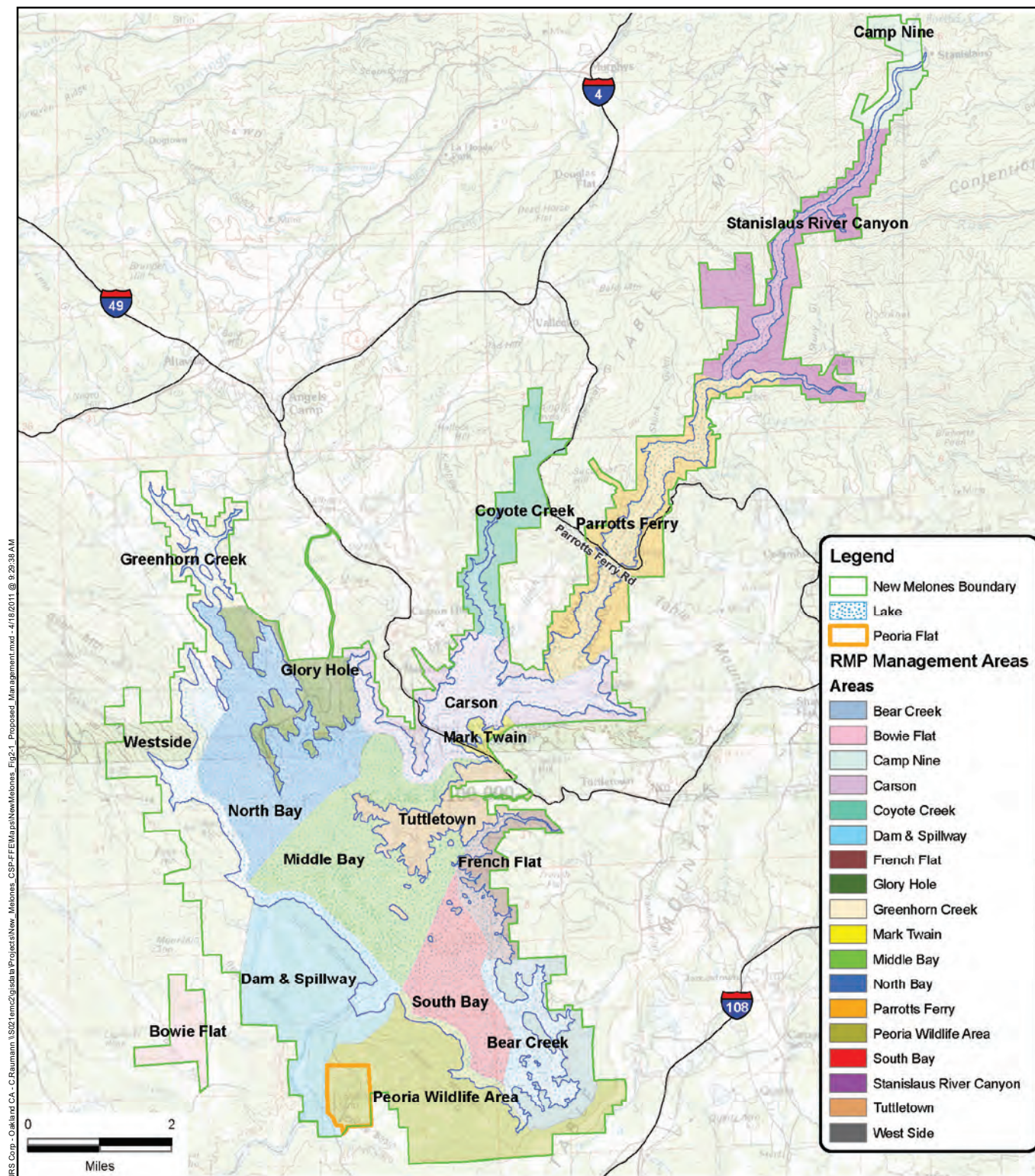
¹² Reclamation 2006

¹³ Reclamation 1997

¹⁴ Reclamation 1996

¹⁵ Aukerman, Haas & Associates 2008

¹⁶ Haas 2003



New Melones Management Areas

New Melones Lake Area, California
Central California Area Office

Figure 2-1

1. Bear Creek
2. Bowie Flat
3. Camp Nine
4. Carson
5. Coyote Creek
6. Dam & Spillway
7. French Flat
8. Glory Hole
9. Greenhorn Creek
10. Mark Twain
11. Middle Bay
12. North Bay
13. Parrotts Ferry
14. Peoria Wildlife Area
15. South Bay
16. Stanislaus River Canyon
17. Tuttletown
18. Westside

2.2 Recreation Resources at New Melones Lake

New Melones Lake offers a broad range of outdoor recreation activities. Although flood control, water supply, and power generation are considered the primary purpose for the lake, recreation plays a key role in defining the character of the lake and is the primary focus for visitors to the reservoir. This section describes the recreation activities available at the lake; designated recreation area and facilities managed by Reclamation; and an overview of existing commercial services at the lake. This information is used in the analysis of recreation supply and demand in the local area and region presented in Chapter 3 and in the evaluation of potential concession opportunities discussed in Chapter 4.

2.2.1 Recreation Activities

The variations in natural features and expansive water surface area at New Melones Lake support a wide range of outdoor recreation activities throughout the planning area. The primary recreation activities at the lake are water dependent or water enhanced. Water-dependent activities include boating and sailing, kayaking and canoeing, waterskiing and wakeboarding, fishing, and

swimming. Land-based activities in the planning area that are enhanced by proximity to the lake include general day use (e.g., picnicking, hiking, wildlife viewing, etc.), camping, hunting (in designated areas), rock climbing, mountain biking, horseback riding, and spelunking. Day use is permitted in all recreation and outlying areas around the lake, although day-use parking and picnicking are not permitted in the campgrounds. Overall, boating and boating-related activities are the predominant recreation activities occurring at New Melones Lake.¹⁷

2.2.2 Recreation Areas

Reclamation manages and maintains several designated recreation areas and related facilities that focus recreation activity in certain locations. The three primary recreation areas that serve visitors to New Melones Lake are: (1) Glory Hole Recreation Area, (2) Tuttletown Recreation Area, and (3) Mark Twain Recreation Area containing the New Melones Lake Visitor Center and Museum. Recreational facilities found at these developed recreation areas include campgrounds, day use areas (picnic sites), boat ramps, beaches, trails, restrooms, access roads, and parking lots. Most of the current recreation demand at the lake can be met by facilities in these developed areas, excluding periods when water levels are high and when visitation is at a peak.

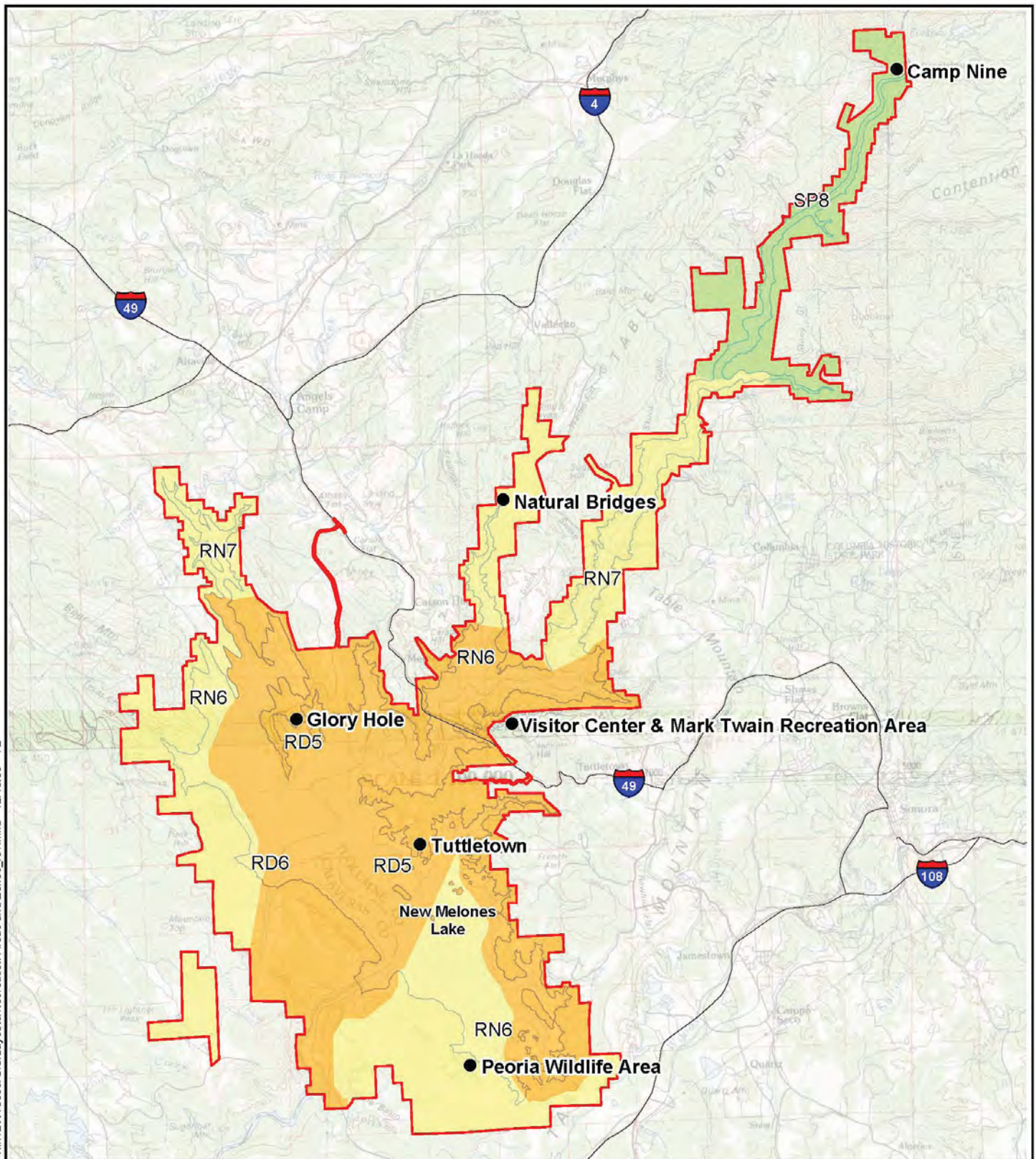
Several undeveloped recreation areas around the lake also help accommodate recreation use. Generally, all of the recreation areas are open for year-round operation, excluding seasonal closures for resource recovery actions and required maintenance. Figure 2-2 shows the location of these areas and their Water Resources Opportunities Spectrum (WROS) classification.

Glory Hole Recreation Area

Glory Hole Recreation Area is in the mid-basin area of the lake and is accessed from Highway 49 near the community of Angels Camp in Calaveras County. It includes two campground areas (Big Oak and Ironhorse); two boat launch areas (Glory Hole Point and Angels Creek); three day use areas (Black Bart, Buck Brush, and Osprey Point); and the New Melones Lake Marina. Several trails at Glory Hole serve hikers and mountain bikers. The Glory Hole area also includes a swim beach (near the Angels Creek Area), a fish cleaning station, dump station, and an amphitheatre that serves the two campgrounds.

¹⁷ Additional information on recreation preferences is available from the on-site and telephone survey, which is summarized in more detail in Section 3.2.1.

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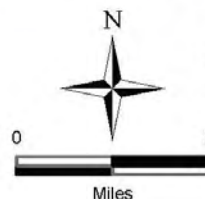
WROS INVENTORY SCALE										
1	2	3	4	5	6	7	8	9	10	11
U	S			RD		RN		SP		P

U - Urban Recreation
 S - Suburban Recreation
 RN - Rural Natural Recreation
 RD - Rural Developed Recreation
 SP - Semi Primitive Recreation
 P - Primitive Recreation

WROS Categories

U	SP
S	P
RD	
RN	

Recreation Areas and Zones



New Melones Lake, California
 Central California Area Office

Figure 2-2

Tuttletown Recreation Area

Tuttletown Recreation Area is 8 miles south of the Glory Hole Recreation Area on the eastern side of the lake in Tuolumne County. It is also accessed from Highway 49. Three developed campgrounds in the Tuttletown area include Acorn, Manzanita, and Chamise. Others include the Oak Knoll and Fiddleneck Group Camps. Tuttletown is served by three day-use areas (Eagle Point, Lupine, and Heron Point) and one boat launch near the Eagle Point area. It also contains several trails for hikers and mountain bike riders, as well as a fish cleaning station and dump station.

New Melones Visitor Center and Museum

The New Melones Lake Visitor Center and Museum is adjacent to Reclamation administrative offices and maintenance yard and is accessed from Highway 49 just south of the Stevenot Bridge. The Visitor Center and Museum offer exhibits on the use of the Stanislaus River by prehistoric and historic peoples, as well as natural resources, and local and regional recreation information.

Other Outlying Recreation Areas

New Melones Lake is also served by a number of undeveloped recreation areas in more remote parts of the planning area. These sites provide lake access and support dispersed recreational use as well as other uses such as wildlife management. However, all of these areas have limited and/or basic facilities, and therefore offer little support of current or future levels of visitor activities. These recreation areas are encompassed within the management areas listed in Section 2.1.2.

2.2.3 Recreation Facilities

The recreation areas at New Melones Lake provide a wide range of recreation-related facilities. This section describes these facilities in more detail. A comprehensive matrix showing recreation facilities by recreation area is presented in Table 2-1.

Table 2-1A. Recreation Facilities at New Melones Lake

Facilities	Metric	Glory Hole Recreation Area											
		New Melones Lake Marina	Iron Horse Campgrounds	Big Oak Campground	Tower Climb Trailhead	Carson Creek Trailhead	Buck Brush Day Use	Black Bart Day Use	Osprey Point Day Use	Angels Creek Swim Area	Angels Creek Boat Ramp	Angels Fish Cleaning Station	Glory Hole Point Boat Ramp
Access and Parking:													
Paved Parking Spots	#	97	10	24	0	0	20	44	39	0	196	118	126
Unpaved Parking Spots	#	20	0	0	13	14	0	0	0	48	0	0	460
Access Roads	U=Unpaved	P+U	P	P	P	P	P	P	P	U	P	P	P
Launch Ramp Boat Lanes	#	0	0	0	0	0	0	0	0	0	6	0	7
Courtesy Docks	#	0	0	0	0	0	0	0	0	0	2	0	3
Day Use Facilities:													
Picnic Sites w/ grills	#	0	0	0	0	0	0	19	20	9	11	0	0
Picnic Sites w/o grills	#	0	0	0	1	1	0	0	0	0	0	0	0
ADA Picnic Area	Yes / No	No	No	No	No	No	No	No	No	No	No	No	No
Overnight Facilities:													
Standard Sites	#	0	67	53	0	0	0	0	0	0	0	0	0
Walk-in Sites	#	0	20	0	0	0	0	0	0	0	0	0	0
Group Sites	#	0	0	0	0	0	0	0	0	0	0	0	0
ADA Campsites	#	0	4	1	0	0	0	0	0	0	0	0	0
Camp Host Sites	#	0	2	2	0	0	0	0	0	0	0	0	0
Trails:													
Number and length of trails	# (Miles)	6 trails (11.6 miles)											
Support Facilities:													
Restrooms w/ flush toilets	#	1	4	3	0	0	1	1	1	0	Nearby	1	0
Restrooms w/ showers	#	0	3	2	0	0	0	0	0	0	0	0	0
Portable Toilets	#	0	0	0	0	0	0	0	0	0	0	0	1
CXT Vault Restrooms	#	0	0	0	1	1	0	0	0	0	0	0	1
Potable Water	Yes / No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No
Dump Station	Yes / No	No	No	No	Nearby	No	No	No	No	No	No	No	No
Fish Cleaning Station	Yes / No	No	No	No	No	No	No	No	No	No	No	Yes	No
Pay Phone	Yes / No	Yes	No	No	No	Yes	No	No	No	No	No	No	No
Floating Lake Restrooms	#	Four (4) floating restrooms on the lake											
Miscellaneous:													
Equestrian Staging Area	Yes / No	No	No	No	No	No	No	No	No	No	No	No	No
Playground	Yes / No	No	No	No	No	No	No	No	No	No	No	No	No
Boat Rentals	Yes / No	Yes	No	No	No	No	No	No	No	No	No	No	No
Boat Mooring Facilities	Yes / No	Yes	No	No	No	No	No	No	No	No	No	No	No
Store	Yes / No	Yes	No	No	No	No	No	No	No	No	No	No	No
Amphitheater	Yes / No	No	Yes	No	No	No	No	No	No	No	No	No	No

* Source: Reclamation, 2007a (Resource Inventory Report)

* Shading indicates that these parking spaces are only used during lower lake levels

New Melones Lake
Commercial Services Study &
Financial Feasibility Evaluation

Table 2-1B. Recreation Facilities at New Melones Lake

Facilities	Metric	Tuttletown Recreation Area								
		Acorn Campground	Manzanita Campground	Chamise Campground	Fiddleneck Group Camp	Oak Knoll Group Camp	Lupine Day Use Area	Heron Point Day Use	Eagle Point Group Picnic Area	Tuttletown Boat Ramp
Access and Parking:										
Paved Parking Spots	#	12	2	6	0	10	44	40	96	141
Unpaved Parking Spots	#	0	4	0	12	0	0	0	0	350
Access Roads	P=Paved / U=Unpaved	P	P+U	P+U	P	P	P	P	P	P+U
Launch Ramp Boat Lanes	#	0	0	0	0	0	0	0	0	7
Courtesy Docks	#	0	0	0	0	0	0	0	0	3
Day Use Facilities:										
Picnic Sites w/ grills	#	0	0	0	0	0	14	18	10	0
Picnic Sites w/o grills	#	0	0	0	0	0	1	0	0	0
ADA Picnic Area	Yes / No	No	No	No	No	No	No	No	Yes	No
Overnight Facilities:										
Standard Sites	#	68	40	8	0	0	0	0	0	0
Walk-in Sites	#	0	15	28	0	0	0	0	0	0
Group Sites	#	0	0	0	6	10	0	0	0	0
ADA Campsites	#	1	1	0	0	0	0	0	0	0
Camp Host Sites	#	1	2	0	0	0	0	0	0	0
Trails:										
Number and length of trails	# (Miles)	7 trails (6.3 miles)								
Support Facilities:										
Restrooms w/ flush toilets	#	1	2	2	Nearby	0	1	1	Nearby	1
Restrooms w/ showers	#	1	1	1	0	0	0	0	0	0
Portable Toilets	#	0	0	0	0	0	0	0	0	0
CXT Vault Restrooms	#	1	0	0	0	1	0	0	0	0
Potable Water	Yes / No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Dump Station	Yes / No	No	No	No	Nearby	No	No	No	No	No
Fish Cleaning Station	Yes / No	No	No	No	No	No	Yes	No	No	No
Pay Phone	Yes / No	No	No	No	No	No	Yes	No	No	No
Floating Lake Restrooms	#									
Miscellaneous:										
Equestrian Staging Area	Yes / No	No	No	No	No	No	No	No	No	No
Playground	Yes / No	No	No	No	No	No	No	No	No	No
Boat Rentals	Yes / No	No	No	No	No	No	No	No	No	No
Boat Mooring Facilities	Yes / No	No	No	No	No	No	No	No	No	No
Store	Yes / No	No	No	No	No	No	No	No	No	No
Amphitheater	Yes / No	No	No	No	No	No	No	No	No	No

* Source: Reclamation, 2007a (Resource Inventory Report)

* Shading indicates that these parking spaces are only used during lower lake levels

Table 2-1C. Recreation Facilities at New Melones Lake

Facilities	Metric	HQ	Undeveloped Areas									Total (All Areas)
		New Melones Administration	Mark Twain	Old Town of Melones	Chaparral Basin	Peoria	Bear Creek	French Flat	Natural Bridges	Parrots Ferry	Camp Nine	
Access and Parking:												
Paved Parking Spots	#	31	0	10	0	0	0	0	30	0	0	1,096
Unpaved Parking Spots	#	0	60	8	10	36	4	0	0	20	90	1,149
Access Roads	P=Paved / U=Unpaved	P	P	P	U	P+U	U	U	P	P	P	--
Launch Ramp Boat Lanes	#	0	0	0	0	0	0	0	0	0	0	20
Courtesy Docks	#	0	0	0	0	0	0	0	0	0	0	8
Day Use Facilities:												
Picnic Sites w/ grills	#	1	0	0	0	0	0	0	0	0	0	102
Picnic Sites w/o grills	#	2	0	0	0	0	0	0	4	0	0	9
ADA Picnic Area	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Overnight Facilities:												
Standard Sites	#	0	0	0	0	0	0	0	0	0	0	236
Walk-in Sites	#	0	0	0	0	0	0	0	0	0	0	63
Group Sites	#	0	0	0	0	0	0	0	0	0	0	16
ADA Campsites	#	0	0	0	0	0	0	0	0	0	0	7
Camp Host Sites	#	0	0	0	0	0	0	0	0	0	0	7
Trails:												
Number and length of trails	# (Miles)	1 trail (0.5 miles)	5 trails (11.9 miles)									
Support Facilities:												
Restrooms w/ flush toilets	#	1	0	0	0	0	0	0	0	0	0	21
Restrooms w/ showers	#	0	0	0	0	0	0	0	0	0	0	8
Portable Toilets	#	0	1	0	0	0	0	0	0	0	0	2
CXT Vault Restrooms	#	0	0	0	1	0	0	0	1	0	1	8
Potable Water	Yes / No	Yes	No	No	No	Yes	No	No	No	No	No	--
Dump Station	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Fish Cleaning Station	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Pay Phone	Yes / No	Yes	No	No	No	No	No	No	No	No	No	--
Floating Lake Restrooms	#											
Miscellaneous:												
Equestrian Staging Area	Yes / No	No	No	No	No	Yes	No	No	No	No	No	--
Playground	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Boat Rentals	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Boat Mooring Facilities	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Store	Yes / No	No	No	No	No	No	No	No	No	No	No	--
Amphitheater	Yes / No	No	No	No	No	No	No	No	No	No	No	--

* Source: Reclamation, 2007a (Resource Inventory Report)

* Shading indicates that these parking spaces are only used during lower lake levels

Campgrounds

Reclamation manages five developed campgrounds at New Melones Lake, two at the Glory Hole Recreation Area, and three at Tuttletown Recreation Area. The five campgrounds collectively have 327 camping sites,¹⁸ available for use during the primary recreation season. Camping is permitted only in the designated campgrounds; no shoreline camping is allowed. Amenities at each camping site include a picnic table, fire pit, and grill; each campground has water spigots, restroom facilities, and hot showers. In addition, there are two group campgrounds located at Tuttletown with a combined 16 campsites.

Campground reservations are available through the National Recreation Reservation Service, or are otherwise available on a first-come first-served basis. Each campground also has its own self-registration/self-pay station. The fee for overnight camping for a standard campsite is \$18 per night and \$14 per night for the walk-in campsites. Fees at the group campgrounds range from \$100 to \$120 per night.

Boat Access Facilities

Both the Glory Hole and Tuttletown Recreation Areas have boat launch ramps with courtesy docks. At Glory Hole, two boat ramps are provided: Angels Creek Boat Ramp, with six boat ramp lanes and two courtesy docks; and Glory Hole Point Boat Ramp, with seven boat ramp lanes and three docks. Tuttletown has only one boat launch facility, with seven boat ramp lanes and three docks. All of the boat launch facilities are served by paved and/or unpaved parking and other nearby support facilities, such as restrooms.

Day-Use Facilities

Day-use facilities at New Melones Lake provide a total of 119 picnic sites, primarily at the Glory Hole and Tuttletown Recreation Areas. Limited picnic facilities are also provided at the Mark Twain Recreation Area and at Natural Bridges. Of the total picnic sites, 108 sites include grills. An Americans with Disabilities Act (ADA) -accessible group picnic site is also available, located at the Eagle Point Group Picnic Area. Many of the day-use areas provide trailhead access to the developed trail system around the lake.

Trails

New Melones Lake has an extensive trail system for visitors participating in hiking, biking, and wildlife viewing activities. The trail system consists of 19 trails covering approximately 30.3 miles. The majority of trails have been developed within the Glory Hole Recreation Area. Specifically, there are six trails at Glory Hole: Angels Creek Trail (2.5 miles/moderate difficulty); Buck Brush Loop (1.3 miles/easy); Carson Creek Trail (2.3 miles/moderate difficulty); Frontier Trail (2.0 miles/moderate difficulty); Gold Rush Trail (2.2 miles/moderate difficulty); and Tower Climb (1.3 miles/challenging).

¹⁸ Includes seven ADA-accessible campsites and seven camp host sites

Historically, the trail system at the Tuttletown Recreation Area was limited. However, a complementary system of trails in the Tuttletown Recreation Area has recently been developed. The trails at Tuttletown include: Black Bear Loop Trail (1.2 miles/easy); Cougar Point Trail (0.4 miles/easy); Fox Ravine Trail (0.4 miles/easy); Heron Point Trail (1.7 miles/easy); Kingsnake Loop Trail (0.8 miles/easy); Redtail Trail (1.2 miles/easy); and Ringneck Run Trail (0.6 miles/easy).

One trail is available at the New Melones Visitor Center – the Norwegian Gulch Trail (0.5 miles/easy). There are five other trails at undeveloped recreation areas, including Natural Bridges Trail (0.7 miles/moderate difficulty); Green Springs Trail (2.0 miles/moderate difficulty); Peoria Mountain Trail (4.0 miles/challenging); Peoria Ridge Trail (3.7 miles/moderate difficulty); and Table Mountain Trail (1.5 miles/challenging). Some of the outlying areas may also have informal trails.

Equestrian Staging Area

The Peoria WMA provides an equestrian staging area, which facilitates horseback riding and other equestrian activities around the lake. The staging area includes space for trailer parking, tie areas, and water. It has been available for overnight group use by special use permit.

Access Roads and Parking

Formal parking areas are provided at all developed recreation areas, while informal parking is common at many of the undeveloped areas. Some of the developed parking areas are inundated when the water level in the lake is high, limiting parking space at the boat launches and day use areas. During peak visitor periods, parking at the marina and overflow parking for campers is also limited.

Dam Overlook

The Dam Overlook is on the western side of the lake in Tuolumne County, and is accessed via Peoria Flat Road from Highway 108/120 (Reclamation 1995). This area contains viewing shelters, a restroom, and a parking lot, and was developed for public viewing during dam and facility construction. The facility is currently closed to the public.

Support Facilities

A number of support facilities are also provided at the developed and undeveloped recreation area at New Melones Lake, including:

- Amphitheater (at Iron Horse Campground)
- RV dump stations
- Fish cleaning stations
- Restrooms (including floating restrooms on the lake)

- Showers (coin-operated)
- Potable water systems
- Pay phones

In addition, the New Melones Lake Marina at the Glory Hole Recreation Area provides boat mooring and other commercial services to visitors; see Section 2.4 for more information.

2.3 Recreation Use and Visitation

The recreation resources at New Melones Lake draw a substantial number of visitors to the lake every year. Recent data indicate that annual visitation to the lake has ranged between approximately 660,000 and 790,000 over the past 5 years. Additional information on recreation visitation and occupancy rates, as it relates to measures of recreation demand, is presented in Section 3.2.1.

According to on-site survey information,¹⁹ many visitors reside in the surrounding counties of Tuolumne and Calaveras, which together account for 29.1 percent of total visitation to the lake. The Lake also draws substantial numbers of visitors from the Bay Area, with Alameda, Contra Costa, and Santa Clara counties collectively comprising 25.9 percent of total visitation. The Lake is also a popular recreation destination for residents from the Sacramento Valley, with Sacramento, San Joaquin, and Stanislaus counties accounting for 25.1 percent of total visitation. The remaining 20 percent of visitors come from other parts of the State.

2.4 Commercial Services and Concessions

Commercial services can be provided at Reclamation facilities to support and enhance recreational activities, programs, and facilities, and to provide a means for disseminating public use information.²⁰ Currently, commercial services at New Melones Lake are limited to a single marina concessionaire and other commercial activities undertaken pursuant to special use permits.

2.4.1 New Melones Lake Marina

The primary commercial service already operating at New Melones Lake is the New Melones Lake Marina located in the Glory Hole Recreation Area. The marina operates under a concession agreement, specifying services to be provided, between the concessionaire and Reclamation.

¹⁹ U.S. Bureau of Reclamation, 2008c

²⁰ All concessionaire contracts include explicit measures related to the notice and dissemination of public information, communications equipment necessary in the event of emergencies, medical emergency provisions, and spill emergency response measures (Reclamation 2009a).

Marina Facilities and Services

The marina offers boat slips and mooring for rent, which accommodate both small and large watercraft, including houseboats. The marina maintains a total of 100 small boat slips (20-24 feet), of which 56 are covered and 44 are uncovered. The marina slips are rented on an annual term and are fully occupied (with a waiting list). The marina also offers houseboat rentals and other motorized watercraft rentals (i.e., patio boats, ski boats, fishing boats, and personal watercraft). The marina has a convenience store that sells fishing and camping supplies, food and beverages, and other miscellaneous items. The marina also has a boat fueling station, sewage pump-out service, propane sales, and baggage cart service. The marina does not offer prepared food service. The current concessions agreement is set to expire in 2012.

Marina Rates

The rates charged by the marina for all goods and services provided must be approved by Reclamation on an annual basis. Reclamation approves rates based on a market review of recreation services provided at comparable facilities in the region. A summary of the current rates approved for the New Melones Lake Marina is presented in Table 2-2 and Table 2-3. The marina has the discretion to charge less than the approved rates in response to market conditions.

Houseboating

Houseboating is an integral component of overall marina operations. The marina is authorized to have a total of 106 houseboats at its facility, including 18 rental houseboats, 38 private houseboats docked in marina slips, and 50 private houseboats docked at mooring balls in the cove. The marina operator has the discretion to accommodate fewer houseboats, including houseboat rentals, based on market conditions. For example, the marina has recently reduced its fleet of rental houseboats to 13 based on existing demand. Currently, three unique houseboat models are offered for rent: Escapade, Odyssey, and Eclipse. Rental rates vary by boat and by season. Approved weekly rates during the winter months (off-season) range from \$2,965 to \$4,515 per boat, whereas peak summer rates are between \$5,014 and \$7,509 per week. Although the demand for houseboat rentals fluctuate from year to year and season to season, there remains a strong demand for houseboat mooring, which is illustrated by a multi-year waiting list that is maintained by the concessionaire.²¹

²¹ Personal communication with Mike Han, General Manager, Water Resorts, Inc. on December 8, 2009

Table 2-2. New Melones Lake Marina Approved Rates (2009)

Item / Service	Rate (\$)
Fishing Boats	
Daily	\$75
Hourly	\$19
Patio Boats	
Daily	\$250
Hourly	\$63
Bluewater Ski Boats, 19'	
Daily	\$395
Hourly	\$70
Malibu Wakesetter, 21'	
Daily	\$525
Hourly	\$105
Waverunners	
Daily	\$425
Hourly	\$75
Berthing:	
Day	\$26
Week	\$117
Monthly	
20' Open	--
20' Covered	\$293
24' Open	\$248
24' Covered	\$335
Mooring Ball	\$281
48' x 15' Slip, QTR	\$1,379
Annual	
20' Open	--
20' Covered	\$2,208
24' Open	\$1,802
24' Covered	\$2,490
Mooring Ball	\$2,307
48' x 15' Slip	\$4,341
Dock Service (\$/hr)	\$64
Mechanic (\$/hr)	\$95
Pumpout Service (under 35')	\$0.11 / gallon
Pumpout Service (over 35')	\$0.11 / gallon
Electricity to Slips	Charge cost

Source: U.S. Bureau of Reclamation, 2009b, Approved Rate letter and spreadsheet, dated December 5, 2008

**Table 2-3. New Melones Lake Marina Approved Rates (2009)
– Houseboat Rentals**

Houseboat	Weekend	Mid-Week	Weekly
Escapade			
Spring	\$3,256	\$3,431	\$5,731
Summer	\$4,041	\$4,272	\$7,509
Winter	\$2,559	\$2,698	\$4,515
Odyssey			
Spring	\$2,774	\$2,917	\$4,725
Summer	\$3,514	\$3,717	\$6,155
Winter	\$2,233	\$2,345	\$3,912
Eclipse			
Spring	\$2,258	\$2,363	\$3,850
Summer	\$2,861	\$2,993	\$5,014
Winter	\$1,761	\$1,845	\$2,965

Source: U.S. Bureau of Reclamation, 2009b, Approved Rates (letter and spreadsheet), dated December 5, 2008

Marina-Related Planning Issues

The 2003 visitor capacity study for New Melones Lake identified a number of planning issues that are important for the marina and other potential commercial services:

- Inadequate parking, loading zones, and accessible facilities
- Need for diversity of boat rentals and pricing options
- (Appropriate) number and size of houseboat rentals
- Footprint of the marina exceeding contract agreement
- Long-term exclusive use of private houseboat moorings

The visitor capacity study further suggests that the “reasonable” number of houseboats (not including those moored at the marina) that should be on the water at any one time is between 50 and 60. It also suggests that fewer than 10 percent of the private houseboats leave the marina at one time, thereby indicating an upper limit on houseboats on the lake. Reclamation has determined that the current size of the marina reflects an optimal capacity for watercraft, including houseboats, based on management considerations and visitor experience. A use limit on houseboats would limit potential commercial opportunities at a marina related to additional houseboat mooring and/or number of rentals.

2.4.2 Other Commercial Services

Other types of commercial services are found at New Melones Lake, but are subject to special use permits or license agreements rather than concessions contracts. For example, when water conditions are appropriate, commercial rafting companies offer guided raft trips on the Stanislaus River (in the Camp Nine area), with difficulty levels ranging from low to moderate. In addition, fishing guides from the area commonly bring their clientele to New Melones Lake, and commercial outfitters sometimes offer guided gold panning expeditions in the planning area. Furthermore, a seaplane school has also operated on the lake in the past. Although the focus of this study will be on commercial services that would be provided in accordance with concessions agreements, other commercial services are also considered.

Chapter 3

Regional Recreation Facilities and Commercial Services

Recreational use at any location depends on many factors, including the locations and types of activities at alternative sites. Chapter 3 provides an overview of the regional recreation environment considering the supply of and demand for commercial services opportunities. The demand analysis also considers regional recreation trends as well as the demographic characteristics of the visitor base at New Melones Lake.

3.1 Supply of Recreation Resources

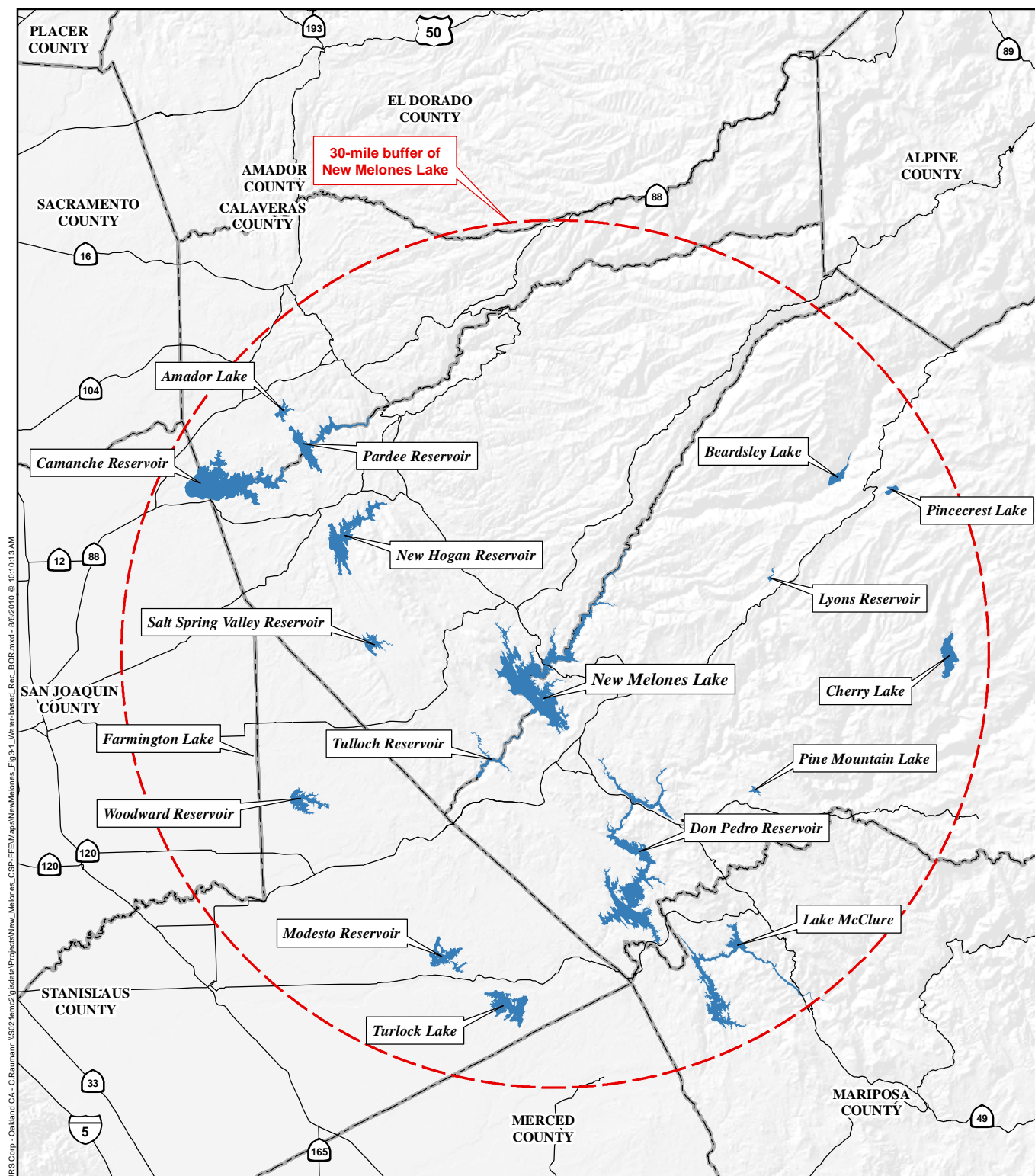
This subsection considers three measures of recreation supply. The first is recreation and commercial service opportunities at other water-based facilities proximate to New Melones Lake. The second considers other California facilities similar in size and character to New Melones Lake. The third reflects local recreation-serving businesses near New Melones Lake.

3.1.1 Water-Based Recreation Facilities near New Melones Lake

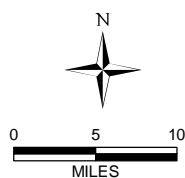
New Melones Lake is one of many lakes and reservoirs in the region. Some of these nearby facilities provide commercial services which should be considered in planning for commercial services at New Melones Lake. For this analysis, all lakes and reservoirs within an approximate 30-mile radius were considered (Figure 3-1).²² Each is described below and is included in Table 3-1.

- **Amador Lake** is a small reservoir located near the communities of Ione and Buena Vista, approximately 30 miles north of New Melones Lake. It was developed by the Jackson Valley Irrigation District, but recreation management at the reservoir is provided by the Lake Amador Resort. The resort provides marina services including a boat launch area, docks, storage, fishing boat rentals and non-motorized boat rentals. Although the resort is open to motor-boating, no waterskiing or jet-skis are allowed, and there is no houseboating. The resort also provides developed camping at 150 sites and RV camping at 73 sites with full hookups. Other amenities include a general store, restaurant, club house, swimming pond, and waterslides. Lake Amador is well known for its recreational fisheries.

²² The selection of a 30-mile radius is consistent with previous recreation analyses (see State of California, Department of Water Resources, *Comparative Inventory of Recreation Facilities at California's Largest Reservoirs*, 2000, published December 2001.) Several additional facilities are included in the analysis that are just outside the 30-mile threshold, but should be considered in the regional supply of recreation resources in the region.



Water-Based Recreation Facilities in Proximity to New Melones Lake



New Melones Lake Area, California
Central California Area Office

Figure 3-1

Table 3-1. Summary of Recreation and Commercial Facilities at Waterbodies within Approximately 30 Miles of New Melones Lake

Waterbody	Distance from New Melones (Miles)	Surface Acres	Miles of Shoreline	General Recreation Facilities				Commercial Services								
				Boat Launch Areas	Camp-grounds	Camp-sites	RV Camping (Full Hookups)	Marina	Houseboat Rentals	Motorized Boat Rentals	Non-Motorized Boat Rentals	Rec. Equipment Rentals	Food Service	Store	Equestrian Riding Stables	Other Lodging
New Melones Lake	--	12,500	100	3	5	305	NO	YES (1)	YES	YES	NO	NO	NO	YES	NO	NO
Amador Lake	30.0	400	14	1	4	150	YES	YES (1)	NO	YES	YES	NO	YES	YES	NO	NO
Beardsley Reservoir	28.6	N/A	N/A	1	1	16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Cherry Lake	31.8	N/A	N/A	1	1	45	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Don Pedro Lake	20.0	13,000	160	3	1	172	YES	YES (2)	YES	YES	YES	YES	YES	YES	NO	NO
Farmington Lake	23.5	N/A	N/A	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lake Camanche	28.8	7,700	53	2	15	762	YES	YES (2)	NO	YES	YES	NO	YES	YES	NO	YES
Lake McClure	21.7	7,000	82	4	4	600	YES	YES (2)	YES	YES	YES	YES	YES	YES	NO	NO
Lake McSwain	29.6	N/A	N/A	2	4	98	YES	YES (1)	NO	YES	YES	NO	YES	YES	NO	NO
Lyons Reservoir	19.5	N/A	N/A	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Modesto Reservoir	20.2	2,800	31	2	N/A	150	YES	YES (1)	NO	YES	YES	YES	YES	YES	NO	NO
New Hogan Lake	18.2	4,400	50	2	5	N/A	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Pardee Lake	23.3	2,000	37	1	1	100	YES	YES (1)	NO	YES	NO	NO	YES	YES	NO	NO
Pinecrest Lake	32.2	300	4	1	2	300	NO	YES (1)	NO	YES	YES	YES	YES	YES	NO	NO
Pine Mountain Lake	20.0	202	6	1	1	23	YES	YES (1)	NO	NO	YES	NO	YES	YES	YES	NO
Salt Spring Valley Res.	13.0	N/A	N/A	1	1	24	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO
Tulloch Lake	8.0	N/A	55	2	1	130	YES	YES (1)	NO	YES	YES	YES	YES	YES	NO	YES
Turlock Lake	22.0	3,500	26	1	1	66	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Woodward Reservoir	21.5	2,900	23	3	5	154	YES	YES (1)	NO	YES	YES	YES	YES	YES	NO	NO

N/A: Information not available

- **Beardsley Reservoir** is one of three reservoirs operated as part of the Tri-Dam Project (along with Donnell's Lake and Tulloch Lake), which is jointly managed by the Oakdale Irrigation District and the South San Joaquin Irrigation District. It is approximately 29 miles east of New Melones Lake. Beardsley Reservoir has developed recreation facilities, such as campgrounds and day-use areas, with amenities including stoves, table, and flush toilets. It also provides opportunities for boating (including a boat launch), fishing, swimming, and hiking and wildlife viewing along a system of nature trails. No commercial services are available at Beardsley Reservoir.
- **Cherry Lake** is in the Stanislaus National Forest just over 30 miles east of New Melones Lake, and is managed by the United States Forest Service (USFS). The lake has a single boat launch. Other recreation facilities include a developed campground with 45 campsites, vault restrooms, sandy swimming beaches that are only accessible by boat, as well as hiking trails. There is neither a marina nor any other commercial services at Cherry Lake.
- **Don Pedro Reservoir** is approximately 20 miles south of New Melones Lake, along the Tuolumne River. It is the fifth largest reservoir in California with approximately 160 miles of shoreline (at maximum capacity). Don Pedro Reservoir provides abundant recreation opportunities that are managed by the Don Pedro Recreation Agency²³ and which are supported by commercial businesses at the lake operated by a marina concessionaire.²⁴ Camping opportunities include tent camping, group camping, RV camping, and boat-in camping, which are complemented by day-use and picnic areas, as well as a swimming lagoon. Fishing is allowed year-round on the Reservoir and some hunting access is provided (subject to private property permission and BLM regulations/access). Don Pedro Reservoir is served by two full-service marinas, Lake Don Pedro Marina and Moccasin Point Marina. Both offer houseboat rentals (ranging from 50 to 70 feet); rentals of ski boats, patio boats, fishing boats and personal watercraft; recreation equipment rentals; boat slip rental (daily/monthly); boat repair shop; dry storage; and convenience store that sells recreation supplies (e.g. bait and tackle). In addition, Lake Don Pedro Marina has a café restaurant, while Moccasin Point Marina provides snack bar service.
- **Farmington Reservoir** is part of the Farmington Flood Control basin operated by USACE, and is approximately 24 miles from New Melones Lake. There are no developed recreation facilities or commercial services at the Reservoir.

²³ The Don Pedro Recreation Agency, which is responsible for the recreation element of the Don Pedro Project, is sponsored by the Turlock Irrigation District, the Modesto Irrigation District, and the City and County of San Francisco.

²⁴ Forever Resorts (www.foreverhouseboats.com)

- **Lake Camanche**, about 29 miles from New Melones Lake, covers 7,700 surface acres and has 53 miles of shoreline. The Lake is administered by the East Bay Municipal Utility District (EBMUD), but all recreation and supporting commercial services are provided by a concessionaire.²⁵ Camping is available at 15 campgrounds providing 762 campsites, including full hookups in RV park areas, as well as campsites with yurt structures. Alternative options for overnight accommodations include cottages, motel rooms, and a mobile home park. Lake Camanche has two boat launch areas on the northern and southern shores of the lake, each with a full-service marina. The marinas offer on-water fueling, berthing, storage, and rental boats. In addition, each marina contains a general store that sells general recreation supplies. Food service is provided by a coffee shop (North Shore) and snack bar (South Shore). Other commercial services include laundry facilities and lake tours.
- **Lake McClure** is approximately 22 miles south of New Melones Lake and is operated by the Merced Irrigation District. The lake covers 7,000 surface acres and has over 80 miles of shoreline. Recreation facilities include four developed campgrounds containing 600 campsites, RV hookups, swimming lagoons, restrooms with flush toilets, and showers. The lake has four developed recreation areas (McClure Point, Barrett Cove, Horseshoe Bend, and Bagby), all of which are served by boat launching facilities. There are two marina facilities at the lake, one at McClure Point and the other at Barrett Cove. Both marinas provide houseboat mooring and fishing and patio boat rentals, and at Barrett Cove Marina, houseboat rentals are also available. A concessions store and groceries are available at all recreation areas other than Bagby.
- **Lake McSwain** is just south of Lake McClure, approximately 30 miles from New Melones Lake and is also operated by Merced Irrigation District. It is smaller than Lake McClure and caters to powerboats, canoes, kayaks, inflatables, and small sailboats. Waterskiing, jet skiing, wakeboarding, and houseboats are not permitted. Lake McSwain has four campground loops with a total of 98 campsites, along with RV hookups, restrooms with flush toilets and showers, a swim beach, and children's playground. The single developed recreation area at the lake includes a boat launch and full-service marina with fishing and patio boat rentals. While the lake has no houseboat rentals or mooring, a concessions store and snack bar are open for business there.
- **Lyons Reservoir** is a Pacific Gas & Electric (PG&E) facility about 20 miles east of New Melones Lake. There are no commercial services available, and the only formal recreation facility at the Reservoir is a parking area that includes a toilet, trash containers, one picnic table,

²⁵ Camanche Recreation Company (www.camancherecreation.com)

and drinking water. Informal recreation opportunities are provided primarily during the recreation season (May 1 through October 31), including angling, hiking, picnicking, horseback riding, and bicycling. Dispersed camping also occurs in the northern portion of the planning unit, as well as on adjacent USFS lands. No boating or body contact recreation is permitted. Whitewater rafting opportunities are available just north of Lyons Reservoir on the South Fork Stanislaus River.

- **Modesto Reservoir and Regional Park**, about 20 miles south of New Melones Lake, covers 3,240 acres of land and 2,800 acres of surface water. The area provides general recreation opportunities such as camping, swimming, fishing, boating, water/jet skiing, bird watching, waterfowl hunting (with permit during specific times of year), archery, and radio-controlled airplane flying. Modesto Reservoir offers approximately 150 full hook-up campsites, undeveloped camping areas, picnic shelters/tables, archery range, and a radio control glider airplane field. Modesto Reservoir and Regional Park is managed by the Stanislaus County Parks and Recreation, which uses a concessionaire to provide marina services, including a coffee shop, grocery store, boat and ski rentals, and fuel.
- **New Hogan Lake** is a USACE facility about 18 miles northwest of New Melones Lake. New Hogan Lake supports standard water-based recreation opportunities, such as boating, waterskiing, fishing, canoeing, sailing, cruising, and swimming. Nine designated recreation areas surround the lake, which provide opportunities for camping (at five campgrounds); day use and picnicking; hiking, biking, and equestrian trail use; ranger programs; hunting; and disc golf. While there are two boat launch areas, there is neither a marina nor other commercial services at the lake.
- **Pardee Lake** is approximately 24 miles northwest of New Melones Lake near the community of Ione. The lake covers 2,000 surface acres and has 37 miles of shoreline. EBMUD oversees the operation and maintenance of facilities, but recreation management is under the direction of Pardee Lake Recreation, Inc., a concessionaire under long-term contract with EBMUD.²⁶ Overnight facilities at Pardee Lake include one developed campground with 100 campsites, as well as an RV Park with full hookups. Other recreation facilities include day-use areas, two swimming pools, restrooms with flush toilets and showers, laundry facilities, and a playground. Although body contact recreation (such as swimming and waterskiing) is prohibited at the lake, boating is popular and is supported by one boat launch area and full-service marina. The marina provides mooring and slips; boat rentals; boat, trailer and RV storage; and a convenience store that sells general

²⁶ Pardee Lake Recreation (www.pardeelakerecreation.com)

recreation supplies. In addition, a café restaurant at the lake provides prepared food service.

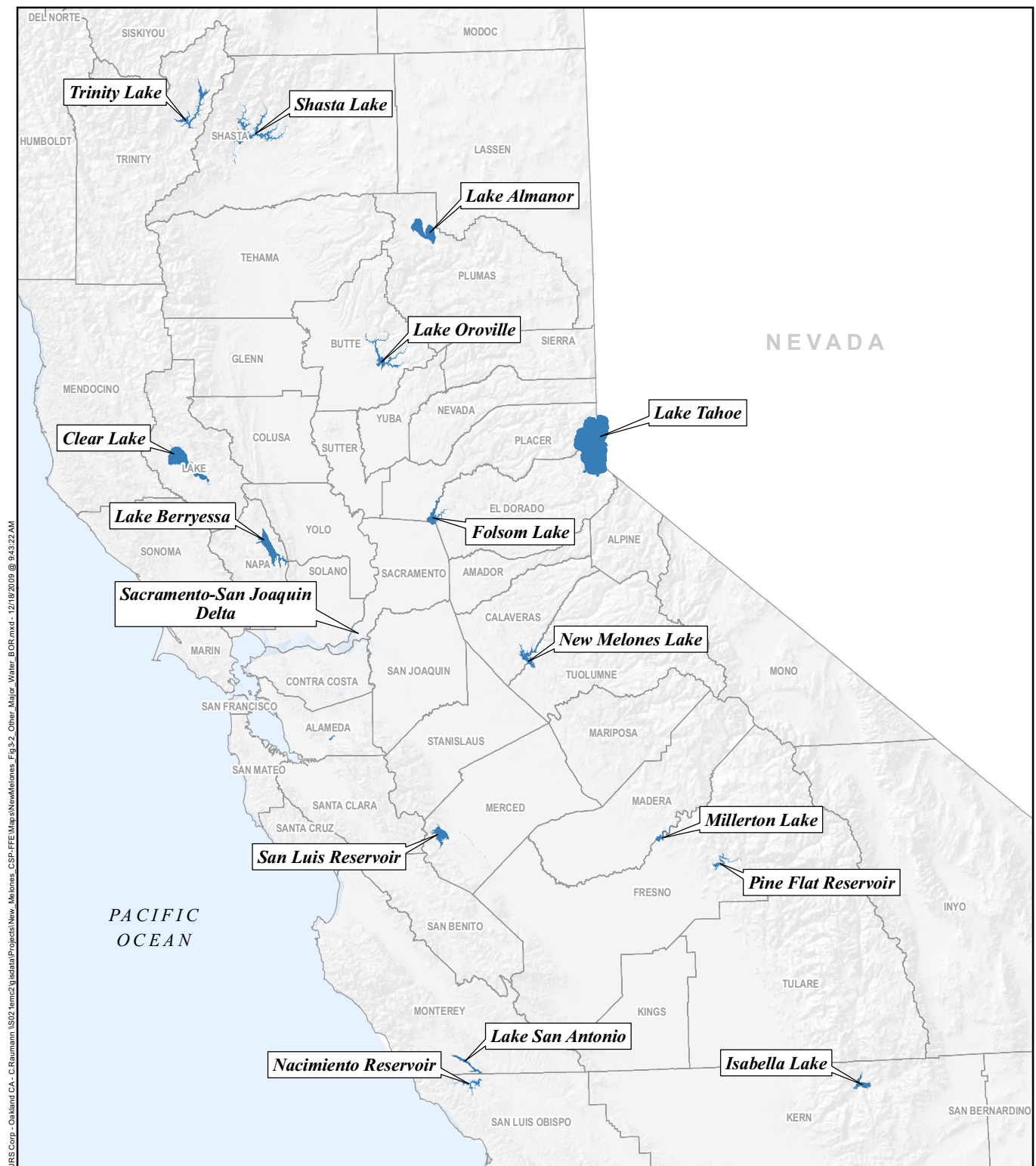
- **Pinecrest Lake** is in Tuolumne County, in the Stanislaus National Forest, just over 30 miles northeast of New Melones Lake. The 300-acre lake is owned and operated by PG&E as part of its Spring Gap-Stanislaus Hydroelectric Project. The USFS manages the recreation opportunities at the lake. The most common recreation activities are camping, fishing, hiking, and general trail use, swimming, and boating (personal watercraft are not allowed). Recreation facilities include campgrounds (with 300 campsites, tables, grills, and flush toilets), day use areas with swim beach, and boat launch area with marina. The marina is operated by concessionaire Pinecrest Lake Resorts and is open seasonally (April – October). It provides motorboat, paddleboat, sailboat, party-boat, and kayak rentals, as well as short-term slips and temporary mooring. The marina also sells general recreational supplies and groceries.
- **Pine Mountain Lake** is a relatively small private lake serving local residents and visitors in the town of Groveland, approximately 20 miles southeast of New Melones Lake. The lake and surrounding facilities support numerous recreational activities, including boating, swimming, fishing, camping, horseback riding, tennis, and golf. The lake is served by a marina that offers small boat rentals, food service (grill), and water taxi service. The campground provides 23 campsites, which include 10 sites with RV hookups. Other facilities at the lake include country club, lodge (available for rental), full-service equestrian stable, swimming pool, golf course, and tennis courts.
- **Salt Springs Valley Reservoir** is a privately owned lake approximately 13 miles northwest of New Melones Lake in Calaveras County near the town of Copperopolis. The Reservoir features a jet-ski course and fishing, which are accommodated by a developed boat launch area with transient berths. No ski boats are allowed. Overnight and group camping is available at the campground (with 24 campsites) and at the RV Park, which is open year round. There are also day-use areas with picnic sites, boat wash-down areas, swimming areas, and fish cleaning stations, as well as restrooms and showers. A convenience store provides relevant items such as bait and tackle and ice. No marina or recreation rentals are available at the Reservoir.
- **Tulloch Lake** is operated as part of the Tri-Dam Project, jointly managed by the Oakdale Irrigation District and the South San Joaquin Irrigation District. The Lake is approximately 8 miles southwest of New Melones Lake, near the community of Jamestown. Tulloch Lake has over 55 miles of shoreline and is a highly developed recreation destination, subject to overcrowding during the peak recreation season, indicating a strong demand for recreational opportunities in the local

area. Recreation access is from privately-owned docks and through privately-owned facilities accessible by the public on a fee basis. Commercial services are extensive. The South Lake Tulloch RV Campground and Marina provides opportunities for overnight camping and RV camping (130 campsites with full hookups), as well as lakefront cabin rentals. The marina facility provides boat slips, boat rentals, fuel, a general store, laundromat, and restrooms and showers. A hotel resort offers waterfront accommodations and a wide range of vacation amenities.

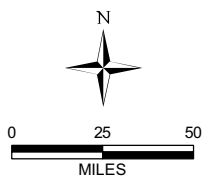
- **Turlock Lake State Recreation Area (SRA)**, managed by the California Department of Parks and Recreation (DPR), is about 22 miles south of New Melones Lake. This area is open year-round and provides opportunities for camping, picnicking, fishing, swimming, boating, and water skiing. The recreation area features 26 miles of shoreline with developed day-use areas, campgrounds, and a boat launch. However, no commercial services are available.
- **Woodward Reservoir and Regional Park** is approximately 22 miles west of New Melones Lake, near the town of Oakdale, and is managed by the Stanislaus County DPR. The park consists of 3,767 acres of land and 2,900 acres of surface water, which are available for recreation, including swimming, fishing, boating, water/jet skiing, waterfowl hunting (with permit), and radio-controlled airplane flying. Facilities include 115 developed campsites, 40 full hook-up RV campsites, undeveloped camping areas, and day-use facilities (e.g., picnic shelter, barbeques, picnic tables). The park also contains marina facilities and concession services, such as a coffee shop, grocery store, boat and ski rentals, and fuel.

3.1.2 Comparable Water-Based Recreation Facilities Statewide

To fully understand the supply of commercial services that may be provided at New Melones Lake, it is also important to account for facilities and services provided at comparable lakes and reservoirs throughout Northern California. The discussion below focuses on larger, water-based facilities that share some of the attributes found at New Melones Lake, including size, primary recreation activities, types of use, and relatively low elevation (Figure 3-2). Lake Tahoe (although at a much higher elevation) and the Sacramento-San Joaquin Delta (although not a lake or reservoir) were also included because they are both prominent water-based recreation opportunities in Northern California.



Other Major Water Bodies in California



New Melones Lake Area, California
Central California Area Office

Figure 3-2

- **Clear Lake**, in Lake County, is the largest, natural freshwater lake in California with nearly 44,000 surface acres and 100 miles of shoreline at full capacity. The lake is surrounded by private and public lands, both of which provide substantial opportunities for public recreation, such as camping, boating, and fishing. This mix of lands also supports a wide range of commercial services for visitors. Numerous boat launch areas and full-service marinas provide boat slips and mooring. Some are associated with private commercial resorts, and others are on public lands such as county parks and state park lands. Overnight camping, including several RV parks, is available at the lake. Other commercial services provided near Clear Lake include hotel/motel lodging and destination resorts, recreation equipment rentals, and convenience stores.
- **Folsom Lake** is in Sacramento County and covers 11,400 surface acres at capacity. Folsom Lake is operated by Reclamation, but California State Parks manages the recreation facilities as part of the Folsom Lake SRA. The SRA provides opportunities for general recreation, such as camping at two developed campgrounds (providing 150 campsites and RV hookups), swim beaches, trail use, and day-use areas. Boating access is provided at five boat launch areas and is supported by a full-service marina at Brown's Ravine. Numerous commercial services are provided and are managed under concessions agreements with California State Parks.
- **Isabella Lake** is a popular recreation destination east of Bakersfield in Kern County. The surface area of the lake is 11,400 acres and the venue offers about 38 miles of shoreline. It is surrounded by private and public lands providing numerous access points to the lake. There are eight developed campgrounds offering 800 campsites and RV hookups, managed by a private concessionaire to the USFS. The lake also has four boat launch areas and is served by three marinas. Other commercial services around the lake include convenience stores, restaurants, and other lodging.
- **Lake Almanor** covers 28,500 surface acres in Plumas County and has approximately 52 miles of shoreline. It is owned and operated by PG&E as part of its North Fork Feather River facilities. PG&E and the USFS maintain several boat launch areas and campgrounds for public use. However, many of the recreation opportunities at the lake are tied to commercial facilities that are operated by private businesses under agreement with PG&E. These include 22 separate resorts which provide a range of commercial services, including lodging. Among them, five full-service marinas provide additional amenities, such as boat and equipment rentals.

- **Lake Berryessa**, a Reclamation facility in Solano County, covers about 21,000 surface acres and has 165 miles of shoreline. Lake Berryessa offers several free day-use areas and one free boat ramp. The seven developed recreation areas at the lake are operated by concessionaires. These commercial resorts provide opportunities for camping, other lodging (e.g., cabin rentals and RV Park), boat launching, and full-service marinas with houseboat, powerboat, personal watercraft, and other equipment rentals. Reclamation has recently prepared a Visitors Service Plan that will guide the future operation of Lake Berryessa.
- **Lake Nacimiento** and Lake San Antonio comprise the Lake Nacimiento Recreation Area, which is operated by the Monterey County Water Resources Agency. Together, these lakes cover approximately 11,100 surface acres and have 225 miles of shoreline. Because the lands surrounding the lakes are primarily privately owned, there are relatively few public recreation areas. Recreational opportunities are provided primarily by two commercial resorts (one at each lake) which offer marina facilities, including boat launching and mooring, boat rentals (houseboats at Lake San Antonio), and dry storage. In addition, these resorts offer camping, overnight lodging (including RV camping and cabins), restaurants, and convenience stores.
- **Lake Tahoe** is a large, natural lake in California and Nevada that serves as a very popular recreation destination. Both public and private lands surround the lake, providing substantial opportunities for recreation and supporting a wide range of commercial services, including resorts and casinos. Facilities at the lake include numerous boat launch areas and full-service marinas. Camping is available at 18 public and private campgrounds, and other overnight lodging options, such as RV Parks and hotels/motels, are available. Day use is accommodated at public/private beaches, which contain snack bars/restaurants and convenience stores.
- **Millerton Lake**, east of Fresno, covers approximately 4,900 surface acres and has 47 miles of shoreline. It is a popular recreation area for San Joaquin Valley residents. It is a Reclamation facility, but recreation opportunities are managed by California State Parks as part of the Millerton Lake SRA. Camping is available at two campgrounds with 173 sites, including RV hookups. The Lake is served by three boat launch areas and one full-service marina. The marina is a concessionaire to California State Parks, and provides mooring, boat rentals, dry storage, and a snack bar.
- **Oroville Lake** in Butte County is the second largest reservoir in California, covering approximately 21,000 surface acres with 165 miles of shoreline. Recreation opportunities at the lake are provided by California State Parks as part of the Lake Oroville SRA, including

seven campgrounds with 312 sites; RV camping; and hiking, biking, and equestrian trails. The Lake is served by four developed and five undeveloped boat launch areas. It also has two full-service marinas, operate by concessionaires under agreement with California State Parks. The marinas offer boat mooring, boat and personal watercraft rentals (including houseboats), snack bar/restaurants, and convenience stores selling groceries and other recreation goods.

- **Pine Flat Lake**, east of Fresno, covers nearly 6,000 acres and has approximately 67 miles of shoreline. The Lake is operated by the USACE, which also manages most of the recreation facilities there. Several campgrounds provide camping and RV use. The lake is served by four boat launch areas, as well as two marinas. Pine Flat Lake Marina offers boat mooring and slips, boat rentals (including houseboats), camping, and a store. Trimmer Marina offers mooring only. Pine Flat Lake Resort is on the lake and provides camping (including RV sites), a general store, and an outdoor café.
- **San Luis Reservoir** in Merced County covers 13,800 surface acres and has 65 miles of shoreline. It has two boat launch areas and no marina. Camping is available at four campgrounds offering 132 campsites and RV dump services. Other facilities include hiking, biking, and equestrian trails, showers, restaurant, convenience stores, and coin laundry.
- **Shasta Lake** in Shasta County is the largest reservoir in California, covering 29,500 surface acres with 370 miles of shoreline. It is owned and operated by Reclamation, but the USFS manages many of the recreation facilities as part of the Whiskeytown-Shasta-Trinity National Recreation Area. In addition to abundant opportunities for camping (including RV use), numerous overnight lodging options, such as cabins and hotels/motels, are available. Shasta Lake is a popular boating destination with many boat launch facilities, marinas, and resorts. The 11 marinas at the lake provide mooring capacity for approximately 2,500 boats, and many of these are full-service facilities, offering boat and equipment rentals, including houseboat rentals. Standard marina services are typically complemented by convenience stores and gift shops.
- The **Sacramento-San Joaquin Delta** provides water-based recreation opportunities, particularly boating and fishing through a large expanse between the Bay Area and the Central Valley. There are numerous boat launch facilities and marinas throughout the Delta. In addition to mooring services, some marinas offer boat rentals, restaurants/snack bars, accommodations and convenience stores.
- **Trinity Lake** covers 17,000 surface acres with 145 miles of shoreline in Trinity County. In a manner similar to Shasta Lake, Trinity Lake is a Reclamation facility for which USFS is responsible for management of

most recreation facilities. Such facilities include seven boat launch areas and five marinas, some of which provide boat rentals, including houseboats. In addition, a number of commercial resorts provide overnight lodging and recreation support services.

3.1.3 Summary and Comparison of Facilities with New Melones Lake

New Melones Lake is similar to many large California reservoirs due to its size, location in the foothills, availability of opportunities for motorized boating and warm-water fishing, and, because of favorable weather, its suitability for a relatively long boating season. Developed day use areas and camping facilities are also similar to those at other large reservoirs in California. At full pool, New Melones Lake is larger than many reservoirs in Northern California, although a few other lower elevation reservoirs, such as Lake Shasta and Lake Oroville, are larger. Like other large reservoirs, New Melones Lake has a marina, although other reservoirs have multiple marinas. However, the Lake, offers fewer food options and other services compared to many of the other facilities within 30 miles. On the whole, New Melones Lake is less commercially developed than other comparable-sized reservoirs.

New Melones Lake is similar to many reservoirs in California with regards to water level characteristics. Water levels fluctuate substantially throughout the year because of seasonal water deliveries (especially during the summer), provision for flood control, and natural drought and wet cycles. The fluctuations can create changing physical conditions, which does provide challenges for maintaining access to a reservoir's facilities.

New Melones Lake differs from higher elevation lakes and reservoirs in other characteristics. At New Melones Lake, water is warmer and generally more conducive for activities such as waterskiing or wakeboarding. Moreover, the climate at New Melones Lake allows for participation in these types of summer activities both earlier in the spring and later into the fall. Higher elevation facilities typically have more cabins and summer residences because of the cooler summers at those elevations. Some of the higher elevation lakes and reservoirs may be more desirable for cold water fishing and non-motorized activities, as conflicts between motor boaters and personal water craft is less likely.

New Melones Lake is somewhat unique among lower elevation reservoirs in offering to recreationists semi-primitive flat water recreational opportunities (as classified by the WROS in the RMP/EIS). Few larger reservoirs offer this type of secluded recreation activity. The semi-primitive zone also provides whitewater boating opportunities at low water levels.

New Melones Lake is one of the largest reservoirs close to the San Francisco Bay Area, and residents of Alameda, Contra Costa, and Santa Clara Counties account for a substantial proportion of visitors to the area. While the San

Francisco Bay Area has many reservoirs, most are relatively small and do not allow motorized use.

In summary, New Melones Lake is very similar to many large reservoirs in California at similar elevations in the foothills. Further, many of the boating, fishing, and developed camping recreation opportunities at the lake are similar to other venues. The level of commercial development is generally less at New Melones Lake than at the other large facilities. However, New Melones Lake is relatively unique among larger reservoirs in its proximity to the San Francisco Bay Area. Geographically, only Lake Berryessa has comparable or better access to the Bay Area market.

3.1.4 Private Recreation-Oriented Businesses in Local Area

In addition to other water-based recreation areas, it is also important to consider the supply of private local businesses that serve recreational visitors to New Melones Lake. The communities surrounding New Melones Lake are small tourist-based locales that draw many visitors to the region irrespective of the lake with their unique shops, galleries, and museums. These communities include Angels Camp, Sonora, Columbia, Jamestown, and Copperopolis within close proximity to the lake, as well as the more distant communities of San Andreas, Twain Harte, and Murphys. Visitors to these areas are attracted to local shopping and dining in the historic “gold country” region, as well as other recreation opportunities available in the region; the most prominent attraction in the general area is Yosemite National Park.

Many of the towns, including Sonora and Angels Camp, have grown considerably in recent years and now provide full-service commercial shopping areas that serve local residents and visitors alike. Some local businesses also cater directly to visitors coming to recreate at New Melones Lake. This section reviews some of the private businesses in the area to help understand the extent to which potential commercial services at New Melones Lake are already provided locally/regionally.

From the perspective of general recreation services, there is one business that primarily serves visitors to New Melones Lake – Glory Hole Sports. Glory Hole Sports is along Highway 49 in Angels Camp at the turnoff to the Glory Hole Recreation Area. The commercial focus of Glory Hole Sports is on the sale of fishing and other recreation equipment and supplies, including fishing rods and reels, bait, and tackle. It also sells groceries allowing visitors to the lake to purchase snack foods, beverages, and ice en route to the lake. A full-service deli at the store provides another food option to visitors. There is also a gas station at Glory Hole Sports.

Other options are available for purchasing groceries, fuel, and general recreation supplies in Angels Camp and Sonora. There are several full-service grocery stores where food and beverages can be purchased. Prepared food can be obtained from a number of local dining establishments and fast-food

restaurants. Other gas stations along Highway 49 provide convenience store merchandise, in addition to fuel service. Local retailers in the area, including large chain stores, provide an alternative location to purchase recreation equipment and suppliers.

There are a number of local businesses in the communities around the lake that focus on specific types of recreation activities, including activities occurring at New Melones Lake. Private recreation businesses in the area include:

- Fishing guides, including those that offer guided fishing trips at New Melones Lake
- Equestrian stables, including outfits that provide organized trail rides, pack trips, and riding rentals
- Cave exploration outfits that provide opportunities for spelunking in the variety of natural limestone and crystalline-filled caverns open to the public (e.g., Moaning Cavern and Mercer Caverns)
- Gold panning expeditions catering to families, schools, and organized groups
- Adventure outfitters that provide a wide range of recreation rentals, as well as recreation gear for sale
- Whitewater rafting operators that provide single and multi-day guided raft trips, including trips on the Stanislaus River.²⁷ Currently, commercial operators offer whitewater trips both above and below New Melones Lake on the Stanislaus River.
- Boat storage facilities that provide local boat owners opportunities for dry boat storage
- Hotels/motels that provide overnight accommodations for visitors to the area
- RV parks that cater to visitors with RVs that require full electrical hookups and sewage disposal services

3.2 Demand for Recreation Resources

This section includes a discussion of the demand for recreational resources. It begins with a review of existing recreation demand at New Melones Lake (Section 3.2.1), followed by a review of regional recreation demand (Section 3.2.2). Section 3.2.3 describes trends important to recreation use at New Melones Lake. Other factors influencing recreation demand are discussed in Section 3.2.4. Much of the existing information about recreation demand is

²⁷ A special use permit is required from Reclamation for commercial whitewater trips in the New Melones Planning Area

focused on park or natural area visitation and not necessarily on commercial services. However, it is expected that increases in recreation visitation will lead to greater demands for associated commercial services.

3.2.1 Measures of Existing Recreation Demand at New Melones Lake

This section summarizes existing recreation demand at New Melones Lake. Visitation is briefly discussed, followed by a discussion of visitor capacity and occupancy. Results of two recreation surveys important to the availability of commercial services are then discussed.

Visitation at New Melones Lake

Visitor use provides one indicator of recreation demand in the study area. Over the past 5 years, New Melones Lake has attracted an average of approximately 713,000 visitors annually, with visitation peaking in 2006 at nearly 800,000 visitors (see Table 3-2).²⁸ Visitation varies annually in response to a number of factors, most notably water levels and economic conditions. Most recreation use at the lake is at the Glory Hole Recreation Area and Tuttletown Recreation Area, which collectively account for 80 percent of visitation to the lake. The other recreation areas jointly account for the remaining 20 percent. Visitation is seasonal and is highest during the peak recreation season (May through September), which accounts for 62 percent total annual visitation (see Table 3-3).

Table 3-2. Recreation Visitation at New Melones Lake (2004-2008)

Year	Recreation Area			Total
	Glory Hole	Tuttletown	Other	
2004	320,111	215,394	164,483	699,988
2005	303,891	232,132	145,219	681,242
2006	368,030	296,502	127,759	792,291
2007	313,755	285,703	131,586	731,044
2008	292,990	230,199	138,292	661,481
Average	319,755	251,986	141,468	713,209

Source: U.S Bureau of Reclamation, 2009c (visitation estimates based on traffic counts)

²⁸ U.S. Bureau of Reclamation, 2009c (based on visitation data compiled by Reclamation using traffic counters for the years 2004-2008)

Table 3-3. Average Recreation Visitation by Month at New Melones Lake (2004-2008)

Month	Average Annual Visitation	% of Total Annual Visitation
January	30,225	4.2%
February	34,696	4.9%
March	50,902	7.1%
April	55,631	7.8%
May	85,252	12.0%
June	87,507	12.3%
July	113,310	15.9%
August	85,294	12.0%
September	67,309	9.4%
October	40,461	5.7%
November	32,896	4.6%
December	29,727	4.2%
Total	713,209	100.0%

Source: U.S Bureau of Reclamation, 2009c (visitation estimates based on traffic counts)

Facility Capacity and Occupancy

Occupancy rates indicate whether recreation visitation above specific levels can be accommodated without the addition of new facilities, or whether the current facilities are underutilized. Average campground occupancy rates at New Melones Lake were between 24 percent and 26 percent of maximum occupancy since 2007. However, as annual averages, these figures do not indicate whether current facilities are adequate during peak-use periods such as summer or holiday weekends. Table 3-4 provides estimates of recreation occupancy at New Melones Lake by facility type and by season. Occupancy during the summer is the highest, with facilities (campgrounds, parking lots) reaching full capacity (100 percent) on some summer weekends. Weekday use drops off substantially during the summer while fall and spring occupancy is moderate during the weekends and very low during the weekdays. Winter recreation occupancy is generally very low. Occupancy at picnic sites is very low throughout the year.

Table 3-4. Estimated Weekend and Weekday Recreation Facility Occupancy Rates at New Melones Lake by Season

Recreation Facility	Summer		Fall/Spring		Winter	
	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday
Campgrounds	70-100%	10-20%	20-40%	5-10%	5-10%	2%
Picnic Sites	10%	1%	-	-	-	-
Group Overnight Sites	70-100%	10-20%	20-40%	-	1%	-
Parking Lots (Boat Launches)	70-100%	20-30%	20-40%	5-10%	5-10%	2%

Source: U.S. Bureau of Reclamation, 2009d (estimates provided by field staff that have knowledge of recreation use at New Melones Lake)

When New Melones Lake is at full pool, some parking facilities are inundated and subsequently inaccessible. Consequently, the lake may be at or near full capacity on some summer weekends or holidays. Nonetheless, it appears that additional recreation use could be accommodated at New Melones Lake (aside from some summer weekends) without the construction of new recreational facilities.

The data in Table 3-4 also have important implications for the feasibility of other potential commercial enterprises at New Melones Lake. The viability of any business that requires large initial capital investments depends on continued use within and between years to spread the fixed costs associated with those investments. Fixed costs by definition are invariant with the level of activity of a business and include such categories as interest, taxes, depreciation, and amortization. The seasonality of use at New Melones Lake, particularly low off-season demand, limits the long-run viability of some types of potential commercial enterprises.

Houseboat Occupancy

Specific to houseboats, demand indicators include houseboat occupancy rates for rentals and waiting lists maintained by the marina operator for private houseboat slips and moorings. Occupancy rates for rental houseboats vary by type of boat and season. As expected, occupancy is highest during the peak recreation season, with August generally being the highest month for houseboat rentals. Based on information collected from the marina operator, since 2000, houseboat rental occupancy peaked in 2007, with occupancy averaging about 85 percent during the month of August. The data shows that during certain periods occupancy rates have approached 100 percent for select boats. More recently, rental houseboat occupancy has declined significantly primarily due to economic conditions.

Demand Indicators from Recreation Use Surveys

In the summer of 2007, Reclamation contractors conducted an on-site survey of users at New Melones Lake regarding their frequency of visitation, area of residence, and participation in various recreational activities at the lake. A subsequent telephone survey in the New Melones Lake primary market area was conducted to obtain information about recreation visitation patterns, attitudes towards New Melones Lake, and perceived barriers to participating in outdoor recreation at the lake. The telephone survey targeted not only current lake visitors, but also non-visitor residents of the counties within the primary New Melones Lake market area. The non-visitors surveyed provided valuable information about reasons for not visiting.

The on-site survey revealed that visitors average 13 visits per year to New Melones Lake, although the median number of visits is 6. The disparity between mean and median values indicates that a relatively small proportion of visitors account for a substantially-larger proportion of total visitation to the lake. Nearly one-quarter (23.1%) of the visitors stated they visited the area more than 16 times. The majority of the respondents (59.1%) to the on-site survey said that their typical visit was a day trip. Many of the most frequent visitors at New Melones Lake reside relatively close to the facility.

On-site respondents provided data on the activities in which they participated while visiting New Melones Lake. The following activities were cited by at least 20 percent of the respondents:

- Swimming (59.0%)
- Motor boating (57.2%)
- Shoreline or boat fishing (41.9%)
- Waterskiing or wakeboarding (41.7%)
- Camping (37.4%)
- Beach activities (35.0%)
- Using personal watercraft (32.3%)
- Using open space areas (31.8%)
- Wildlife viewing, bird watching, or viewing natural scenery (30.7%)
- Driving for pleasure, sightseeing, driving through natural scenery (22.6%)
- Picnicking in developed sites (20.6%)

The majority of the activities are water dependent. It is likely that camping and picnicking are water-enhanced activities, as people participate in those activities because of proximity to the lake. Further, some individuals who are camping

also participate in various water-based activities while visiting New Melones Lake.

On-site respondents were asked to rate the activities available at New Melones Lake that were most important to their experience while in the area.

Respondents were asked to rate their top five activities, although many did not provide more than two. The following were either the most popular or second most popular activity selected by at least 20 percent of the respondents:

- Motor boating (49.3%)
- Shoreline or boat fishing (28.2%)
- Waterskiing or wakeboarding (28.2%)
- Swimming (22.6%)

The reservoir and the recreation opportunities it provides are major draw cards for visitors to the local region. Many of these opportunities are not necessarily provided by commercial providers, but could be enhanced by commercial services. For example, an activity such as motor boating could either be provided by a commercial service (e.g., marina) or enhanced by providing fuel or equipment rentals. Overall, it is clear that commercial services at New Melones Lake should be focused on water-based or water-enhanced activities.

On-site respondents were also asked to rate outdoor recreation activities that they would enjoy if they were available at New Melones Lake. Responses varied widely. Many indicated a desire for opportunities already at the lake, indicating a need for interpretation and educational efforts rather than commercial opportunities. For example, a respondent stating that they wish they could participate in fishing suggests an opportunity for introductory instruction because clearly fishing is available at New Melones Lake.

More broadly, the following activities were cited by at least 10 percent of the respondents as the most or second most important activity in which they would have participated were it available:

- Shoreline or boat fishing (17.3%)
- Horseback riding and events (12.6%)
- Motor boating (10.3%)
- Camping (10.3%)

All four of these activities currently are allowed at New Melones Lake. It is possible that some individuals indicating a desire to camp, an activity currently available at the lake, may have been unable to participate in that activity because the campgrounds were full. Additionally, while horseback riding is currently allowed in the area, few visitors may own horses, which indicates an opportunity for a concession which provides equestrian-related services.

Telephone survey respondents who had visited New Melones Lake in the last 5 years were asked about possible barriers to participating in outdoor recreation in the study area. Responses were provided on a 5-point scale from strongly disagree (1) through strongly agree (5); a neutral response was a mean of 3.0. The results with the highest agreement scores were “needs more day-use facilities” (mean: 3.54), “needs more campgrounds with hook-ups and hot showers” (mean: 3.53), and “more camping or overnight use facilities are needed” (mean: 3.26). Some of these services would typically not be provided by a commercial operator but by the recreation provider. However, a private RV-park could provide overnight facilities as well as hook-ups and hot showers.

The telephone survey included a statement to which respondents were asked to comment: “Needs more private business services.” The response across respondents averaged 2.54, suggesting slight disagreement with the statement. However, 21.3 percent of the respondents agreed with the statement and 3.2 percent strongly agreed, suggesting some visitors would come to the lake if additional commercial services were provided. The factor with the lowest rating was “it is too far from where I live to New Melones Lake” (mean: 1.74); only 7.1 percent of the respondents agreed or strongly agreed with this statement. This suggests distance traveled is not a significant barrier to visitation for many in the six counties (Tuolumne, Stanislaus, Santa Clara, Calaveras, Contra Costa, and San Joaquin) where the phone survey was conducted.

On-site survey and telephone respondents were asked to rate the quality of New Melones Lake facilities and services on a five-point scale from very satisfied (1) to very dissatisfied (5). The responses to one factor, “quality of marina,” are particularly important relative to commercial services. On-site survey respondents rated the quality of marina with a mean of 1.93, indicating overall satisfaction. About five percent of the respondents stated they were dissatisfied or very dissatisfied. Twenty-one percent of the respondents had “no opinion,” indicating, not surprisingly, that some visitors’ experiences at New Melones Lake are independent of the marina services. The scores of telephone respondents relative to the marina averaged 1.94, virtually identical to those of on-site respondents. However, 11.3 percent of the telephone survey respondents did say that they were dissatisfied. This may suggest some past visitors may be choosing other boating locations because of dissatisfaction with the marina at New Melones Lake.

3.2.2 Regional Recreation Demand

This section provides a review of information related to regional recreation demand. Insight on the regional demand for recreation can be garnered in the extensive amount of recreation opportunities available near New Melones Lake as outlined in Section 3.1. In addition, indicators of recreation demand are also available at the state level. The information presented here is from the California Outdoor Recreation Plan (CORP), prepared by California Department of Parks and Recreation (State Parks) in 2009. The CORP is a

planning document reflecting current statewide trends and their effects on outdoor recreation participation and opportunities, and is required for state eligibility for certain federal grants. Most of the document is related to the public provision of outdoor recreation. However, the results also provide some indication of demand for commercial services operated in conjunction with public lands.

The CORP includes the results of a comprehensive statewide survey completed in 2007 and 2008, which provides general information about California residents and their attitudes and views about recreation-related issues. Over 2,700 respondents participated in a phone survey, and more than 1,200 participated in a mail or online survey. The survey effort was completed to provide a “comprehensive view of the outdoor recreation patterns and preferences of Californians.” The report subdivided California into seven regions. The discussion here focuses on three regions that contribute the majority of visitors to New Melones Lake: the Sierra, the Central Valley, and the Bay Area regions.

Respondents were asked if they spend “more,” “about the same,” or “less” time on outdoor recreation activities compared to 5 years ago. An equal number of people from the Sierra and Central Valley regions stated “more” and “less” time, while a greater percentage of respondents (39.3 percent) in the Bay Area stated they are spending “more” time in the outdoors than “less” time (29.7 percent). These responses suggest that there has been a slight increase in demand for outdoor recreation activities. Respondents were also asked if certain factors would limit their level of physical activity in the parks; one factor was commercial services. The majority of respondents in all three regions stated that commercial services do not limit their activity (“not at all”), although between 2.5 percent and 6.1 percent of the respondents stated that it does “a lot.” This indicates that a small proportion of people in the market area may be more inclined to visit if there are commercial services.

Survey respondents were asked to rate the importance of various recreational facilities and services, from 1 (not at all important) to 5 (very important). Some of the items were applicable to commercial services. The results, rounded to the nearest integer, included the following:

- RV campgrounds with electrical and water hookups (Sierra region: 4; other two regions: 3)
- Sheltered lodging facilities such as rustic cabins, yurts, and tent cabins (Sierra region: 4; other two regions: 3)
- Commercial visitor services within public parks and outdoor recreation areas such as hotels, motels, restaurants and shops (All three regions: 3).
- Launch ramps, marinas and other facilities (Sierra region: 4; other two regions: 3)