State of California
The Resources Agency
Department of Water Resources

Oroville Facilities Relicensing Recreation and Socioeconomics Study Reports Addenda and Errata

JANUARY 2005

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OROVILLE FACILITIES RELICENSING RECREATION AND SOCIOECONOMICS STUDY REPORTS ADDENDA AND ERRATA

Oroville Facilities Relicensing FERC Project No. 2100

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REPORT SUMMARY

This document serves as an accompaniment to the 19 Recreation and Socioeconomic Study Reports prepared for the Oroville Facilities Relicensing Collaborative. It addresses factual and significant typographical errors found in the 19 reports since the date each report was released to the Recreation and Socioeconomics Work Group. Corrections to these errors are presented in a table for each report. These study errata tables specify the location of the error within the respective report (Section and page number), and the correction to the error. Study addenda, if any, precede the respective study errata table; addenda and some table entries are presented to supplement or help clarify reported information.

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TABLE OF CONTENTS

REPORT SUMMARY RS-1

1.0 INTRODUCTION 1-1

2.0 STUDY REPORT ADDENDA AND ERRATA 2-1
- 2.1 R-1 – Vehicular Access 2-1
- 2.2 R-2 – Recreation Safety Assessment 2-2
- 2.3 R-3 – Assessment of the Relationship of Project Operations and Recreation 2-6
- 2.4 R-4 – Relationship Assessment of Fish/Wildlife Management and Recreation 2-7
- 2.5 R-5 – Assessment of Recreation Areas Management 2-8
  - Study R-5 Addendum – Trails Management 2-8
- 2.6 R-6 – ADA Accessibility Assessment 2-13
- 2.7 R-7 – Reservoir Boating 2-14
  - Study R-7 Addendum 1: Social Capacity vs. Recreation Standards 2-14
  - Study R-7 Addendum 2: Assessment of Marina Facilities and Floating Restrooms 2-16
  - Study R-7 APPENDIX B 2-21
- 2.8 R-8 – Recreation Carrying Capacity 2-22
  - Study R-8 Addendum: Future Floating Campsite Demand and Capacity 2-22
- 2.9 R-9 – Existing Recreation Use 2-25
- 2.10 R-10 – Recreation Facility Inventory and Condition Report 2-31
  - Study R-10 Addendum: Trail Use Designations 2-31
  - R-10 Insertion 1 2-34
  - R-10 Insertion 2 2-39
- 2.11 R-11 – Recreation and Public Use Impact Assessment 2-42
- 2.12 R-12 – Projected Recreation Use 2-43
- 2.13 R-13 – Recreation Surveys 2-44
  - Study R-13 Addendum: Relation of Draft and Final Reports 2-44
  - R-13 Insertion 1 2-46
- 2.14 R-14 – Assessment of Regional Recreation and Barriers to Recreation 2-49
  - Study R-14 Addendum: Potential for Special Events to Increase Project Area Visitation 2-49
  - R-14 Insertion 1 2-51
  - R-14 Insertion 2 2-52
- 2.15 R-15 – Recreation Suitability Analysis 2-53
- 2.16 R-16 – Whitewater and River Boating 2-57
- 2.17 R-17 – Recreation Needs Analysis 2-58

2.18 R-18 – Recreation Activity, Spending, and Associated Economic Impacts 2-60
2.19 R-19 – Fiscal Impacts 2-61

3.0 ACKNOWLEDGMENTS 3-1

ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
ALP	Alternative Licensing Process
BLM	U.S. Bureau of Land Management
BR	boat ramp
DBW	California Department of Boating and Waterways
DFG	California Department of Fish and Game
DPR	California Department of Parks and Recreation
DUA	Day Use Area
DWR	California Department of Water Resources
FERC	Federal Energy Regulatory Commission
FRRPD	Feather River Recreation and Parks District
GIS	Geographic Information System
LFC	Low Flow Channel
LOSRA	Lake Oroville State Recreation Area
msl	mean sea level
NPS	National Park Service
OHV	off-highway vehicle
OWA	Oroville Wildlife Area
PWC	personal watercraft
RMP	Recreation Management Plan
RSWG	Recreation and Socioeconomics Work Group
RV	recreational vehicle
SR	State Route
SVRA	State Vehicular Recreation Area
USFS	U.S. Forest Service

1.0 INTRODUCTION

The California Department of Water Resources (DWR) operates the Oroville Facilities, a multipurpose water supply, flood management, power generation, fish and wildlife enhancement and recreation project. The hydroelectric facilities operate under a license from the Federal Energy Regulatory Commission (FERC), which expires on January 31, 2007. Pursuant to the Federal Power Act, DWR is required to file an application for a new license on or before January 31, 2005.

During the course of the Alternative Licensing Process (ALP) employed by DWR, 17 recreation and two socioeconomic studies were conducted on topics that were brought forth by the Recreation and Socioeconomics Work Group (RSWG). These studies will be used by FERC to support environmental analysis and licensing decisions. Methodologies for these 19 studies followed Study Plans that were crafted and reviewed by a Task Force convened by the RSWG, and reports were produced between September 2003 and June 2004. All of these documents have been released to the public via the RSWG; they are also available on DWR's Relicensing Web Page and at three library collections compiled and maintained in support of the ALP. Since each report's release, a list of factual and typographical errors has been compiled for each report.

This document serves as an accompaniment to the 19 Recreation and Socioeconomic study reports and should be referred to when reading those study reports. The following sections, one for each report, contain corrections to all known factual errors and any major typographical errors. Each section contains an errata table for one report; errata tables for each report specify the location of the error within the report (Section and page number), and the correction of the error or brief report addition. In some cases, some entries in errata tables are presented to supplement or help clarify reported information. Comments received by RSWG participants and other members of the public are addressed herein if they pertain to a factual error.

During the RSWG's report review activities, some comments received related to omissions or issues needing further discussion or clarification. If justified by the respective Study Plan and the intended scope of the study, such comments were addressed via report addenda, most of which were distributed to the public via the RSWG. Any report addenda produced are provided in this document preceding the respective report's errata table.

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2.0 STUDY REPORT ADDENDA AND ERRATA

This section of the report contains the addenda, if any, and errata for each report, with one subsection devoted to each of the 19 studies. In some cases, errata tables are followed by revised tables and/or text, as described in the respective errata table for that report.

2.1 STUDY R-1 – VEHICULAR ACCESS

Table 2.1-1. Errata to R-1 – *Vehicular Access (FINAL),* dated September 2004.

Report Section	Page	Change
Global	multiple	Change "Brad P. Freeman" to "Brad B. Freeman"
Table of Contents – List of Tables	iv	Change "Table 6.1-2" to "Table 6.3-1"; delete footnote "1" here and for Table 5.2.2
5.0 Study Results	5-1	First paragraph, second sentence: Add to end of sentence ",if appropriate".
Table 5.2-1	5-11	Change title to of table from "Features" to "Recreation Site Features."
Table 5.2-1	5-11	Bidwell Canyon, under Number of Parking Spaces: Change from "451" to "447"; under Water Levels When Shoreline Access is Available: Delete "(fishing at low levels only)."
Table 5.2-1	5-11	Loafer Creek, under Number of Parking Spaces: Change from "429" to "522"; under Water Levels When Shoreline Access is Available: Change from "High" to "All".
Table 5.2-1	5-11	North Thermalito Forebay Recreation Area, under Number of Parking Spaces: Change from "192 approx" to "276"; under Water Levels When Shoreline Access is Available: Change from "All" to "NA[4]".
Table 5.2-1	5-11	Spillway DUA, add "BR/" before "DUA", under Number of Parking Spaces: Change from "1,095" to "468"; under Activity: add "Boating."
Table 5.2-1	5-12	Foreman Creek Car-top BR, under Number of Parking Spaces: Change "7" to "10".
Table 5.2-1	5-12	Stringtown Car-top BR, under Number of Parking Spaces: Change "10" to "approximately 15".
Table 5.2-1	5-12	Vinton Gulch Car-top BR, under Number of Parking Spaces: Add "approximately".
6.3, Table 6.1-2	6-8 to 6-10	Change Table number to 6.3-1 revise associated reference in text (first paragraph of section, p. 6-7).

2.2 STUDY R-2 – RECREATION SAFETY ASSESSMENT

Table 2.2-1. Errata to R-2 – *Recreation Safety Assessment (FINAL)*, dated January 2004.

Report Section	Page	Change
1.5.4 California Department of Parks and Recreation	1-11	Change fourth sentence to "DPR conducts boat patrols at Lake Oroville as well."
1.5.8 California Department of Boating and Waterways	1-12	Add as new second to last sentence in paragraph: "DBW also provides training in enforcement of the California Boating Law for Park Rangers and local law enforcement officers."
4.0 Methodology	4-1	Add as first sentence to paragraph below first list of bulleted items: "This report primarily focuses on recreation areas and reservoir boating areas."
4.3 Review of Incident Reports / Accident Statistics	4-3	Add new second sentence to first paragraph stating: "Incident reports and summaries were obtained from DWR because DFG and the Butte County Sheriff's Office send their reports to DWR."
5.3.1.2 Lake Oroville Boating-Related Accidents	5-17 and 5-18	Replace Tables 5.3-2 and 5.3-3 with the revised tables following this table. (*Note: Revised data cells have been shaded*.)
5.3.1.2 Lake Oroville Boating-Related Accidents	5-19	Replace Table 5.3-5 with the revised table following this table. (*Note: Revised data cells have been shaded*.)
5.3.1.2 Lake Oroville Boating-Related Accidents, Water Depth and Safety	5-20	Add the following sentence to the end of the second paragraph: "It is important to consider that these numbers do not take boating use levels into account."

Table 5.3-2. Reported boating accidents at Lake Oroville (1997-2002).

Type of Accidents		1997	1998	1999	2000	2001	2002	Total	Percent of Total	Annual Average
Collision with Vessel	# of accidents	4	3	0	8	2	1	18	30.0%	6
	Injuries	4	3	0	2	0	1	10	22.7%	2
	Fatalities	0	0	0	0	0	0	0	0%	0
Fall in Boat	# of accidents	1	0	0	1	0	0	2	3.3%	0
	Injuries	1	0	0	1	0	0	2	4.5%	0
	Fatalities	0	0	0	0	0	0	0	0%	0
Skier Mishap	# of accidents	4	3	1	5	3	0	16	26.7%	3
	Injuries	4	3	1	5	3	0	16	36.4%	3
	Fatalities	0	0	0	0	0	0	0	0%	0
Struck by boat	# of accidents	1	0	0	0	0	0	1	1.7%	0
	Injuries	1	0	0	0	0	0	1	2.3%	0
	Fatalities	0	0	0	0	0	0	0	0%	0
Collision with Fixed Object	# of accidents	0	1	0	0	4	2	7	11.7%	1
	Injuries	0	1	0	0	3	0	4	9.1%	1
	Fatalities	0	0	0	0	0	0	0	0%	0
Grounding	# of accidents	0	0	1	0	2	0	3	5.0%	1
	Injuries	0	0	0	0	3	0	3	6.8%	1
	Fatalities	0	0	0	0	0	0	0	0%	0
Falls Overboard	# of accidents	0	0	2	0	1	0	3	5.0%	1
	Injuries	0	0	2	0	2	0	4	9.1%	1
	Fatalities	0	0	0	0	0	0	0	0%	0
Capsizing	# of accidents	0	0	2	0	0	0	2	3.3%	0
	Injuries	0	0	0	0	0	0	0	0%	0
	Fatalities	0	0	1	0	0	0	1	100%	0
Fire / Explosion - Fuel	# of accidents	0	0	1	0	1	1	3	5.0%	0
	Injuries	0	0	1	0	0	0	1	2.3%	0
	Fatalities	0	0	0	0	0	0	0	0%	0
Fire / Explosion – Other than Fuel	# of accidents	0	0	0	0	1	0	1	1.7%	0
	Injuries	0	0	0	0	0	0	0	0%	0
	Fatalities	0	0	0	0	0	0	0	0%	0
Flooding / Swamping	# of accidents	0	0	0	2	0	0	2	3.3%	0
	Injuries	0	0	0	0	0	0	0	0%	0
	Fatalities	0	0	0	0	0	0	0	0%	0
Other	# of accidents	1	0	1	0	0	0	2	3.3%	0
	Injuries	1	0	1	0	0	0	2	4.5%	0
	Fatalities	0	0	0	0	0	0	0	0%	0
TOTAL:	# of accidents	**11**	**7**	**8**	**16**	**14**	**4**	**60**	**100%**	**10**
	Injuries	**11**	**7**	**5**	**8**	**11**	**1**	**44**	**100%**	**7**
	Fatalities	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**100%**	**0**

Source: DBW 2003

Table 5.3-3. Reported boating accidents by month at Lake Oroville (1997-2002).

Year		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1997	Number of Accidents	0	0	1	0	0	2	3	4	1	0	0	0	11
	Injuries	0	0	0	0	0	2	3	4	2	0	0	0	11
1998	Number of Accidents	0	0	0	0	0	0	3	3	1	0	0	0	7
	Injuries	0	0	0	0	0	0	3	3	1	0	0	0	7
1999	Number of Accidents	0	0	0	0	1	2	3	1	1	0	0	0	8
	Injuries	0	0	0	0	1	1	2	1	1	0	0	0	6
	Fatalities	0	0	0	0	0	1	0	0	0	0	0	0	1
2000	Number of Accidents	0	0	2	0	2	1	3	3	2	2	0	1	16
	Injuries	0	0	1	0	0	0	2	4	1	0	0	0	8
2001	Number of Accidents	0	0	0	1	0	2	4	4	2	1	1	0	15
	Injuries	0	0	0	0	0	3	2	3	2	1	0	0	11
2002	Number of Accidents	0	1	0	0	0	1	2	0	0	0	0	0	4
	Injuries	0	0	0	0	0	0	1	0	0	0	0	0	1
Totals	Number of Accidents	0	1	3	1	3	8	19	15	7	3	1	1	61
	Injuries	0	0	1	0	1	6	13	15	7	1	0	0	44
	Fatalities	0	0	0	0	0	1	0	0	0	0	0	0	1

Note: There was slight discrepancy in the total number of accidents reported by type compared to by month during 2001 and for the 6-year total.
Source: DBW 2003b.

Table 5.3-5. Reported accidents at major Northern California lakes and reservoirs (2001 – 2002).

Lake/Reservoir	Surface Acreage[1]	Year	Number of Reported Accidents	Injuries	Fatalities
Lake Oroville	**15,800** **(167 / 5 / 2)**	**2001** **2002**	**15** **4**	**11** **1**	**0** **0**
Shasta Lake	29,500 (370 / 14 / 12)	2001 2002	57 60	27 35	3 1
Folsom Lake	12,000 (75 / 4 / 1)	2001 2002	24 21	11 19	1 0
Lake Tahoe	122,000 (72 / 11 / 15)	2001 2002	15 20	5 14	0 0
Lake Berryessa	21,000 (165 / 8 / 7)	2001 2002	23 33	21 21	1 1
Northern California (Total)[2]	-	2001 2002	477 475	256 246	37 27

[1] Acreage figures for reservoirs are for full pool (does not apply to Lake Tahoe). Figures in parentheses indicate miles of shoreline / number of boat ramps / number of marinas.
[2] Data for Northern California also includes non-lake areas including the Sacramento-San Joaquin Delta and San Francisco Bay.
Source: DBW 2002, DBW 2003a, and EDAW, Inc. 2003a.

2.3 STUDY R-3 – ASSESSMENT OF THE RELATIONSHIP OF PROJECT OPERATIONS AND RECREATION

Table 2.3-1. Errata to R-3 – *Assessment of the Relationship of Project Operations and Recreation (FINAL)*, dated May 2004.

Report Section	Page	Change
Report Summary – Reservoir Elevation Effects on Attendance	RS-3	First sentence; delete "1974/1975" and replace with "1990/1991"
Report Summary – Low Water Effects on Boat Ramps	RS-4	Delete "unpaved" from first line on page, which describes the lower Bidwell Canyon Boat Ramp
Report Summary – Model Runs Related to Feather River Flows and Temperatures	RS-8	Add the following two sentences at start of second paragraph of subsection: "A three-day increased flow event conducted during August 2002 to benefit the fishery in the LFC provided the opportunity to evaluate the effects of increased flows on water temperature and recreation use. Flows were increased from 700-800 cfs before the event to 1,000-1,750 cfs during the event."
5.1.2.1 Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay Elevation	5-9	Add to end of second paragraph: "A similar pattern was observed for the other summer months."
5.1.2.1 Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay Elevation	5-10	Add to the end of the first paragraph: "Some boaters also have also pointed out problems with mud on the ramps and trailers dropping off the end of the ramps at Monument Hill BR and Larkin Road Car-top BR when pool levels are low."
5.2.2.1 Effects of Low Water on Lake Oroville Boat Ramp Usability During 2002	5-21	Paragraph 3 (bottom of page), sentence 4: change "two-lane" to "three-lane"
5.2.3.4 Foreman Creek Car-Top Boat Ramp	5-32	Add to end of paragraph (below photo): "Launching at low pool levels is also likely to be adversely affected by mud deposited on the old road."
5.2.7.1 Fishing in the Feather River	5-41	Paragraph 1, last sentence: Change "dominance" to "presence"

2.4 STUDY R-4 – RELATIONSHIP ASSESSMENT OF FISH/WILDLIFE MANAGEMENT AND RECREATION

Table 2.4-1. Errata to R-4 – *Relationship Assessment of Fish/Wildlife Management and Recreation (FINAL)*, dated May 2004.

Report Section	Page	Change
Global	multiple	Change "Brad P. Freeman Trail" to "Brad B. Freeman Trail"
Report Summary, Conclusions	RS-6	Add to end of paragraph at top of page: "However, it has been recognized that gravel mining may improve wildlife habitat, if carefully managed."
5.2.1.2 Organizational Structure, DFG and the OWA	5-14	Add to end of top paragraph: "Study T-1—*Effects of Project Operations and Features on Wildlife and Wildlife Habitat*, conducted under the direction of the Environmental Work Group, concluded that carefully-managed gravel extraction can in the long-term replace the existing relatively-barren dredger tailings within the OWA with riparian, freshwater emergent wetland, and lacustrine habitat of higher wildlife value (DWR 2002c)."
6.1.1 Management Agency Structure	6-9	Add to end of top paragraph: "However, as discussed previously, a wildlife habitat study has indicated that continued gravel mining may be an important means of improving wildlife habitat in the OWA (DWR 2002c)."
7.1 Documents and Internet Sources	7-2	Add reference for Study T-1 (DWR 2002c), newly referenced on page 5-14 and 6-9 as noted above.
7.2 Personal Communications	7-6	Top of page (Sherman): replace "Lieutenant" with "Supervising Ranger"

2.5 STUDY R-5 – ASSESSMENT OF RECREATION AREAS MANAGEMENT

Study R-5 Addendum – Trails Management

An earlier draft of this Addendum was circulated to the Recreation and Socioeconomics Work Group on July 22, 2004. This Addendum was revised following a decision issued by FERC on August 17, 2004, regarding a proposed Recreation Plan Amendment.

Trails and Recreation Area Management

In total, there are about 75 miles of non-motorized trails available in the study area. All trails are available for hiking/walking. Of the total 75 miles, about 64.5 miles are available for biking and about 38.5 miles are available for equestrian use. Designated trails for hiking/biking/equestrian use total about 37 miles, followed by hiking/biking (about 28 miles). There are about 9 miles of hiking-only trails, and 1.6 miles of hiking/equestrian-only trail at Sycamore Hill on the Dan Beebe Trail. In the spring of 2002, DPR designated most of the non-motorized trails in the study area as multiple-use. Previously, 17 miles of trails were designated hiking/equestrian use only and did not allow biking (DWR 2004). Many additional miles of trails previously closed to equestrians were also opened to them by the multiple-use designation. However, in 2004, FERC ordered that Project 2100 trails be restored to their pre-2002 use designations.

At the time of Relicensing Studies, exceptions to the multiple-use designation included the Loafer Creek Loop Trail, which was open to multiple-use on even-numbered dates and open to hikers and equestrians only on odd-numbered dates; a portion of the Brad B. Freeman Trail was hiking/biking only; as mentioned the Sycamore Hill segment of the Dan Beebe Trail was hiking/equestrian only; and the Chaparral and Wyk Island Trails were (and are) hiking only. There are five formal trailheads within the Project Boundary and several other access points within the Study area (DWR 2004). All fire roads within the LOSRA are also open to biking and hiking. Within the OWA, bicycling and horseback riding are permitted, but only on roads (DWR 2004).

DWR Role in Trail Management

DWR's responsibility lies in FERC license 2100 compliance, and coordinating Project trail issues among several adjacent recreation management jurisdictions. A Comprehensive Non-Motorized Trails Program for the Project area could outline each agencies' (DPR, DFG, DWR, FRRPD, USFS, BLM) specific responsibilities and identify an implementation plan which would likely be geographically based. It could identify existing trails, how they were developed, how new trails will be developed and how trails will be managed and how management will be coordinated. Trails and trailheads have been reviewed to varying degrees in Studies R-2 – *Recreation Safety Assessment*, R-6 – *ADA Accessibility Assessment*, R-8 – *Recreation Carrying Capacity*, R-10 –

Recreation Facility Inventory and Condition Report, R-11 – *Public Use Impact Assessments*, and R-17 – *Recreation Needs Analysis*. Trailheads have also been evaluated in R-1 – *Vehicular Access Study*.

DPR Role in Trail Management

DPR manages more than 3,000 miles of trails Statewide. The trail management program began with the California Conservation Corp which mainly built new trails in the 1930's. DPR currently sets broad goals for trails within the state of California. DPR's proposed General Plan for the LOSRA will address trends, needs, and opportunities. Identifying the vision and priorities for resource protection and development, interpretation, and facilities are some objectives of the proposed General Plan.

DPR has issued two draft documents in the last several years, one a California Recreation Trails Plan (July 2001) which has since been finalized (July 2003) and the second a draft Statewide Trails Policy (2004). DPR has just finished receiving public and stakeholder comments on the draft policy and will be finalizing it in the next year after considering those comments. The policy will outline the process for implementing the action guidelines stated in the Recreation Trails Plan (pers. comm, McKowen 2004).

Trails "Task Force" Report

A Trails Task Force led by various stakeholders including representatives from the Lake Oroville Joint Powers Authority (The Dangermond Group) and DPR was formed at the request of the Recreation and Socioeconomic Work Group (RSWG). A "Trails Committee Report" was submitted to the RSWG in October 2003. This report was intended to provide background for the trails component of the anticipated new Project 2100 Recreation Plan. This report attempted to resolve a number of trails planning issues, but did not detail specific alignments or review feasibility issues related to environmental compliance, construction, or property ownership.

Resource Action Development

Components of the Trails Committee Report, in large part comprised of a range of individual trails-related Resource Actions, were included in a Resource Action Identification Form (RAIF) called the Lake Oroville Recreation Area Trails System.

Change to Multiple-use Trails

As described above, in the spring of 2002, DPR designated most of the non-motorized trails in the study area as multiple-use. Previously, 17 miles of trails were hiking/equestrian use only and did not allow biking. Horses and stock animals had also been restricted from many other trails. Some trail users in the study area would prefer that these trails return to their previous use designations. However, the vast majority of survey respondents using trails did not have encounters with other trail users that they felt put them at-risk. However, the On-site Recreation survey was not designed to identify if trail users had encounters that they felt lessened their trail-related recreation

experience. The survey was also not designed to specifically elicit opinions of survey respondents regarding the multiple-use designation.

It is proposed that a future Comprehensive Non-Motorized Trails Program further explore the potential for conflicts due to multiple-use designation. If significant risks or conflicts are occurring, a future Comprehensive Non-Motorized Trail Program could outline management strategies to address actual or perceived user safety issues and/or user experience effects. Trail use restrictions or designations, trail locations, trail O&M, and I&E needs could also be addressed in such a plan (DWR 2004).

DPR has generally been implementing a Statewide policy to convert appropriate and suitable trails to multiple-use (minimum four feet wide), unless there is a compelling reason not to (such as for safety). DPR's goal in changing trails to multiple-use was to accommodate the increasing demand for trails within the State and within the Lake Oroville area. Changes to multiple-use status at Lake Oroville have included:

- Dan Beebe Trail with the exception of Sycamore Hill;
- Brad Freeman Trail;
- The Bidwell Canyon Trail;
- Loafer Creek Loop Trail (alternate days), and;
- Roy Rogers Trail.

Some equestrian trail users filed a complaint with FERC because they were not satisfied with the change in trail use status nor with the decision-making process DPR employed when changing the trail status. Additionally, some equestrians were unhappy with the widening of the Dan Beebe Trail as part of the conversion, and questioned the decision-making process undertaken to initiate the widening (Davis et al. 2003). FERC responded by ordering DWR/DPR to change the trails back to their original designation, in part based on a literal interpretation of a descriptive error in DWR's 1993 Amended Recreation Plan (FERC 2002; NPS 2004; pers. comm. Rischbieter 2004). DWR responded to FERC requesting additional time to prepare an amendment to the Recreation Plan, and that DPR not be required to change the trails back to single uses until the request for amendment had been reviewed. DWR and DPR received a response from FERC in August, 2004, denying the amendment, and the trails have recently been restored to pre-2002 designations..

Conclusions

The advantage of providing multiple-use trails Statewide is in the opportunity to provide more access to every type of trail user. Potential risks between equestrian users and mountain bikes are of concern and could be more fully evaluated as part of the trail planning process for a Comprehensive Non-Motorized Trails Program Plan. As use on trails increases in the future, as it is projected to do, monitoring of use levels and trail conditions is warranted to maintain safety and quality of experiences. Capacity triggers for ecological, spatial, facility, and social capacity (that could determine future actions) could be identified as part of the Comprehensive Non-Motorized Trails Program Plan.

Input from stakeholders and others should continue to be an element of management and decision-making.

A Comprehensive Non-Motorized Trails Program Plan could include some or all of several elements. For example, it could be based on an inventory of existing trails with photographs of any area requiring maintenance (such as erosion sites) and corresponding GPS/GIS data collection for geographic identification of such sites. Additionally, portions of trail where visibility is low, such as tight corners, could be documented and markers could be added in order to minimize incidents of conflict between user types on trails with more than one type of use. Additionally a Comprehensive Non-Motorized Trails Program Plan could identify and quantify the social and environmental effects of any significant future changes in trails management and usage.

Another issue is the potential to complete trail opportunities/loops within the study area. The Thermalito Forebay, Thermalito Afterbay, and Diversion Pool are areas where trails surround all or part of the waterbodies, but in some cases do not directly connect. In addition, the Lime Saddle area is lacking trail connections between major recreation facilities. The campgrounds, boat ramp, marina, and associated day use facilities are not connected by any developed trails. Any future Non-Motorized Trails Program will likely consider new trail routes in these areas with input from stakeholders and others (DWR 2004).

References

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Rischbieter, Doug. Staff Environmental Scientist, DWR. Personal communication with I. Mayes, Sr. Environmental Planner, EDAW, San Francisco, CA; July 21, 2004.

Table 2.5-1. Errata for R-5 – *Assessment of Recreation Areas Management (FINAL)*, dated June 2004.

Report Section	Page	Change
Global	multiple	Change “Brad P. Freeman Trail” to “Brad B. Freeman Trail”
Figures 5.1-1, 5.1-2, and 5.1-3 (Public Land Jurisdiction).	5-3, 5-5, and 5-7	Public management jurisdiction boundaries shown on these figures should be revised as follows: 1) Only State-owned lands should be depicted on maps within "LOSRA" (so LOSRA maps will have "holes" which represent federal inholdings); 2) Maps should indicate that most LOSRA lands are held (in fee) by DWR, with DPR holding the "Recreational Interest" (management); 3) Federal lands "within" LOSRA should not be depicted as part of LOSRA in ownership maps, but may be depicted as such on any management (jurisdiction) maps even though DPR does not literally manage those lands (USFS grants right to "use, protect, administer").
5.1.1.11 State Water Contractors -- Budget	5-56	Delete first sentence of first new paragraph on page (pers. comm., Jones 2004).

2.6 STUDY R-6 – ADA ACCESSIBILITY ASSESSMENT

Table 2.6-1. Errata for R-6 – *ADA Accessibility Assessment (FINAL),* dated September 2003.

Report Section	Page	Change
Global	multiple	Change "Brad P. Freeman Trail" to "Brad B. Freeman Trail"
Table 5.3-3	5-21	Add note at Spillway BR/DUA: "Parking area and DUA facilities were reconstructed subsequent to DPR evaluation in 2000."
5.3.3.2 Bidwell Canyon Boat Ramp/Day Use Area, Wyk Island DUA	5-23	In subheading, delete "DUA" after "Wyk Island"; add "the historic" before "bridge"; replace "Campground" with "BR/DUA parking lot."
5.3.3.11 Spillway Boat Ramp/Day Use Area	5-25	First sentence: Change "is a short floating dock" to "are three short floating docks"; Delete the third and fourth sentences; replace with "The upper area has 350 vehicle/trailer spaces (8 marked as ADA accessible) and 118 vehicle spaces (8 marked as ADA accessible).

2.7 STUDY R-7 – RESERVOIR BOATING

Study R-7 Addendum 1: Social Capacity vs. Recreation Standards

The following tables were distributed at the June 24, 2004 Recreation and Socioeconomics Work Group meeting, and the topic was discussed as guided by the bulleted items.

- RSWG comments on recreation standards are taken to mean boat traffic density standards, as shown on R-7 Report, p. 5-73, Table 5.5-10 where the standards used consist of below/approaching/at/exceeding assessment as related to physical (spatial) capacity.

- Social capacity can be stated in similar way as above (not found in R-7 report); this new look at the data may facilitate comparison of physical and social capacity:

Crowding Classification (p. 5-65)	Range Of Mean Crowding Score (p. 5-65, 5-67)	Social Capacity Assessment*	Range of Observed Boat Traffic Density (p. 5-73)**	Physical Capacity Assessment (p. 5-73)**
1-3 (low)	1.0 - 3.0	Below	Mod/low density (>20 acres/boat)	Below
4-6 (mod)	3.1 - 6.0	Approaching	High density (10.1-20.0 acres/boat)	Approaching
7-9 (high)	6.1 - 9.0	Exceeding	Very high density (<=10 acres/boat)	Exceeding

* R-7 report reported but did not use mean crowding ratings to assess social capacity status of Lake Oroville zones; a mean score of 6.0 is considered "at" capacity.
** 10 acres/boat is considered "at" capacity; option exists to re-label spatial capacity ranges to better match crowding ranges (columns 1 and 2) so that <=10 = high, 10-20 = moderate, 20-50 = low, >50 = very low.

- The following table applies this new social capacity categorization to the R-7 results for Lake Oroville, and compares with the spatial (boat traffic density) standards used:

	Crowding		Boat Traffic Density	
Reservoir Zone	**(Mean Score for Peak Season Holidays) and Capacity Assessment (p. 5-66)**	**(Mean Score for Peak Season Weekends) and Capacity Assessment (p. 5-65)**	**(All Boats – Peak Season Holidays) (Acres Per Boat) and Capacity Assessment (p. 5-76)**	**(Active Boats Only – Peak Season Holidays) (Acres Per Boat) and Capacity Assessment (p. 5-76)**
West Branch	3.8 (approaching)	3.1 (approaching)	**16 (approaching)**	36 (below)
Upper N Fork	4.5 (approaching)	2.9 (below)	23 (below)	37 (below)
Lower N Fork	4.6 (approaching)	2.7 (below)	34 (below)	96 (below)
Main Basin	4.2 (approaching)	2.9 (below)	30 (below)	60 (below)
Middle Fork	3.8 (approaching)	3.4 (approaching)	**9 (exceeding)**	22 (below)
South Fork	4.7 (approaching)	3.6 (approaching)	**11 (approaching)**	37 (below)

- Crowding was discounted in our assessments to some degree because the scores were judged to be related to shoreline crowding as well as on-water traffic; at the same time, attention should be paid to traffic density including shoreline boats in that it is a potential limitation on the use of many boaters.

- The above supports the conclusions (see Table 5.5-13) that use is approaching capacity at West Branch, Middle Fork and South Fork, is below capacity at other areas (Upper North Fork was elevated into “approaching” category due to Facility limitations).

- It is important to remember the context of the four types of capacity; full capacity assessment includes facility and ecological capacity, in addition to social and spatial capacity.

Study R-7 Addendum 2: Assessment of Marina Facilities and Floating Restrooms

This information was presented to the Recreation and Socioeconomics Workgroup on July 22, 2004 in response to a request to provide additional assessment of marina facilities, in particular as related to parking adequacy, and of floating restrooms.

Assessment of Marina Parking

Although several sources of parking guidelines for marinas are available, a wide range of variables affect boat usage and resulting parking demands, requiring site-specific assessment of parking needs. Perhaps the foremost factor is the use level the boats stored at the marina in wet slips and at moorings receive. Observations were not made of marina slip and mooring buoy occupancy at Lake Oroville, but marina industry sources and the study authors' professional experience suggest that use of marina boats is perhaps 25-30 percent on peak season weekends and 15-20 percent on weekdays. Summer holiday weekend use may be in the range of 40-60 percent. At Lake Oroville, it was observed that many houseboaters used their boats at the mooring and did not leave the mooring to cruise the lake. These boaters and their guests, like those who do leave the marina, require parking spaces.

Although systematic observation was not done and it is difficult to know from sight whether moored houseboats were occupied or not, informal observations conducted in the course of other Study R-7 field work suggests that the use rates cited above generally hold true for Lake Oroville. (An average of 82 houseboats were counted out on the lake on summer weekend afternoons, about 16 percent of the approximately 500 moored. An average of 192 houseboats were counted on three summer holidays, about 38 percent of the approximately 500 moored. Some of the houseboats observed were rental units, which are not included in the mooring buoy count. However, not all boats moored or docked at the marinas are houseboats. Nearly all pontoon boats and non-powered boats--primarily sail boats--used on the lake also originate at the marinas; an average of 33 of these boats were observed on summer weekend afternoons and an average of 60 were observed on three summer holidays.)

Other factors in marina parking needs include the size of the boats in slips and moored and the size and nature of the rental fleet. At both Lake Oroville marinas, most of the boats are houseboats. Some of these are 50 feet or greater in length. The wet slips at Bidwell Canyon Marina in particular contain several dozen large cabin cruisers and sailboats. Each boat of these types can host several people at one time. The larger houseboats can host a dozen or more people, who are likely to arrive at the marina in several vehicles. Marinas with these large boats, then, will require relatively more parking per boat than they would for smaller boats.

With the above factors in mind, it may be useful to compare the parking provided at the Bidwell Canyon and Lime Saddle marinas with guidelines developed from existing sources and knowledge of Lake Oroville use patterns and conditions. The table below

Assessment of Marina Parking based on Guidelines.[1]

	Bidwell Canyon Marina	Lime Saddle Marina [2]
Guideline	0.7 spaces per slip or mooring [3]	0.5 spaces per slip or mooring [4]
Spaces Needed	680 slips/moorings = 476 spaces needed	Current: 220 slips/moorings = 110 spaces needed Future: 340 slips/moorings = 170 spaces needed (assumes 120 wet slips lost 12/02 will be replaced)
Current Parking	Parking spaces increase as the reservoir pool level decreases: - 168 spaces at full pool (900 ft.) in upper paved marina lot plus 30 unpaved spaces in overflow lot. - About 230 spaces at 850 ft. pool elevation (typical of mid to late summer in wet or normal years) in upper and lower paved marina lots plus 30 unpaved spaces in overflow lot. - About 300 spaces at 800 ft. pool elevation (typical of mid to late summer in dry years) in upper and lower paved marina lots plus 30 unpaved spaces in overflow lot.	Boat ramp and marina share parking lot: - Have 45 vehicle spaces in main lot, 64 spaces in paved overflow lot near entrance, and additional spaces in lot above ramp (most of this lot is often occupied by ramp users' vehicles and boat trailers) - Total = approx 140 spaces if assume space for 30 vehicles will be available in overflow lot above ramp.
Conclusions[5]	- About 275 spaces deficient at 900 ft. pool elev. (full pool) - About 215 spaces deficient at 850 ft pool elev. - About 145 spaces deficient at 800 ft pool elev. (if elevation occurs during peak boating season) - Marina boaters and guests may also park in the residential area near the Bidwell Canyon entrance and walk in.	- Current: sufficient parking at current reduced number of slips - Future: About 30 spaces deficient when 120 slips are replaced, depending on use level of overflow lot and lot above ramp by ramp users. Will be deficient by as many as 60 spaces if little or no room for vehicles is available in lot above ramp.

1. Several parking guidelines have been published and implemented by various boating organizations. Parking space guidelines from 0.6 to 0.8 spaces per marina boat stored are most common, although one source stated 0.2 spaces per mooring (and 0.6 per wet slip) were sufficient (Tobiasson and Kollmeyer 2000; Stone 2002). The International Marina Institute (2004a) suggested that more than 0.5 spaces per slip would be excessive for most sites.
2. Assessment of Lime Saddle Marina includes a future condition, with assumption that 200 wet slips lost to December 2002 storm damage will be replaced in the near future.
3. Because the boats stored at Bidwell Canyon Marina are primarily houseboats and other large craft, and the marina maintains a sizeable rental fleet of houseboats and other large watercraft, a relatively high parking guideline of 0.7 parking spaces per slip was used in this assessment.
4. Because Lime Saddle Marina has about 70 percent fewer moorings (like at Bidwell Canyon, primarily houseboats), fewer other large boats in slips, and a smaller fleet of large rental boats, a more conservative guideline of 0.5 parking spaces per slip was used for that site.
5. These conclusions assume that marina boaters and guests will not park in vehicle/trailer spaces in the boat ramp lot at Bidwell Canyon or the shared lot at Lime Saddle, although this is commonly done and spaces may be available.

provides the guidelines used for this assessment, and compares the parking at the Bidwell Canyon and Lime Saddle Marinas to the guidelines. This assessment applies to peak boating season conditions (Memorial Day weekend through Labor Day weekend); parking demand is much lower during most of the non-peak season.

Other Marina Amenities

Bidwell Canyon Marina provides men's, women's, and handicapped accessible restrooms, and several gas pumps and pump-out stations on its main dock, in the area surrounding their marina store and office. Lime Saddle marina has a two-stall floating restroom (temporarily relocated to the marina by DPR to replace the restroom damaged by the December 2002 storm), two gas pumps, and a pump-out station. The number of these facilities needed, like parking, also depends to some degree on the level of use marina boats receive, as well as other factors. However, no published or established guidelines have been found for marina amenities such as restrooms, gas docks, and holding tank pump-out facilities. The California Department of Boating and Waterways publishes guidelines for boat ramp facilities only. The International Marina Institute (2004b) was contacted for this assessment and stated that they were not aware of any marina-specific guidelines.

Regarding restroom stalls, the number needed at the two Lake Oroville marinas may be reduced by the fact that most of the boats moored at the marinas are houseboats with on-board toilet facilities. There is also a restroom at the parking area for each marina, which boaters may use before heading to their moored boat or out on the lake. At the same time, a high number of boats with on-board toilet facilities increases the need for holding tank pump-out facilities.

The number of gas docks needed is not directly related to the size of the marina or number of moorings/slips because the gas pumps supply fuel to many non-marinas boaters as well. Although the houseboats that predominate at the marinas have high fuel needs, it has been observed that relatively few boats leave their moorings, even on summer weekends. Also, many houseboats that were observed away from the marina were beached or moored in nearby coves, which required only a few minutes cruising time to reach from the marina mooring field. Both of these factors would reduce overall fuel demand.

Assessment of Floating Restrooms

DPR maintains seven floating restrooms distributed across the length of Lake Oroville. Two of the restrooms are anchored in the main basin at the south end of the lake and each arm of the lake has a single restroom anchored out of the flow of boat traffic in a cove. Each restroom has two unisex stalls and room for several boats to tie up alongside while boaters use the facility. The greater convenience over land based restrooms makes the facilities popular with boaters. Nevertheless, observations indicate that boaters typically do not have to wait to use the restrooms, even during summer weekend afternoons and holidays peak use times. Some boaters are

interested in having more floating restrooms installed to reduce the distance between facilities and further enhance convenience.

DPR crews pump out the floating restroom holding tanks weekly most of the year, and every two weeks during the winter when boating activity is lowest. Most of the restrooms have been retrofitted with solar powered pumps that minimize the amount of water used for flushing, thus reducing the frequency that pumping out is necessary (R. Beach, pers. comm.). The facilities were observed to be in good condition, clean, and free of objectionable odors. DPR reports no problems with the function of the floating restrooms or any indication that the facilities are overused, such as full holding tanks or an inability to empty the holding tanks frequently enough commensurate with their use level (R. Beach, pers. comm.). Water quality testing conducted by DWR on several dates during the summer of 2003 in the vicinity of several of the floating restrooms did not detect any bacteriological contamination of the surrounding waters (Boullion 2003).

References

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Tobiasson, B., and R. Kollmeyer. 2000. Marinas and Small Craft Harbors (2nd Edition). Van Nostrand Reinhold, New York, NY.

Table 2.7-1. Errata for R-7 – *Reservoir Boating (FINAL),* dated March 2004.

Report Section	Page	Change
Report Summary - Introduction	RS-1	Second paragraph, first sentence: add "by volume" after "reservoir" and add "and the fourth largest in surface area" after "Shasta Lake,"
1.1 Background Information	1-1	Second paragraph, first sentence: add "by volume" after "reservoir"
5.3.3 Comparison of Project Area Boating Facilities with Standards	5-36	First bullet under Enterprise BR: change 53 percent to 47 percent. Add bullet under Enterprise BR: "No boarding dock is provided" Add new heading "Lime Saddle BR" and bullet: "Only a single dock, not useable from each launch lane"
Table 5.5-2	5-59	Footnote 2: add to end of note "but the overflow lot is not included in the capacity totals or average utilization percentages."
5.5.1.1 Parking Capacity at Project Area Boat Launches	5-59	Delete "Canyon" from "Spillway Canyon BR" heading
5.5.1.4 Boaters' Perceptions of the Need for Additional Boat Ramp Capacity	5-64	Last paragraph (top of page), last sentence: after "limits" add "and effects of low water on ramp launching capacity"
5.5.3.4 Boat Traffic Density During the Peak Season	5-73	Add to end of first paragraph: "Appendix B provides data on the surface acres of each count zone corresponding with each count date."
Figure 5.5-1 and 5.5-2	5-75 and 5-77	Revise note within maps' key: After "Calculations" add "include all watercraft and are" Add sentence to end: "Differences in surface acres among counts are accounted for in the calculations."
Table 5.5-13	5-81	Delete source note from table.
6.2 Existing Conditions of Boating Facilities	6-2	Third paragraph, last sentence: after "Bidwell Canyon" add ", Lime Saddle,". At end of paragraph add: "No dock is provided at Enterprise BR."
Appendix B	B-1	Add following pages as Appendix B.

Study R-7 APPENDIX B

Surface Acreage of Lake Oroville Boat Count Zones on the Date of Peak Season Boat Counts

Calculations of reservoir surface acres available were based on GIS data for the nearest elevation to the actual elevation of the reservoir on the count day. GIS data was available for the following elevations: 900 feet, 880 feet, 840 feet, 800 feet, 780 feet, and 740 feet. Surface acres were calculated by extrapolation from the next highest and lowest elevations for which data were available for the following elevations: 860 feet, 820 feet, and 760 feet.

Peak Season – Weekend Counts

Count Date	Actual Elev.	Elev. Used	Reservoir Zone						TOTAL
			LNF	MB	MF	SF	UNF	WB	
8/31–9/2/2002	734	740	1699	3816	1470	874	500	691	9050
5/25/2003	897	900	2655	5714	2537	2033	1257	1614	15810
7/5/2003	889	880	2545	5495	2396	1901	1093	1470	14900
6/16/2002	828	**820**	2104	4684	1954	1475	833	1053	12103
6/23/2002[a]	822	**820**	2104	4684	1954	1475	833	1053	12103
7/13/2002[a]	796	800	1968	4444	1822	1333	751	932	11250
8/3-4/2002	766	**760**	1799	4033	1586	1006	570	788	9782
6/1/2003	899	900	2655	5714	2537	2033	1257	1614	15810
6/15/2003	899	900	2655	5714	2537	2033	1257	1614	15810
6/28/2003	897	900	2655	5714	2537	2033	1257	1614	15810
7/20/2003	868	860	2392	5209	2241	1759	1004	1322	13927
7/26/2003	859	**860**	2392	5209	2241	1759	1004	1322	13927
8/3/2003	849	840	2239	4923	2085	1616	915	1173	12951
8/16/2003	838	840	2239	4923	2085	1616	915	1173	12951
8/24/2003	830	840	2239	4923	2085	1616	915	1173	12951

* Elevations shown in bold type were not available as GIS layers; surface acres were estimated by extrapolation from higher and lower available elevation data.

Peak Season – Holiday Counts

Count Date	Actual Elev	Elev Used	Reservoir Zone						TOTAL
			LNF	MB	MF	SF	UNF	WB	
8/31–9/2/2002	734	740	1699	3816	1470	874	500	691	9050
5/25/2003	897	900	2655	5714	2537	2033	1257	1614	15810
7/5/2003	889	880	2545	5495	2396	1901	1093	1470	14900

2.8 STUDY R-8 – RECREATION CARRYING CAPACITY

Study R-8 Addendum: Future Floating Campsite Demand and Capacity

An earlier draft of this addendum to the R-8 study report was distributed at the July 22, 2004, Recreation and Socioeconomic Work Group meeting.

- Current Supply - There are currently 10 floating campsites anchored in several coves on Lake Oroville.

- Current Demand - As reported in Relicensing Study R-7—*Reservoir Boating*, the floating campsites received high levels of use during the recreation season, with particularly high occupancy rates during the summer months of June, July, and August. Percent occupancy during weekdays and weekends was approximately 74 percent and 79 percent respectively during the recreation season. During the months of June, July, and August (2002), percent occupancy rates were even higher at 90 percent, 94 percent, and 86 percent respectively by month on weekdays and 94 percent, 93 percent, and 90 percent respectively by month on weekends.

- Projected Demand - As reported in Relicensing Study R-12—*Projected Recreation Use*, future demand for camping in the study area is estimated to be moderate, while future demand for boating is estimated to be high. The estimated annual change in demand is 1.1 percent for camping and 1.8 percent for boating. Assuming demand for floating campsites is related to demand for both camping and boating, it is estimated that annual demand for floating campsites will increase by at least 1.5 percent at a minimum. The actual annual change in demand may actually be higher, given the limited regional supply (supply-demand consideration), as Lake Oroville is the only regional recreation area that provides floating campsites.

- Projected Need if No Constraints - Assuming that demand for floating campsites increases by at least 1.5 percent annually, it is estimated that between 6 and 10 new floating campsites would be needed by 2050 to accommodate all anticipated peak season weekend demand. This estimate should be qualified by recognition that floating campsites are inherently low in number (10 existing), and even a doubling of sites is likely to generate additional demand and use levels consistently close to capacity, based on these facilities' apparent popularity.

- Constraints to Consider - Additionally, this estimate does not take into consideration several constraints that likely limit the number of floating campsites

that could potentially be placed around Lake Oroville. These constraints include the following, among others:

- *Lack of suitable coves*—there are some locations around the reservoir that could potentially accommodate new floating campsites. However, the placement and anchoring of floating campsites is a complex undertaking that involves consideration of bathymetry, prevailing winds, and other physical and engineering parameters. As such, there are a finite number of suitable locations for additional floating campsites. While suitability studies were not completed, DWR estimates that very few additional locations could accommodate floating campsites based on the placement of the existing floating campsites.

- *Only one maintenance boat*—currently there is only 1 maintenance/pump-out boat that is dedicated to servicing the floating campsites. The boat is currently being used to capacity with the 10 existing campsites. If additional floating campsites are provided, a new maintenance boat, including appropriate staff, will likely be needed.

- *Use fees*—recently (summer 2004), the price for using a floating campsite was raised to $100. In the mid-1990s, when fees were also higher, percent occupancy was lower at the floating campsites. Generally, when user fees are increased, there is a resulting decrease in visitation. However, it is estimated that visitation will fully rebound within 2 to 3 years after the initial fee increase, once visitors have become accustomed to the higher fees. This trend has been identified and quantified at multiple USDA Forest Service recreation sites (Loomis and Walsh 1997).

- <u>Conclusion</u> - Currently, it is estimated that at least 3 new floating campsites could be accommodated on Lake Oroville based on potentially suitable locations for new moorage sites. This is the stated need based on what we know today and with input from DPR. If DWR, based on further engineering analysis, determines that additional floating campsites are feasible and are in continued high demand in the future, the number of new floating campsites and associated moorage sites may increase. However, an additional support boat and other costs also need to be considered to allow an informed assessment of floating campsite economic feasibility.

Table 2.8-1. Errata to R-8 – *Recreation Carrying Capacity* (FINAL), dated June 2004.

Report Section	Page	Change
5.5.2.12 Foreman Creek Car-top BR Ecological Capacity	5-87	First line of last paragraph: Change "830" to "800"
5.6 Study Area Trails Capacity Summary	5-97	Delete "Kelly Ridge Trail" from bulleted list of Project area trails.
5.6.3 Facility Capacity	5-99	First sentence of second paragraph:" delete last four words ("and Kelly Ridge Trail"), and correct spelling of Rogers Trail.

2.9 STUDY R-9 – EXISTING RECREATION USE

Table 2.9-1. Errata for R-9 – *Existing Recreation Use (FINAL)*, dated February 2004.

Report Section	Page	Change
Report Summary, Introduction	RS-1	Second paragraph, line 1: Add "in terms of storage" after "second largest reservoir in California".
Report Summary, Need for This Study	RS-1	First paragraph, line 4: Delete word "also" after "This study…".
List of Tables, Table 5.1-4	iv	Add "(recreation days)" after "Existing use" in title for Table 5.1-4.
List of Tables, Table 5.6-3	v	Add "6 a.m. to 6 p.m." after "Monthly summary of" in title of Table 5.6-3.
1.1 Background Information	1-1	First paragraph, line 1: Add "in terms of storage" after "second largest reservoir in California".
Table 1.1-1. Study area sites.	1-2	Under Trails heading replace "Kelly Ridge Trail" with "Bidwell Canyon Trail".
3.0 Study Objective(s)	3-1	Line 9: Add "*Recreation*" Before "*Carrying Capacity*" (first occurance in document; global change).
4.1.5.1 2002 Trail Counter Locations (Phase I)	4-9	First paragraph, line 1: Replace "at the head of the Kelly Ridge Trail" with "on the Dan Beebe Trail"; After first sentence in paragraph 1, add: "(A short segment of the trail at this location is shared by the Dan Beebe Trail and the Bidwell Canyon Trail.)" ; Line 3: Replace "a split in the trail" with "the Bidwell Canyon Trail splits off"; End of line 4: Delete "to the Kelly Ridge area"; Line 5: Replace "The Kelly Ridge area" with "The trail here"
4.1.5.2 2003 Trail Counter Locations (Phases II and III)	4-10	Second paragraph, lines 4 and 6: Replace "Kelly Ridge Trail" with "Bidwell Canyon Trail".
4.2.1.1 Revisions to Traffic Counter Data	4-12	Second paragraph, line 1: Change "monthly total" to "daily total".
5.1.2 Lake Oroville	5-3	First paragraph, line 3: Change "sites" to "complexes (Table 5.1-1)"
5.1.3 Diversion Pool	5-7	First paragraph, line 3: Change "site." to "area."
Table 5.1-4	5-7	Add "(recreation days) after "Existing Use" in table title.
5.2.1.1 Activities at Lake Oroville Sites	5-14	First paragraph, line 13: Delete sentence "However, use of this camping opportunity was negligible and therefore not included as an activity at this site."
Table 5.2-1. Use by activity at Lake Oroville sites.	5-15	Several revisions; replace first page of Table 5.2-1 with revised version following this errata table; revised data cells are highlighted.
5.2.1.3 Activities at Thermalito Forebay Sites	5-20	Change "negligible" to "minimal" in last sentence of first paragraph.

Table 2.9-1. Errata for R-9 – *Existing Recreation Use (FINAL)*, dated February 2004.

5.2.1.5 Activities at Oroville Wildlife Area Sites	5-24	Second paragraph, line 5: Add word "each" after "10 percent of use".
5.2.1.5 Activities at Oroville Wildlife Area Sites	5-25	Second paragraph, last line: Change "no" to "negligible".
Table 5.2-6. Use by activity at additional sites within the FERC boundary.	5-27	Several revisions; replace Table 5.2-6 with revised version following this errata table; revised data cells are highlighted.
Table 5.2-7. Use by activity at additional sites outside of the FERC boundary.	5-29	Several revisions; replace Table 5.2-7 with revised version following this errata table; revised data cells are highlighted.
Figure 5.2-7. Use by activity at additional sites outside of the FERC boundary.	5-30	Two revisions; replace Figure 5.2-7 with revised version following this errata table.
5.4.1 Non-holiday VAOT	5-42	Second paragraph, fourth line: After "off-season:" delete "130," .
5.5 Campground Occupancy	5-51	Second paragraph, line 9: Delete "a" after "The campground had". Second paragraph, line 11: Delete "and weekend capacity was reached".
5.6.1.1 Monthly Trail Use (2002)	5-53	Second paragraph, line 3: Change "still recorded with" to "recorded".
5.6.2.1 Monthly Trail Use (2003)	5-55	Fifth paragraph, line 5: Replace "Kelly Ridge Trail" with "Bidwell Canyon Trail".
5.6.2.1 Monthly Trail Use (2003)	5-55	Sixth paragraph, line 4: Replace "Kelly Ridge Trail" with "Bidwell Canyon Trail"
Table 5.6-3. Monthly summary of trail counter data: 2003 locations (Phase 3).	5-56	Add to table title: "6 a.m. to 6 p.m." after "Monthly summary of".
Table 5.6-3. Monthly summary of trail counter data: 2003 locations (Phase 3).	5-56	Change third column heading to "Location #10: Bidwell Canyon Trail, Lower Bidwell Canyon"
Table 6.1-1. Distribution of existing use (recreation days) by site and general area.	6-3	Next-to-last column for Oroville Wildlife Area Sites should be 127,344 (not 127,347).
Table 6.2-1. Ranking of activities in the Project area based on percent contribution to total use in Project area.	6-8	Change middle column for Sightseeing to 26.6. Change last column for Boating access to 503,552 and Sightseeing to 440,631.

Revised Report Tables and Figures

Table 5.2-1. Use by activity at Lake Oroville sites.

Activities	# of Recreation Days at Site	Percent of Activity at Site	Activities	# of Recreation Days at Site	Percent of Activity at Site
Bidwell Canyon BR/DUA/Marina			**Loafer Creek DUA**		
Bank fishing	9,773	5	Bank fishing	1,452	5
Boating access	156,366	80	Boating access		
Camping			Camping		
Sightseeing	9,773	5	Sightseeing	1,452	5
Hunting			Hunting		
Picnicking	9,773	5	Picnicking	13,059	45
Swimming	9,773	5	Swimming	13,059	45
Trail use			Trail use		
Other			Other		
Bidwell Canyon Campground			**Loafer Creek Campground**		
Bank fishing			Bank fishing		
Boating access			Boating access		
Camping	22,252	100	Camping	23,531	100
Sightseeing			Sightseeing		
Hunting			Hunting		
Picnicking			Picnicking		
Swimming			Swimming		
Trail use			Trail use		
Other			Other		
Loafer Creek BR			**Loafer Creek Group Campground**		
Bank fishing			Bank fishing		
Boating access	29,246	100	Boating access		
Camping			Camping	5,820	100
Sightseeing			Sightseeing		
Hunting			Hunting		
Picnicking			Picnicking		
Swimming			Swimming		
Trail use			Trail use		
Other			Other		
Loafer Creek Equestrian Campground			**Lime Saddle BR/DUA/Marina**		
Bank fishing			Bank fishing	7,677	5
Boating access			Boating access	138,186	90
Camping	1,926	100	Camping		
Sightseeing			Sightseeing		
Hunting			Hunting		
Picnicking			Picnicking	7,677	5
Swimming			Swimming		
Trail use			Trail use		
Other			Other		

Table 5.2-6. Use by activity at additional sites within the FERC boundary.

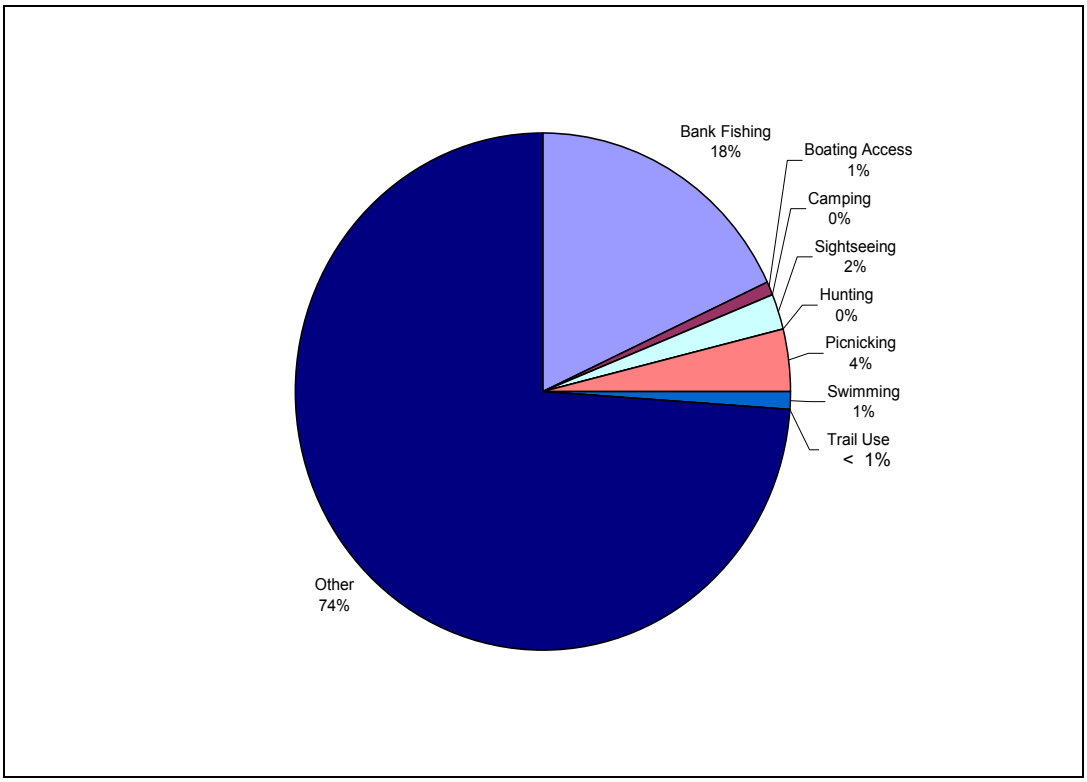
Activities	# of Recreation Days at Site	Percent of Activity at Site	Activities	# of Recreation Days at Site	Percent of Activity at Site
Feather River Fish Hatchery			**Dispersed Sites**		
Bank fishing			Bank fishing	1,665	10
Boating access			Boating access	n/a	<1
Camping			Camping		
Sightseeing	152,375	95	Sightseeing	4,995	30
Hunting			Hunting	4,995	30
Picnicking	8,020	5	Picnicking	2,498	15
Swimming			Swimming	1,665	10
Trail use			Trail use	n/a	<1
Other			Other	833	5
Other Dispersed Sites					
Bank fishing	108	5			
Boating access					
Camping					
Sightseeing	1,728	80			
Hunting					
Picnicking	108	5			
Swimming	108	5			
Trail use					
Other	108	5			

Sources: DWR 2003; EDAW, Inc. 2003.

Table 5.2-7. Use by activity at additional sites outside of the FERC boundary.

Activities	# of Recreation Days at Site	Percent of Activity at Site	Activities	# of Recreation Days at Site	Percent of Activity at Site
Riverbend Park			**Clay Pit SVRA**		
Bank fishing	12,092	40	Bank fishing		
Boating access	907	3	Boating access		
Camping			Camping		
Sightseeing	1,512	5	Sightseeing		
Hunting			Hunting		
Picnicking	3,023	10	Picnicking		
Swimming	605	2	Swimming		
Trail use	n/a	<1	Trail use		
Other	12,092	40	Other	18,324	100
Rabe Road Shooting Range					
Bank fishing					
Boating access					
Camping					
Sightseeing					
Hunting					
Picnicking					
Swimming					
Trail use					
Other	20,591	100			

Sources: DWR 2003; EDAW, Inc. 2003.



Sources: DWR 2003; EDAW, Inc. 2003.

Figure 5.2-7. Use by activity at additional sites outside of the FERC boundary.

2.10 STUDY R-10 – RECREATION FACILITY INVENTORY AND CONDITION REPORT

Study R-10 Addendum: Trail Use Designations

The purpose of this addendum is to present the current trail use designations in the study area, which have changed since Study R-10 was completed.

DPR has management responsibility and maintains most of the trails within the study area, specifically those which are within LOSRA. The California Public Resources Code (PRC) grants DPR the authority to authorize horse and other stock animal use of trails, and the authority to exclude bicycles from certain trails. A DPR Superintendent's Order issued in February 2002 changed trail use designations of many study area trails from hiking/biking and hiking/equestrian use to "multiple use," with affected trails shared by hikers, bikers, and equestrians. This was the trail use designation during 2002 and 2003 when Study R-10 was conducted, and as described in Section 5.1.5 of the Study R-10 report. However, the 2002 DPR Superintendent's Order was rescinded in 2004, after FERC denied DWR's request to amend the 1993 Amended Recreation Plan in support of the changes in trail use designation. Pursuant to direction from FERC, the trail use designation has been returned to that existing prior to the February 2002 DPR change and consistent with the 1993 Project No. 2100 Amended Recreation Plan. The table below describes the trail use designations at the time Study R-10 was done, and the current designations resulting from the reversal of the changes made by DPR.

Trail	Trail Length (miles)	Trail Use Designation					
		During 2002-03 Study Period			Current (and before 2/2002)		
		H	B	E	H	B	E
Bidwell Canyon Trail	4.9	●	●	●	●	●	X
Brad B. Freeman Trail	41.0	●	●	●	●	●	● [5]
Visitors Center (Chaparral) Trail	0.2	●	X	X	●	X	X
Dan Beebe Trail	14.3	●	● [1]	●	●	X	●
Loafer Creek Day Use/Campground Trail	1.7	●	X	X	●	X	X
Loafer Creek Loop Trail	3.2	●	● [2]	●	●	X	●
Sewim Bo Trail (completed in 2003-04)	0.5	NA	NA	NA	●	● [3]	● [3]
Potter's Ravine Trail	5.5	●	● [4]	● [4]	●	● [4]	● [4]
Roy Rogers Trail	4.0	●	●	●	●	X	●
Wyk Island Trail	0.2	●	X	X	●	X	X

Key to symbols: H = Hiking, B = Biking, E = Equestrian; ● indicates use is allowed; X indicates use is not allowed.
1. The Sycamore Hill segment of trail (1.6 miles) was not open to bicycles.
2. Bike use was allowed only on even-numbered calendar dates.
3. Bikes and horses are not specifically excluded from the Sewim Bo Trail, but it was designed for pedestrian use.
4. A short segment of the trail alongside Spillway cove is for pedestrian (hiker) use only.
5. Some portions are closed to horses, such as the north side of the Diversion Pool and at Thermalito Forebay.

Table 2.10-1. Errata to R-10 – *Recreation Facility Inventory and Condition Report (FINAL)*, dated September 2003.

Report Section	Page	Change
Table 1.2-1	1-4	Under Day Use Areas: Delete "Loafer Creek BR/DUA" move under "Boat Ramps with Day Use Areas"; Under Trailheads and Trails: Change "Brad P. Freeman" to "Brad B. Freeman" (global change throughout document) Change "Loafer Creek Canyon Trail" to "Loafer Creek Loop Trail"; add bullet: "Roy Rogers Trail"
2.0	2-1	First sentence: Replace "Fern's" with "FERC's"
5.1.1.1	5-1	Second line: Delete "waterskiing and"
5.1.1.2	5-2	Line 9: Add "composed of six individual sites" after "a group site"
5.1.1.6	5-5	Line 8: Change "The Dan Beebe Trail" to "The Loafer Creek Loop Trail and the Roy Rogers Trail"
5.1.1.7	5-5	First paragraph, last sentence: After open parentheses add "primarily for waterfowl, but also for upland game, including"
Table 5.1-1	5-7	For Lime Saddle Campground, under Tent Pads: Change "—" to "28"; for Lime Saddle Group Campground, under Tent Pads: Change "—" to "6"; add two footnotes: "6. Full hook-up sites" (for Bidwell Canyon RV sites and Lime Saddle RV sites) and "7. RVs may use sites but no hook-ups are provided" (for Loafer Creek Campground RV sites)
5.1.3.6	5-12	Line 6: After 2-lane add "and 3-lane"
Table 5.1-3	5-13	Add footnote: 1. Facilities listed are associated and shared with adjacent North Forebay BR & DUA (see Table 5.1-4) [footnote is for Aquatic Center row]; Also for Aquatic Center: change "217" to "251" under Parking Spaces.
5.1.4.1 to 5.1.4.7 and Table 5.1-4	5-15 to 5-19	Numerous corrections in table and associated text; replace text and table with the text and table following this page (Insertion 1). Note: Revised data cells in the table have been shaded.
5.1.4.12 to 5.1.4.16, Table 5.1-5	5-20 to 5-22	Numerous corrections in table and associated text; replace text and table with the text and table following this page (Insertion 2). Note: Revised data cells in the table have been shaded.
5.1.5.2	5-23	First sentence: Replace "OWA trails" with "The Brad Freeman Trail"; add to end of first sentence "at the northwest corner of the Afterbay."
5.1.5.3	5-23	Add to end of sentence the first sentence: "about 1.5 miles directly to the east of the Toland Road Access north of the Afterbay."
Table 5.1-6	5-25	Delete row for "Kelly Ridge Trail"; note that "Allowable Uses" column for certain trail segments is incorrect for several trails. Some errata date to the time of R-10 publication, and others resulted from a broad change of trail use designation that was imposed after publication. For a full contemporary, correct description of trail use designation please refer to the Recreation Management Plan (RMP), Section 6.5.
5.1.5.7	5-25	First sentence: After "can be accessed" add "from the Visitor Center and Saddle Dam Trailhead and can also be accessed"

Table 2.10-1. Errata to R-10 – *Recreation Facility Inventory and Condition Report (FINAL)*, dated September 2003.

5.1.5.8	5-25	Second sentence: Replace "circles" with "passes alongside"; add "and" before "the Diversion Pool"; add "crosses" before "the crest"
5.1.5.10	5-26	Second sentence: Delete "Loafer Creek Horse Campground", replace with "Saddle Dam Trailhead and the Visitors Center"; replace "near" with "below"; add to end of sentence "and from the Lakeland Blvd. Trailhead."
5.1.5.11	5-26	First sentence: replace end of sentence from "the MFFR…" with "Lake Oroville at the upstream end of the Middle Fork arm."
5.1.5.12	5-26	Delete section; Kelly Ridge Trail as described is same as Bidwell Canyon Trail (Section 5.1.5.7)
5.1.5.14	5-27	Line 5 (top of page): Replace "area" with "DUA"; replace "429" with "251"
5.1.5.16	5-27	First sentence: Replace "many trails for multiple uses" with "no developed trails, although the Brad Freeman trail follows gravel roads through a portion of the OWA."
5.1.5.17	5-27	Third sentence: After "Spillway" add "BR/DUA" ; replace "1,000" with "100 vehicle and several hundred vehicle/trailer"; delete last sentence.
5.1.5.19	5-28	Last sentence: Replace "451" with "279 vehicle/trailer."
5.2.3	5-29	First set of bullets, Bullet 1: Add "and equestrian camp improvements"; Bullet 2 and 3: Add "and parking area" after "road"; Add new Bullets: "Group staging area at Diversion Pool"; "Model Airplane Site improvements"; "Vault toilet installation at six sites." Replace second set of bullets with: "Fish Hatchery landscaping replacement" and "Coordinate with feather River Nature Center and construct trail and day-use improvements along river opposite the Feather River Fish Hatchery"
6.0	6-2	First bullet: After "recommended" add "for use"; Second bullet: replace "portable" with "pit"; Fourth bullet: replace "shoulders" with "lower portions"; Add Bullet: The defunct vault toilet at the Dark Canyon Car-top BR is in need of replacement or repair.
Table 6.0-2	6-2	Dark Canyon Car-top BR, under Maintenance Needed: Replace "Garage" with "Garbage"; add "Replace or repair defunct vault toilet."
Appendix C	C-1 to C-4	Trail use designations depicted for certain trail segments are incorrect on parts of all 4 figures. Some errata date to the time of R-10 publication, and others resulted from a broad change of trail use designation that was imposed after publication. For a full contemporary, correct description of trail use designation please refer to the Recreation Management Plan (RMP), Section 6.5.

Study R-10 Insertion 1

5.1.4.1 Bidwell Canyon Boat Ramp and Day Use Area

Located along the southern shore of the reservoir east of Oroville Dam, the boat ramp is a popular home base for boaters (Stienstra 2000). Bidwell Canyon is one of the major attractions in the Project area and is also discussed in Section 5.1.1.1 Bidwell Canyon Campground. There is a visitor information station and fee collection booth, as well as a marina. There are two areas with sun shelters, barbecues, and picnic tables (21 total) at the DUA, which generally surrounds a relocated historic bridge and tollhouse. The site has drinking water, eight flush toilets (two ADA accessible), a gray water sump, a seven-lane boat ramp, a telephone, and two fish cleaning stations.

The lower boat ramp was recently extended to 700 feet msl, providing use of the ramp at lower reservoir levels than previously available. The project was completed in December 2002. There is parking for 279 vehicles with trailers in the upper lot (Table 5.1-4). The Bidwell Bar Historical Suspension Bridge and Bidwell Bridge Toll House are located adjacent to the boat ramp parking lot. The concessionaire-run marina offers boat rentals, groceries, fishing supplies, a snack bar, 280 covered and uncovered berths and about 400 mooring buoys, fuel docks, pumping stations for boat holding tanks, and boat storage (DWR 2000b). All of the Bidwell BR and DUA facilities were in good condition (Table 6.0-1). Generally, the Bidwell Canyon facilities are available at high, medium, and low lake levels.

5.1.4.2 Lime Saddle Boat Ramp and Day Use Area

Located on the western shoreline of the West Branch of the North Fork arm of Lake Oroville, the Lime Saddle area is one of the major attractions at the Oroville Facilities. There is a staffed entrance kiosk where information is provided and fees are collected. Adjacent to the entrance kiosk are four single-vehicle parking spaces (one is ADA accessible). There are 13 picnic tables (4 ADA accessible), seven sun shelters, four flush toilets (all ADA accessible), a drinking fountain, a telephone, a four-lane boat ramp, a fish cleaning station, and two garbage dumpsters all on the main parking level at the top of the boat ramp. In the main parking area there are 45 single-vehicle parking spaces (3 are ADA accessible) and 131 car/trailer spaces (seven are ADA accessible). Additionally there is parking above the main level in an overflow lot suited for approximately 70 vehicles/trailers and additional vehicles without trailers, and another 64 single-vehicle parking spaces are available in a lot near the entrance kiosk (Table 5.1-4).

The boat ramp was recently extended to 702 feet msl (pers. comm., Feazel 2003), providing use of the ramp at lower reservoir levels than previously available. The project was completed in December 2002. The facilities are also available at medium and high lake levels. All of the Lime Saddle BR and DUA facilities were in good condition.

There is a concessionaire-run full-service marina that offers gas, a boat repair and supply shop, a general store with bait and tackle, and a pump-out station. The marina also offers rentals for houseboats, patio boats, fishing boats, and ski boats. Also available are short- and long-term overnight moorage, docks, and covered and open slips (approximately 120 buoys and 100 uncovered slips). The facilities were in good condition in 2000. However, in December 2002 the marina was severely damaged by a storm that left the concessionaire-run marina in disrepair (Table 6.0-2). As of August 2003, Lime Saddle Marina was still being repaired and was not fully functional. The marina concessionaire contract with DPR is up for bid, construction may not be completed until a contract is signed with a concessionaire. The concessionaire is responsible for any needed repairs to the marina facilities.

5.1.4.3 Loafer Creek Boat Ramp and Day Use Area

The boat ramp shares the same visitor information and fee collection booth as the other Loafer Creek attractions (also see Section 5.1.1). There is an eight lane boat ramp and a large parking area for 192 vehicle/trailer combinations (Table 5.1-4). All eight lanes of the boat ramp are accessible to 800 feet msl. Two lanes are available as low as 775 msl. There are two ADA-accessible flush toilets and a telephone.

Adjacent to the Loafer Creek boat ramp (see Section 5.1.1), the DUA offers opportunities for swimming, picnicking, and fishing. There are 30 picnic tables (some ADA accessible), 17 barbecues (including several large group grills), shade trees, a swimming area with a beach, a playground area, eight flush toilets (all ADA accessible), drinking fountains, showers, and parking for 251 vehicles, five of which are ADA-accessible spaces (Table 5.1-4). Overall, all of the Loafer Creek BR and DUA facilities were in good condition (Table 6.0-1).

5.1.4.4 Monument Hill Boat Ramp and Day Use Area

With 17 miles of shoreline and 4,300 surface acres of water, the Thermalito Afterbay is open for boating, swimming, fishing, picnicking, and limited hunting (DWR 2000b). The surface and shoreline are within the OWA, but recreation facilities and boat ramps are managed by DWR.

A two-lane boat ramp with floating dock is available at the Monument Hill site on the eastern shoreline of the Afterbay. There are 10 picnic tables, nine barbecues, four flush toilets (one appears to be ADA accessible but is not signed as such), a fish cleaning station and a swimming beach. There are 10 single-vehicle parking spaces (one is ADA accessible) and 39 car/trailer combination spaces (three are ADA accessible; Table 5.1-4). Additionally, there is a graded and graveled parking area approximately 60 by 60 yards in area (capacity of about 30 vehicles with trailers). The facilities were in good condition (Table 6.0-1).

5.1.4.5 North Thermalito Forebay Boat Ramp and Day Use Area

The North Thermalito Forebay covers 300 surface acres of the entire 630-acre Thermalito Forebay and hosts non-motorized boating and other recreational activities (DWR 2000b). There is a staffed visitor information and fee collection booth. The south side of the facility includes the Aquatic Center with a 1,200 sq. foot boat storage and classroom building and fenced outdoor storage area (see 5.1.3.6). Nearby are two paved boat ramps, one with two lanes and one with three lanes, each with a floating dock (Table 5.1-4). There are six flush toilets (two are ADA accessible) and 251 single-vehicle parking spaces (three are ADA accessible) on two sides of the DUA. The parking lot nearest the ramps has 26 car/trailer parking spaces (one is ADA accessible). There is also a large unpaved overflow parking area between the paved parking lots. Additionally, the DUA has a swimming beach, a large irrigated picnic area with shade trees and 117 tables, shared barbecue grills, drinking faucets, and a telephone. The area was in good condition aside from the lack of information in the existing interpretive display (Table 6.0-2). The interpretive displays have been relocated and are waiting for new panels that have been ordered (pers. comm., Feazel 2003).

5.1.4.6 South Thermalito Forebay Boat Ramp and Day Use Area

Located at the southern end of the Forebay, this recreational site has a self-registration pay station, a two-lane boat ramp with floating dock, 10 picnic tables, 10 barbecues, shade trees, one portable toilet (non-ADA), and a fish cleaning station. There is a graded and graveled parking area approximately 60 by 60 yards (capacity for about 75 vehicles) near the boat ramp combined with an undetermined number of parking spaces near the picnic sites (Table 5.1-4).

Power boating, limited to about 330 acres of the Thermalito Forebay's 630-acre pool, and fishing are the South Forebay's main recreation uses (DWR 2000b). Shoreline swimming also takes place at this DUA. With the exception of one of the interpretive displays lacking any interpretive information (Table 6.0-2), the facilities were in good condition. The interpretive displays have been relocated and are waiting for new panels that have been ordered. A new vault toilet was installed in 2003 (pers. comm., Feazel 2003).

5.1.4.7 Spillway Boat Ramp and Day Use Area

This is the largest boat ramp facility at Lake Oroville, adjacent to the right abutment of Oroville Dam. Development here consists of two multi-lane boat ramps. One of the ramps has eight lanes and can be used during low to medium water levels while the other has 12 lanes and can be used during medium to high water. The eight lane ramp is separate from the 12 lane ramp and has its own accompanying parking lot. During high water, both the lower eight lane ramp and its parking lot are submerged. The lower eight lane boat ramp was recently extended to 695 feet msl, providing use of the ramp at lower reservoir levels than previously possible. The project was completed in December 2002.

The site has a seasonally staffed visitor information and fee collection booth. The site has six flush toilets (two ADA accessible), drinking water, a fish cleaning station, and picnic sites (five tables) with shade structures (Table 5.1-4). The upper lot has 350 vehicle/trailer parking spaces, 40 of which are often available for “en route” (self-contained) RV camping (see Section 5.1.1.9). The lower lot can accommodate over 250 vehicles with trailers. The main ramp has spaces for a maximum of about 75 vehicles with trailers available at medium and low pool levels. The shoreline access allows for fishing at all reservoir levels. The facilities were in good condition (Table 6.0-1).

Table 5.1-4.
Boat ramps and day use areas.

Recreation Area	Pay Station (self-registration or staffed booth)	Boating		Day Use						Health and Safety						Parking		
		Lanes on Boat Ramps (Useable Lake Levels)	Other Facilities	Picnic Tables	BBQ Grills	Sun Shelters	Shade Trees	Other	Fish Cleaning Station	Portable Toilets	Flush Toilets	Drinking Water	Telephone	Garbage Receptacles	Other	Car Parking Spaces	Car/trailer parking spaces	Overflow Parking
Bidwell Canyon BR & DUA	1	7-H; 5-M; 2 to 4-L	1 Floating Dock, Marina adjacent	21	—	—	Yes	Bidwell Bar Historical Bridge & Tollhouse	1	—	8 (2 ADA)	Yes	1	20	1 Gray Water Sump	168 (marina parking)	279 (12 ADA)	Yes: small gravel lot (cars only)
Lime Saddle BR & DUA	1	4-M to H; 2 or 3-L	1 Floating Dock, Marina adjacent	13 (4 ADA)	—	7	Yes	—	1	—	4 (all ADA)	Yes	1	11	—	45 (3 ADA)	131 (7 ADA)	Yes: ~70 car/ trailer spaces
Loafer Creek BR & DUA	1	8-M to H; 2-L	1 Floating Dock	30	17	—	Yes	Playground; Swim Area w/ Beach	—	—	10 (all ADA)	Yes	1	3	2 showers	251 (5 ADA)	192 (6 ADA)	—
Monument Hill BR & DUA	—	2	1 Floating Dock	10	9	—	—	Swim Beach	1	—	4	—	—	8	—	10 (1 ADA)	39 (3 ADA)	Yes: large gravel lot
North Thermalito Forebay BR & DUA	1	2 ramps, 1 with 2 lanes, 1 with 3 lanes	2 Floating Docks	117	37	21	Yes	Swim Area w/ Beach	—	7 (1 ADA)	6 (4 ADA)	Yes	1	18	—	251 (6 ADA)	25 (1 ADA)	Yes: large unpaved area
South Thermalito Forebay BR & DUA	1	2	1 Floating Dock	10	10	—	Yes	—	1	1	—	—	—	6	—	Undesig-nated	Undesig-nated	—
Spillway BR & DUA	1	12-M to H; 8-L to M; 2-L	3 Floating Docks	6	—	6	Yes	—	1	—	6 (2 ADA)	Yes	—	7	—	118 Upper (8 ADA)	350 Upper (8 ADA); 264 Lower	—

Note: The dash indicates that there is no facility or that the category does not apply.
L = Low; M = Medium; H = High, high reservoir levels are defined as those above 850 feet msl. Medium reservoir levels are those from 800 to 850 feet msl. Low reservoir levels are those that fall below 800 feet msl. These divisions are based on historic pool levels (DWR CDEC 2003).

Study R-10 Insertion 2

5.1.4.12 Dark Canyon Car-Top Boat Ramp

Dark Canyon Car-top Boat Ramp is located on the West Branch of the North Fork arm of Lake Oroville. The single-lane boat ramp (formerly a county road) is used at low to medium reservoir levels. There is a paved parking lot (approximately 20 by 20 yards) that will accommodate approximately 15-30 vehicles or 10 vehicles with trailers. There are three pull-out areas between the parking lot and the end of the boat ramp, which is helpful because the road is narrow. There is an abandoned (vandalized) vault toilet and three garbage receptacles (Table 5.1-5). The ramp pavement is in good condition. There is no directional sign on SR 70 nor at several junctures between SR 70 and the entrance to the site (e.g., Big Bend Road and Dark Canyon Road), making it difficult for visitors to find. With the exception of the defunct toilet building and the garbage receptacles needing some maintenance (Table 6.0-2), the site is in good condition.

5.1.4.13 Foreman Creek Car-Top Boat Ramp

Foreman Creek Car-top Boat Ramp is located on the north side of the main body of Lake Oroville. The single-lane boat ramp (formerly a county road) can be used at all reservoir levels. Boating, fishing, and swimming all take place at this site. When reservoir levels fall below 800 feet above msl, the site is closed at night and additional security is present during the day to protect cultural resources. Roped off parking areas accommodate approximately 15-30 vehicles. At high reservoir elevations there is only roadside parking, which will accommodate approximately ten vehicles reasonably close to the shoreline (additional roadside parking is available further from the high water line). There are no restrooms. There is one garbage receptacle (Table 5.1-5) in need of maintenance (Table 6.0-2). Otherwise, the site was in good condition.

5.1.4.14 Larkin Road (Thermalito Afterbay) Car-Top Boat Ramp

The Larkin Road boat ramp has a graded and graveled car-top boat ramp (lanes are not marked but about three watercraft can be launched or retrieved simultaneously), a paved lot (approximately 50 yards by 50 yards which will accommodate approximately 30-50 vehicles or 15-20 vehicles with trailers), a single ADA-accessible vault toilet, and a garbage dumpster (Table 5.1-5). In addition to the designated launching area, there are four nearby shoreline launching sites that are not graded or graveled, one south of the designated launching ramp, and three are north of the main ramp. There are dirt roads that lead to all four of these informal but regularly used launching areas. The area was in good condition (Table 6.0-1).

5.1.4.15 Nelson Bar Car-Top Boat Ramp

Nelson Bar Car-top Boat Ramp is located on the West Branch of the North Fork arm of Lake Oroville. Most of the lower section of the single-lane boat ramp, below the improved cement surface, is passable only on foot due to severe erosion. A berm

prevents vehicles from reaching the lower eroded ramp and the ramp can only be used for trailer launching at high reservoir levels. The site has a gravel parking lot (approximately 60 by 60 yards and will accommodate approximately 30-50 vehicles or 15-20 vehicles with trailers) at elevation 894 feet above msl. There are pull-out areas between the parking lot and the end of the boat ramp, which is helpful because the road is narrow. There is one vault toilet (not ADA accessible) and two garbage receptacles (Table 5.1-5). Aside from the ramp being accessible only on foot at low water (Table 6.0-2), the site was in good condition.

5.1.4.16 Stringtown Car-Top Boat Ramp

Stringtown Car-top Boat Ramp is located on the South Fork arm of Lake Oroville. The boat ramp can be used at all reservoir levels. There is space to park approximately six vehicles in a paved lot above the ramp and additional unpaved roadside parking near the end of the upper cement portion of the boat ramp and various other spillover-parking areas. Visitors also fish and swim at this site. There is a vault toilet (non-ADA accessible) and one garbage receptacle (Table 5.1-5). Below the upper concrete boat ramp, the lower part of the boat ramp, a former County road, is used as a launch ramp at lower reservoir levels. The asphalt pavement below the concrete upper portion is in poor condition, making for rough launching (see photo in Appendix B).

There is no directional sign on Forbestown Road, making it difficult for visitors to locate the site; the first directional sign is at Hurleton Road. The site is in need of extensive pavement maintenance and directional signs at Forbestown Road and possibly additional locations at other intersections. Garbage facilities are also in need of some maintenance (Table 6.0-2).

Table 5.1-5. Boat ramp facilities not associated with a DUA.

Recreation Area	Use		Boating	Health & Safety			Parking
	Activities	Lake level when Boat Ramp is available	Lanes on Boat Ramp	Portable Toilet	Vault Toilet	Garbage Receptacles	Vehcile and Vehicle/Trailer Parking Spaces
Afterbay Outlet BR	Boating	NA[1]	1	—	—	—	no designated parking: approx. 5 vehicles/trailers
Enterprise BR	Boating	Medium to High	2	—	1	3	40 vehicles/trailers
OWA Unimproved BRs	Boating	NA[1]	1	—	—	—	no designated parking: number varies depending on location
Wilbur Road BR (Thermalito Afterbay)	~~Day Use~~ Boating	NA[2]	2	1	—	1	14 (1 ADA) vehicle/trailers
Dark Canyon Car-top BR	Car-Top Boating	Low to High	1	—	1	3	Undefined: approx. 15-30 vehicles or ~10 vehicles/trailers
Foreman Creek Car-top BR	Car-Top Boating	Low to High	1	—	—	1	Undefined: approx. 15-30 vehicles at low levels, approx. 10 at high levels
Larkin Road Car-top BR (Thermalito Afterbay)	Boating	NA[2]	Gravel (~3)	—	1 (ADA)	1	Undefined: approx. 30-50 vehicles or 15-20 vehicles/trailers
Nelson Bar Car-top BR	Car-Top Boating	High	1	—	1	2	Undefined: approx. 30-50 vehicles or 15-20 vehicles/trailers
Stringtown Car-top BR	Car-Top Boating	Low to High	1	—	1	1	Approx. 6 in paved lot, additional unpaved roadside parking
Vinton Gulch Car-top BR	Car-Top Boating	High	1	—	1	2	no designated parking: approx. 10

Note: The dash indicates that there is no facility or that the category does not apply. Undefined means there is a designated parking area, but parking spaces are not delineated. No designated parking means there is roadside parking only.
[1] Not applicable to Feather River boat ramps.
[2] Not applicable. Water levels at Thermalito Afterbay do not generally vary in a way that affects boating access.
Source: EDAW 2003.

2.11 STUDY R-11 – RECREATION AND PUBLIC USE IMPACT ASSESSMENT

Table 2.11-1. Errata to R-11 – *Recreation and Public Use Impact Assessment (FINAL)*, dated January 2004.

Report Section	Page	Change
Figure 1.2-1. Oroville Facilities and the FERC Project Boundary.	1-3	Add missing Project Boundary line at NW tip of West Branch Feather River.
4.2.1 Lake Oroville Dispersed Sites and Areas	4-2	Make "Parish Cove Dispersed Site" **bold**; GLOBAL: Change "Parrish" to "Parish"
5.1.1 Results of Site Observations and Field Assessments	5-1	Add the following sentence below the underlined subheading: "A summary of winter and summer conditions are included below."
6.2.1 Developed Recreation Sites and Areas	6-3	Add the following sentence to the end of the first bullet (Afterbay Outlet Campground and DUA): "Also, additional trash pick-up at this site should be considered to address the periodic trash accumulation observed and reported."

2.12 STUDY R-12 – PROJECTED RECREATION USE

Table 2.12-1. Errata for R-12 – *Projected Recreation Use (FINAL)*, dated May 2004.

Report Section	Page	Change
Report Summary, Introduction	RS-1	Second paragraph, line 1: Add "in terms of storage" after "second largest reservoir in California"
Report Summary, Study Results and Discussion	RS-3	Second paragraph, line 7: Add "*Recreation*" before "*Carrying Capacity*" in Study R-8 report title (first instance in report of GLOBAL change; recurs at six other locations in report).
Acronyms and Abbreviations	iv	Change "RRMP" and "Recreation Resource Management Plan" to "RMP" and "Recreation Management Plan" (first instance in report of GLOBAL change; recurs at one other location in report).
1.1 Background	1-1	First paragraph, line 1: Add "in terms of storage" after "second largest reservoir in California"
Task 2: Assess Potential Models to Fit the Attendance Data	4-4	Line 5: Change "annual (calendar year)" to "annual (fiscal year)"
Table 4.1-1	4-8	Table title: Add "of participation" after "annual days"; add "1998 Statewide" before "latent demand"; add footnote "2. Latent demand conclusions are drawn from DPR Statewide survey data; activity categories were slightly different from those used by Cordell for participation data"
4.1.4.2 Use of the Recreation Visitation Models	4-6	Second paragraph of subsection, line 1: Add "for Lake Oroville" after "visitation model"
5.2.1.2	5-9	Lines 3 and 4 on page 5-9: Replace "in which they would be likely to participate" with "that they believed were not offered in the study area but that they would like to do."
5.2.1.2	5-9	Second paragraph, line 4: Replace "selected" with "mentioned."
5.2.1.2	5-9	Last sentence of section: Add ", usually planned and coordinated by equestrian user groups who secure Special Event Permits from managing agencies."
5.2.2.1 Regional Economy	5-12	Third paragraph, line 4: Change citation (DPR 2003) to (TCW Economics 2003)
Appendix A, Public Opinions and Attitudes on Outdoor Recreation in California - 1997	A-4	First paragraph, line 7: Add to beginning of sentence: "Other sources cited by DPR indicate that"; add to end of next sentence (line 9) "in importance."
Appendix A, Lake Oroville State Recreation Area Attendance Data 1974-2001	A-17 to A-19	Change all references in this section from "[number of] visitors" to "[number of] visitor-days" (23 occurrences).
Appendix B, Lake Oroville Recreation Model (Monthly)	B-20	First paragraph, line 2: Change "one percent confidence level" to "99 percent confidence level" and change the p-value to "0.001"

2.13 STUDY R-13 – RECREATION SURVEYS

Study R-13 Addendum: Relation of Draft and Final Reports

The following paragraph has been added to the Final Study R-13 report, in the Report Summary section (page RS-1, second paragraph).

This iteration of Study R-13 – *Recreation Surveys* supersedes a draft version released in June 2004. The earlier draft version was made available after only limited internal review, with the express purpose of providing the Oroville Facilities Relicensing Collaborative with as timely information as possible. This final document differs from the June 2004 draft only in that it has received editorial refinement to Chapters 4 and 5 and the Appendices; no material changes have been made to the findings presented in the June 2004 draft.

Table 2.13-1. Errata to R-13 – *Recreation Surveys (DRAFT)*, dated June 2004.

Report Section	Page	Change
4.2.2.1 On-Site Survey Sampling Schedule	4-6	Insert map figure 4.2-1 depicting on-site survey sites listed in Table 4.2-3; reference in text (end of first sentence).
4.2.2.1 On-Site Survey Sampling Schedule	4-6	First paragraph, last sentence: Replace “car-top boat ramps” with “boat-in campsites”
Table 4.2-3	4-7	Under “Lake Oroville”: Change “Kelly Ridge Visitor Center” to “Lake Oroville Visitors Center”; under OWA, Clay Pit area: Change “Clay Pit Shooting Range” to “Rabe Road Shooting Range” (GLOBAL change throughout report)
4.3.2	4-12	First paragraph, third sentence: After “dove” add “(late season)”
4.4.2	4-14	Second paragraph, last sentence: Add “often because of low reservoir levels there late in the recreation season.”
5.1, Table 5.1-1	5-2	Added to table rows depicting sample sizes for six geographic study area zones. Revised table and preceding paragraph of text follows this table (Insertion 1). New text and table figures are highlighted.
5.1.1.2	5-5	First paragraph: Add after first sentence “The six resource areas were further divided for the purposes of the survey into 12 zones.”
Table 5.1-8	5-10	Add to note at bottom of table: “and also activities participated in at areas other than where they were contacted. This explains the occurrence of activities like “houseboating” where they do not normally occur (e.g., at the Forebay, Afterbay, and OWA).”
Table 5.1-9	5-11	Add a note at bottom of table: “Respondents could list activities that they participated in at areas other than where they were contacted. This explains the occurrence of activities like “house boating” where they do not normally occur (e.g., at the Diversion Pool, LFC)”
5.1.2.5 (correct Section	5-22	Add to end of first paragraph: “However, it should be noted

Table 2.13-1. Errata to R-13 – *Recreation Surveys (DRAFT)*, dated June 2004.

number to 5.1.3.4)		that individuals' definition of what constitutes "risk and challenge" is likely to vary widely."
5.1.2.6 (correct Section number to 5.1.3.5); Tables 5.1-24 through 5.1-28	5-26 to 5-30	Add to table footnotes: " 'N/A' responses were not included in analysis."
5.1.2.6 (correct Section number to 5.1.3.5) -- Boating Facilities	5-27	Bottom of page, last sentence: Replace "xx percent" with "78-84 percent"
5.1.2.6 (correct Section number to 5.1.3.5) -- Fishing and Hunting Facilities	5-29	Paragraph below Table 5.1-27, fourth sentence: Replace "Section ???" with "Section 5.2".
5.1.2.7 (correct Section number to 5.1.3.6); Tables 5.1-29 through 5.1-31	5-32 to 5-34	Add to table footnotes: " 'N/A' responses were not included in analysis."
5.1.2.7 (correct Section number to 5.1.3.6) -- Water Conditions	5-33	First paragraph on page, before last sentence add: "This phenomenon, relating to answers beyond the intended scope of a particular question, is one of several examples illustrating the need for careful evaluation of context when analyzing these results."
Table 5.1-41	5-44	Add to note at bottom of table: "The survey did not differentiate between anadromous salmon (the attraction in the Feather River/OWA) and planted salmon (smaller fish planted in reservoirs."
5.1.7.3	5-57	Second paragraph, second sentence: replace "(a total of 4, all at the Thermalito Forebay) to "(a total of 123 out of over 1,000 boaters responding, and only four at Thermalito Forebay)"
5.1.7.5	5-59	Second paragraph: After second sentence, add "Motorized fishing boats are not allowed on the North Forebay, and none were observed there."
Table 5.1-62	5-62	Add to note at the bottom of table: "Columns total more than 100 percent because many boaters periodically use more than one ramp."
5.3.2.2	5-89	Add to end of paragraph at top of page: "The other reservoirs are notably more distant from similar population centers."
5.3.8.2, Tables 5.3-22 and 5.3-23	5-104 and 5-105	Data analysis error led to incorrect figures in the two tables; changes with corrected data are generally small (most less than +/-5 percent). Revised tables and corrected associated text follow this table (Insertion 2). New table values and text are highlighted.
5.4.2.2	5-116	First paragraph, last sentence: Replace "balanced against each other" with "carefully viewed in their respective context."

Study R-13 Insertion 1

Table 5.1-1 lists the total sample size for each relevant Project area visitor group used in the On-Site Survey and Mailback Survey data analyses. Table 5.1-1 is intended to provide reference about sample size for individual groups in the subsequent Section 5.1 tables. The number of survey responses received from the various respondent groups (the sample size) varies by question and by item for multiple-item questions and so may be lower than the group sample sizes shown in this table. Questions and respondent groups with very low numbers of responses are noted in table footnotes.

Table 5.1-1. Survey sample sizes for specific respondent groups used in conducting comparative analyses.

Survey Respondent Grouping Variables and Groups	On-Site Survey		Mailback Survey	
	Sample Size (n)	Percent of Sample	Sample Size (n)	Percent of Sample
Total Sample	2,583	100%	1,071	100%
Resource Area where Surveyed				
Lake Oroville	1,396	54%	632	59%
Diversion Pool	62	2%	32	3%
LFC (north of SR 162)	169	7%	58	5%
Thermalito Forebay	311	12%	99	9%
Thermalito Afterbay	295	11%	120	11%
OWA	350	14%	130	12%
Season when Surveyed				
Peak Season (May 15 to Sept. 15)	2,137	83%	891	83%
Non-peak Season (Sept. 16 to May 14)	446	17%	180	17%
County of Residence				
Butte and adjacent counties	1,575	61%	612	57%
Other California counties/out of state	911	35%	395	37%
Unknown[1]	97	4%	64	6%
Primary Activity during Visit				
Boating activities	713	28%	336	31%
Fishing activities	648	25%	253	24%
Trail activities	194	8%	102	10%
Other day-use activities[2]	557	22%	180	17%
Camping activities	125	5%	49	5%
Other[3]	128	5%	46	4%
Unknown (no primary activity listed)	218	8%	105	10%

1. No primary residence Zip Code provided by respondent.
2. Eleven non-boating, fishing, or trail use activities are included in this group; however, over 88 percent of the 557 On-Site respondents indicated that their primary activity was swimming, relaxing, picnicking, or sightseeing.
3. This group includes a wide range of activities listed on the survey including several available only outside the study area (movies, shopping, golf), several available within the study area (hunting, OHV use), and several listed by respondents as "other activities" on the survey (e.g., Frisbee golf, target shooting, casino gambling, model aircraft flying, walking on Oroville Dam).

Study R-13 Insertion 2

5.3.8.2 Similar Site Visitors' Interest in Special Events and New Facilities

Similar site visitors who had never been to Lake Oroville were asked whether special events from a given list would motivate them to visit the Lake Oroville area for the first time (Table 5.3-22). Of the 13 types of events listed, respondents from Black Butte Lake and Lake Berryessa most frequently checked powerboat races (24 and 21 percent, respectively) as an event that would motivate a first visit, while food and beverage festivals were identified by the highest number of Shasta Lake visitors (23 percent). From 16 to 21 percent of Black Butte Lake visitors and 17 to 20 percent of Lake Berryessa visitors expressed interest in fishing events, food or beverage festivals, and water-skiing events. Shasta Lake visitors expressed a similar level of interest in fishing events as a motivation for a first visit. The remaining nine events on the list generally elicited substantially fewer positive responses from similar site visitors, with three to eight percent of visitors at each site expressing interest.

Table 5.3-22. Special events (from a given list) that would motivate similar site visitors to visit Lake Oroville for the first time.

Special Event	Similar Site		
	Black Butte Lake (n=38) **(%)**	**Lake Berryessa** (n=90) **(%)**	**Shasta Lake** (n=71) **(%)**
Fishing events	18.4	16.7	16.9
Food or beverage festivals	21.1	17.8	**22.5**
Water-skiing events	15.8	20.0	7.0
Powerboat races	**23.7**	**21.1**	11.3
Canoe/kayak events	13.2	6.7	2.8
Living history demonstrations	7.9	3.3	5.6
Mountain bike events	7.9	5.6	4.2
PWC events	7.9	5.6	2.8
Target shooting competition	7.9	5.6	7.0
OHV related special events	7.9	5.6	5.6
Sailing events	7.9	7.8	2.8
Triathlons	5.3	3.3	2.8
Equestrian events	7.9	4.4	1.4

*Note: **Bold** type indicates the special event with the highest percentage expressing interest at each site. Respondents could select more than one event from the list provided.*
Source: Similar Site Survey.

The Similar Site Survey respondents were also asked whether any of eight types of facilities listed would motivate them to visit Lake Oroville for the first time. Although the facility checked most often (and the order of the top few responses) varied by site, three

water-oriented facilities on the list elicited the most positive responses at each site: a water park, a floating restaurant, and warmwater swimming/beach areas. Visitors at Black Butte Lake expressed a similar level of interest and, at Lake Berryessa, a more moderate level of interest in showers at DUAs and child play areas (Table 5.3-23).

Table 5.3-23. Facilities (from a given list) that would motivate similar site visitors to visit the Lake Oroville area for the first time.

Facility	Similar Site		
	Black Butte Lake (n=38) **(%)**	**Lake Berryessa** (n=90) **(%)**	**Shasta Lake** (n=71) **(%)**
Expanded outdoor center/nature/cultural/ historic interpretation center	7.9	3.3	5.6
Water park	18.4	**31.1**	22.5
Floating restaurant on Lake Oroville	23.7	18.9	**25.4**
Warmwater swimming/beach areas	**28.9**	21.1	16.9
More RV sites for people with disabilities	5.3	8.9	1.4
Showers at DUAs	18.4	15.6	4.2
Child play areas	23.7	12.2	5.6
More full hook-up RV sites	10.5	10.0	2.8

*Note: **Bold** type indicates the facility with the highest percentage expressing interest at each site.*
Respondents could select more than one facility from the list provided.
Source: Similar Site Survey.

2.14 STUDY R-14 – ASSESSMENT OF REGIONAL RECREATION AND BARRIERS TO RECREATION

Study R-14 Addendum: Potential for Special Events to Increase Project Area Visitation

The following addendum was produced in response to comments voiced at the March 25, 2004, Recreation and Socioeconomics Work Group meeting that questioned the Study R-14 conclusion that special events would be unlikely to attract new visitors to Lake Oroville. ***The first two lines of the last paragraph in Section 6.3.1 (page 6-5) are to be deleted.*** *Insert the following text into Section 6.3.1, at the beginning of the last paragraph.*

Special events appear to be a more important factor in motivating respondents to visit the Lake Oroville area. Although only about 21 percent of household survey respondents who had never visited the Lake Oroville Area were able to name (without prompting) a special event that would motivate a first visit, over 70 percent responded affirmatively to at least one of 13 types of special events when asked if each would motivate a first visit. Also, over 85 percent of those who had visited the area indicated one or more of the 13 types of events would motivate them to visit more often.

Special events may have less of an influence on the choices of those already recreating at other regional reservoirs. About 39 percent of people contacted for the Similar Site Survey indicated one or more of the 13 types of special events listed would motivate them to visit Lake Oroville for the first time.

The following paragraph should be inserted following the last paragraph in Section 6.3.1 (page 6-5):

It is difficult to predict the portion of potential visitors to the Lake Oroville area who will attend special events, but the percentage is likely to be far less than the level of interest shown in survey responses. In other words, although 25 percent of potential visitors contacted during the household survey expressed an interest in food or beverage festivals, only a small fraction of a percent may actually act on that expressed interest and come to an event. Attendance at an event would depend on promotion of the event, the type of event, weather, and many other factors. Nevertheless, it appears that several types of special events have good potential for bringing more and new visitors the area.

Table 2.14-1. Errata for R-14 – *Assessment of Regional Recreation and Barriers to Recreation (FINAL)*, dated September 2004.

Report Section	Page	Change
Report Summary, Conclusions	RS-4	Last paragraph, line 4: Replace "many respondents" with "the majority of respondents"
Table 5.3-3, Little Grass Valley Reservoir, Surface Acres	5-19	Replace "16,000" with "1,615"
5.5.2.4 Facilities – Facilities That Would Motivate Initial Visits to the Lake Oroville Area	5-75	Second-to-last paragraph, line 1: Change "56 percent" to "64 percent"
Table 5.5-15 Facilities (from a given list) that would motivate respondents to visit Lake Oroville for the first time.	5-76 and 5-77	A data analysis error relating to the number of respondents for the three similar site survey groups affected most percentages within the table (the analysis included all survey respondents rather than the subset of those who had never visited Lake Oroville). The revised table and accompanying text sections follow this table; revised text and data cells are highlighted. The percentage in most cells changed less than +/- 5 percent.
Table 5.5-19 Special events (from a given list) that would motivate respondents to visit Lake Oroville for the first time.	5-81 and 5-82	A data analysis error relating to the number of respondents for the three similar site survey groups affected most percentages within the table (the analysis included all survey respondents rather than the subset of those who had never visited Lake Oroville). The revised table and accompanying text sections follow this table; revised text and data cells are highlighted. The percentage in most cells changed less than +/- 5 percent.

Study R-14 Insertion 1

Both the Similar Site and Household Survey respondents were questioned as to whether facilities (from a given list) would motivate them to visit the Lake Oroville area for the first time. Warm water swimming/beach areas was the facility chosen most frequently by respondents from Black Butte Lake (28.9 percent) as the facility that would motivate them to visit Lake Oroville for the first time (Table 5.5-15). This facility was also popular with respondents from the other lakes and the Household Survey. Swimming and beaches were also the most requested new facility/activity from Recreation Visitor Mail-back Survey respondents (Section 5.2.4.1). A water park was the most frequent response from respondents at Lake Berryessa (31.1 percent). Of the given facilities, respondents from Shasta Lake and the Household Survey chose a floating restaurant on Lake Oroville most frequently (25.4 and 37.1 percent respectively) as the facility that would motivate them to visit the Lake Oroville area for the first time.

Table 5.5-15. Facilities (from a given list) that would motivate respondents to visit the Lake Oroville area for the first time.

Facility	Percentage of Respondents			
	Black Butte Lake	Lake Berryessa	Shasta Lake	Household Survey
None	**57.9**	**52.2**	**69.0**	30.5
Indicated that a facility would motivate them to visit for the first-time	42.1	47.8	31.0	**69.5**
Expanded outdoor center	7.9	3.3	5.6	30.5
Water park	18.4	**31.1**	22.5	27.2
Floating restaurant on Lake Oroville	23.7	18.9	**25.4**	**37.1**
Warm water swimming/beach areas	**28.9**	21.1	16.9	29.8
More RV sites for people with disabilities	5.3	8.9	1.4	13.9
Showers at DUAs	18.4	15.6	4.2	25.8
Child play areas	23.7	12.2	5.6	20.5
More full hook-up RV sites	10.5	10.0	2.8	15.2

*Note: **Bold** percentages indicates the facility with the highest respondent percentage. Respondents could list more than one facility from a predetermined list of options. Respondents included 38 from Black Butte Lake, 90 from Lake Berryessa, 71 from Shasta Lake, and 151 from the Household Survey.*
Source: EDAW, Inc. 2003b; EDAW, Inc. 2003d (Household and Similar Site Surveys).

Study R-14 Insertion 2

Of the given facilities that were selected, respondents from Black Butte Lake and Lake Berryessa listed powerboat races most frequently (23.7 and 21.1 percent respectively). Food and beverage festivals was listed by the most Shasta Lake and Household Survey respondents (22.5 and 25.2 percent, respectively). Other special events listed by over 20 percent of Household Survey respondents were canoe/kayak and fishing events (24 and 22 percent, respectively).

Table 5.5-19. Special events (from a given list) that would motivate respondents to visit the Lake Oroville area for the first time.

Special Event	Percentage of Respondents			
	Black Butte Lake	Lake Berryessa	Shasta Lake	Household Survey
None	**57.9**	**55.6**	**69.0**	29.8
Indicated that a special event would motivate them to visit for the first time	42.1	44.4	31.0	**70.2**
Fishing events	18.4	16.7	16.9	21.9
Food or beverage festivals	21.1	17.8	**22.5**	**25.2**
Waterskiing events	15.8	20.0	7.0	15.2
Powerboat races	**23.7**	**21.1**	11.3	19.9
Canoe/kayak events	13.2	6.7	2.8	23.8
Living history demonstrations	7.9	3.3	5.6	17.2
Mountain bike events	7.9	5.6	4.2	13.2
PWC events	7.9	5.6	2.8	7.9
Target shooting competition	7.9	5.6	7.0	14.6
OHV related special events	7.9	5.6	5.6	9.3
Sailing events	7.9	7.8	2.8	8.6
Triathlons	5.3	3.3	2.8	8.6
Equestrian events	7.9	4.4	1.4	9.9

*Note: **Bold** percentages indicated the special event with the highest respondent percentage. Respondents could select more than one event from a predetermined list of options. There were 38 respondents from Black Butte Lake, 90 respondents from Lake Berryessa, 71 respondents from Shasta Lake, and 249 respondents from the Household Survey.*
Source: EDAW, Inc. 2003b; EDAW, Inc. 2003d (Similar Site and Household Surveys).

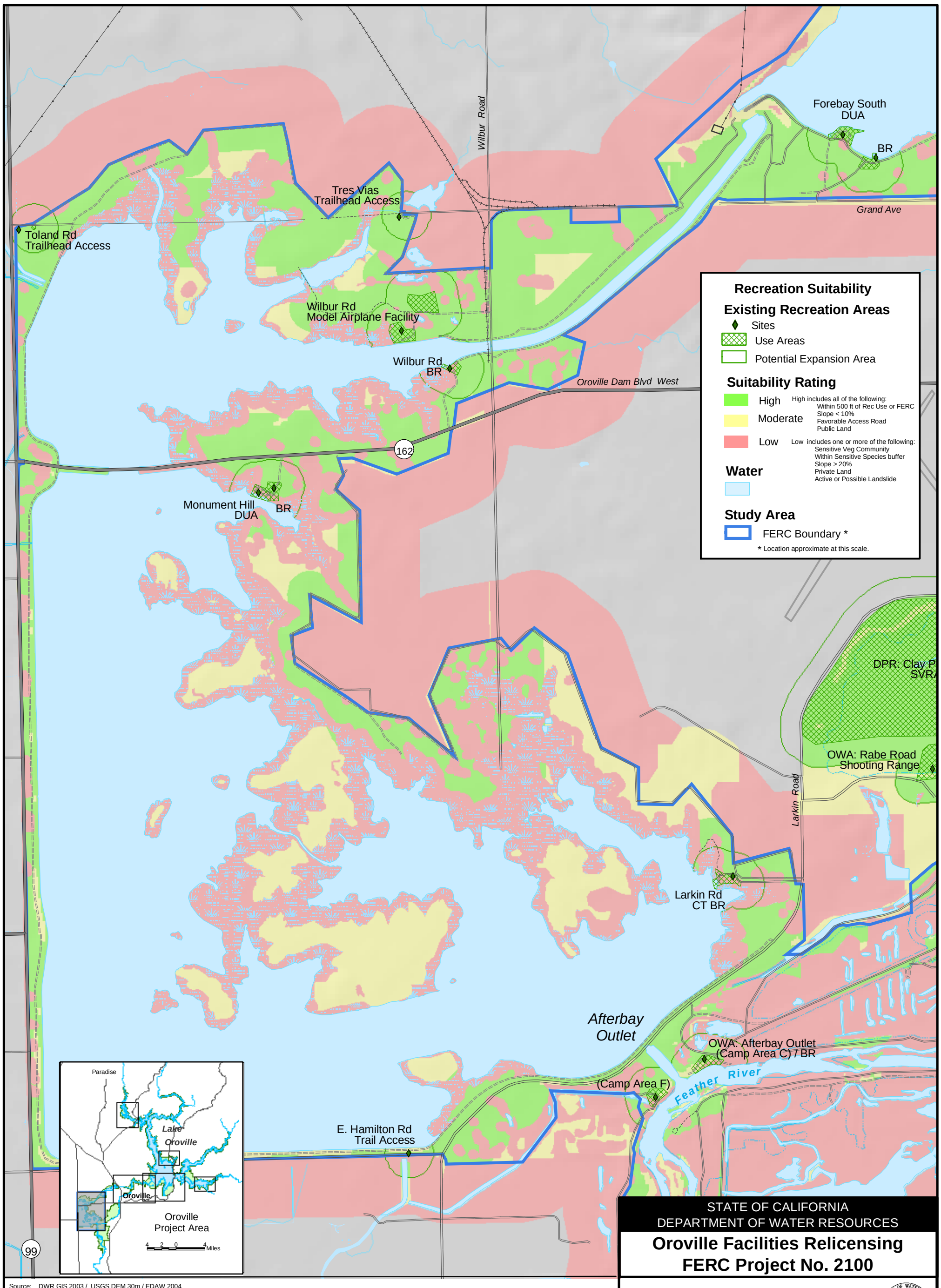
2.15 STUDY R-15 – RECREATION SUITABILITY ANALYSIS

Table 2.15-1. Errata to R-15 – *Recreation Suitability Analysis (FINAL)*, dated February 2004.

Report Section	Page	Change
Table of Contents	i	Add: "4.1.2 Data Not Included in GIS Assessment." Requires page update to Table of Contents.
List of Figure	ii	Add: Figure 5.3-9 Recreation Suitability – Composite – Thermalito Afterbay and Forebay South……..5-31."
New: Section 4.1.2 Data Not Included in GIS Assessment	4-2	Add the following paragraph under a new section 4.1.2 Data Not Included in GIS Assessment: "There were several factors included in the study plan that were not included in the analysis. 'Areas of wind protection' was noted in the study plan as a layer to include in the analysis. This was a factor that was difficult to map due to variable wind patterns. Additionally, some users may view the wind as an opportunity (particularly on warm days), while others may consider the wind a constraint; therefore this type of data was not included in the assessment. Boating hazards were not mapped, as they could change significantly as the level of the reservoir changes. Another factor that was considered, but not included in the assessment was 'deep water shoreline.' This factor was not incorporated in the assessment because the analysis focused primarily on lands located above full-pool and it was difficult to determine what to classify as 'suitable' (e.g., shallow slopes are desirable for swim areas, steeper slopes are desirable for boat ramps, etc.). Lastly, the rationale for including 'favorable tree canopy' was assessed but ultimately not included in the assessment due to the variability in defining a 'favorable tree canopy' (i.e., a favorable tree canopy for a boat ramp may be very different from a favorable tree canopy for a campground or a day use area).
4.3 Analysis of Recreation Constraints	4-4	Add after first sentence of the third paragraph in section 4.3: "The following data were included in the sensitive habitat GIS data layer: Bald Eagle nests, Peregrine Falcon nests, Swainson's Hawk nests, Vernal Pools, rare plant locations, Valley Oak, and riparian species. The following data were also included in the sensitive habitat GIS data layer, but were incomplete at the time of the map's completion (i.e., these data are included in the text results of the GIS assessment, but are not included in the maps accompanying the study report): Elderberry bushes, Giant Garter Snake habitat, and Red-legged Frog habitat. While these data are not represented in the study report maps, it was concluded that the final suitability maps would change very little with this added information."

Table 2.15-1. Errata to R-15 – *Recreation Suitability Analysis (FINAL)*, dated February 2004.

Report Section	Page	Change
5.3 Composite Suitability	5-2	First paragraph, line 8 (sentence beginning "Close-up views": before "Enterprise BR" delete "and"; after "Enteprise BR" add ", Diversion Pool and upper Feather River, and Thermalito Afterbay and South Forebay"; change "5.3-8" at end of sentence to "5.3-9".
Figure 5.3-1	5-15	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-2	5-17	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-3	5-19	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-4	5-21	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-5	5-23	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-6	5-25	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-7	5-27	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
Figure 5.3-8	5-29	On map key under Low Suitability: change "No Sensitive Veg Community" to "Sensitive Veg Community" and "No Active or Possible Landslide" to "Active or Possible Landslide"
New: Figure 5.3-9	5-31	Add new map numbered and titled Figure 5.3-9 Thermalito Afterbay and Forebay South. This map is a composite suitability map at 1:24,000 scale that shows the South Thermalito Forebay, the Thermalito Afterbay and the OWA in the vicinity of the Afterbay outlet. The new map follows this errata table.



Source: DWR GIS 2003 / USGS DEM 30m / EDAW 2004

Scale 1 : 24,000
1" = 2,000 feet

2,000 1,000 0 2,000 Feet

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Oroville Facilities Relicensing
FERC Project No. 2100

Figure 5.3-9
(R-15)

Recreation Suitability -- Composite
Thermalito Afterbay and Forebay South

Prepared by: PJ -- EDAW, Inc.
Date 6/25/04
P:\2000\0s016.gis\arcmap\suit_comp_11x17vert24k_win.mxd

2.16 STUDY R-16 – WHITEWATER AND RIVER BOATING

Table 2.16-1. Errata for R-16 – *Whitewater and River Boating (FINAL)*, dated January 2004.

Report Section	Page	Change
5.1.3 Reservoir Elevation and Availability of Big Bend Run	5-7	Last line on page: Add the word "feet" after "730"
5.1.3 Reservoir Elevation and Availability of Big Bend Run	5-11	Third paragraph, last sentence: Add the words "focus group" after "which includes the"
5.2.1.2 Segment 2: Feather River from the Fish Barrier Dam to the Thermalito Afterbay Outlet	5-21	Top paragraph, line 5: Change "three-fourths mile" to "one-half mile"
5.2.3.2 Segment 2: Feather River from the Fish Barrier Dam to the Thermalito Afterbay Outlet	5-31	Paragraph below Table, line 4: Add "according to focus group members" after "Class II whitewater section"
5.4 Stakeholder-Proposed Whitewater Park	5-37	Paragraph in middle of page, line 11: Replace "2000" with "2003"
6.1.3 Access to the Big Bend Run	6-2	Second paragraph, line 6: First instance of "found that this is not the case" should be deleted.
6.1.3 Access to the Big Bend Run	6-2	Second paragraph, last line: Add "would need to" after "thus"

2.17 STUDY R-17 – RECREATION NEEDS ANALYSIS

Table 2.17-1. Errata to R-17 – *Recreation Needs Analysis (Final)*, dated June 2004.

Section	Page	Change
Global	multiple	Change "Brad P. Freeman" to "Brad B. Freeman"
Report Summary	RS-6	Under "Non-motorized Trails" subsection, change second sentence to read "Most trails are in good condition and reported user conflicts are relatively low."; Under same section, change fourth sentence to read: "A Comprehensive Non-Motorized Trails Program is proposed as a component of the RMP to address the entire trail network."
Figure 5.1-1 Regional Recreation Resources	5-3	In legend, change "Featured Reservoirs" to "Featured Reservoirs and Lakes." On figure, highlight (dark blue) Lake Tahoe as a Featured Reservoir/Lake.
Section 5.2.6 Overall Trail Needs in the Study Area	5-127	Last line on page: Replace "camping" with "trail"
Section 5.2.6.1 Overall Trail-Related Needs	5-129	Under "Continue to provide annual O&M at non-motorized trails" subsection, change first sentence to read "In general, most existing trails are in relatively good condition."
Section 5.2.6.2 Trail-Related Supply Factors	5-130	Revise third sentence of second paragraph to read "Overall, most of the trails in the study area are in good condition, though several use impacts (e.g., erosion, vegetation damage, litter, etc.) were identified along specific sections of trail. Only a few of the trails are ADA accessible; however, several have ADA-accessible facilities at access points."
Section 5.2.6.2 Trail-Related Supply Factors	5-130	Delete "and Equestrian use" from end of third paragraph; change "biking, hiking" to "biking and hiking"
Section 5.2.6.2 Trail-Related Supply Factors	5-130	Revise fourth sentence of paragraph under Brad B. Freeman Trail (bottom of page) to read "Although some of the trail is designated multi-use, no horses are allowed on several segments; thus, the utility of the trail to provide a "loop" is only consistent with hiking and bicycle use. The trail is primarily used for mountain biking (including downhill and cross-country races) and hiking."
Section 5.2.6.2 Trail-Related Supply Factors	5-131	Under "Dan Beebe Trail" subsection: Delete "loop" from first sentence; revise second sentence of paragraph under Dan Beebe Trail to read "The trail is for hiking and equestrian use and bicycles are excluded."; third sentence: delete "at the Loafer Creek Equestrian Campground" and replace with "from the Lakeland Boulevard Trailhead Access and Saddle Dam Trailhead Access at each end of the trail"; at the end of same sentence, delete "near the dam" and replace with "below the dam where the trail crosses the road."; following the above, insert the sentence "The trail can also be accessed from the Lake Oroville Visitors Center and the Bidwell Canyon Campgrounds."

Table 2.17-1. Errata to R-17 – *Recreation Needs Analysis (Final)*, dated June 2004.

Section	Page	Change
Section 5.2.6.2 Trail-Related Supply Factors	5-132	Delete "Bidwell Canyon Trail" section; Replace heading "Kelly Ridge Trail" with "Bidwell Canyon Trail"; replace "Kelly Ridge" in first sentence with "Bidwell Canyon"; replace "multi-use" in first sentence with "hiking and biking"; add to the end of the second sentence ", or the Saddle Dam Trailhead Access (about 40 vehicle spaces)."
Section 5.2.6.2 Trail-Related Supply Factors	5-133	Under "Potter's Ravine Trail," add to the end of the last sentence ", which serves as a trailhead for this trail."
Section 5.2.6.2 Trail-Related Supply Factors	5-133	Under "Saddle Dam Trailhead Access," change "Dan Beebe Trail" to "Dan Beebe and Bidwell Canyon Trails"; add to the end of same sentence ", via a connector trail across the saddle dam."; second sentence: revise "40 car/trailer" to read "20 vehicle and horse trailer"; third sentence: delete "equestrian" and make "trail" plural.
Section 5.2.6.2 Trail-Related Supply Factors	5-135	Revised first sentence of paragraph under "Oroville Wildlife Area" to read "Within the OWA, bicycling, walking/hiking, and horseback riding are permitted; biking and horseback riding are permitted only on roads."
Section 5.2.6.4 Trail-Related Capacity Factors	5-139	Last sentence of first paragraph under "Social Capacity": Replace "have" with "report"
Section 6.1.1.2 Loafer Creek Campground / BR/ DUA / Group Campground / Equestrian Camp Complex	6-47	Change second sentence of paragraph under "Summary of Relevant Site Information" to read "Within the Loafer Creek Complex, the DUA and boat ramp provide 522 parking spaces, of which 11 are ADA accessible."
6.1.1.10 Stringtown Car-top BR	6-61	In first sentence under "Summary of Relevant Site Information": change "approximately 6 vehicle/trailer combinations" to "approximately 15 vehicle/trailer combinations"
Figure 6.2-1 Existing and Proposed Trails	6-87	Delete Figure 6.2-1. Trail use designations depicted for certain trail segments are incorrect on parts of this figure. Some errata date to the time of R-17 publication, and others resulted from a broad change of trail use designation that was imposed after publication. For a full contemporary, correct description of trail use designation please refer to the Recreation Management Plan (RMP), Section 6.5.
Appendix A Site Plans for Oroville Facilities Recreation Sites and Areas	Figure # LO-17	On figure, label circle structure at Horse Camp as "Round Pen"

2.18 STUDY R-18 – RECREATION ACTIVITY, SPENDING, AND ASSOCIATED ECONOMIC IMPACTS

Table 2.18-1. Errata to R-18 – *Recreation Activity, Spending, and Associated Economic Impacts (FINAL)*, dated May 2004.

Report Section	Page	Change
4.4.1 – Recreation-Related Spending	4-12	Paragraph three, sentence 3: Change "…(Butte County and five community areas)." to "…(Butte County and four community areas)."
4.4.1 – Recreation-Related Spending	4-13	First full paragraph, last sentence: Change "Study R-13 – *Projected Recreation Use*" to "Study R-12 – *Projected Recreation Use"*
Table 4.4-2	4-14	Change the "Recreation-Related" column header under DWR to "Other" and change the "Other" column header under DWR to "Recreation-Related"
5.1.5.2 – Facilities Operations and Maintenance Effects – Earnings	5-13	First sentence: Change "earning" to "earnings". Second sentence: Change "socials" to "social"
Appendix B – Table B-5	B-8	Change the TOTAL value in the column labeled "B" from $4.04 to $4.05; change the TOTAL value in the column labeled "E" from $0.81 to $0.83.
Appendix B – Table B-7	B-10	Change the Oroville MA value in the column labeled "B" from $0.76 to $0.72.
Appendix B – Table B-8	B-11	Change the Oroville MA value in the column labeled "F" from $6.40 to $6.10.
Appendix B – Table B-10	B-13	Change the Oroville MA value in the column labeled "F" from $8396 to $8.96; change the Chico MA value in the column labeled "C" from $5.15 to $5.14.
Appendix B – Table B-12	B-15	Change the Oroville MA value in the column labeled "L" from $0.31 to $0.34.
Appendix B – Table B-13	B-16	Change the Chico MA value in the column labeled "Average Spending Per Day" from $246.45 to $46.45; change the Paradise MA value in the column labeled "A" from $0.00 to $0.11.

2.19 STUDY R-19 – FISCAL IMPACTS

Table 2.19-1. Errata to R-19 – *Fiscal Impacts (FINAL),* dated May 2004.

Report Section	Page	Change
4.3.2.1 – Visitor-Driven Cost Translators (All Jurisdictions) – Fire Protection Costs	4-8	Second bullet: change "…by each fire department..." to "…by the City's fire department..."
4.3.2.1 – Visitor-Driven Cost Translators (All Jurisdictions) – Butte County Public Works Department	4-16	Bullet 12: change "Truet Road" to "Truex Road." Bulleted list: add "Stringtown Road" to the list.
4.3.2.1 – Visitor-Driven Cost Translators (All Jurisdictions) – Butte County Public Works Department	4-16	Insert at the end of the first paragraph that follows bulleted list: "However, for context, it is worth noting that of the estimated 144 miles of roads, less than 35 miles are likely to incur substantial use by recreational visitors from outside Butte County. Furthermore, less than half of the Project recreation visitor-days are attributable to non-Butte County residents."
4.3.2.2 – Indirect (Growth-Related) Cost Translators (City of Oroville and Butte County Only) – City of Oroville	4-19	Third paragraph on page, sentence 3: change "On the endogenous expenditure side of the budget, which accounts for 2 percent of total expenditures, several City departments…" to "On the exogenous expenditure side of the budget, several City departments…"
5.1.1.2 – Facilities Operations and Maintenance Effects	5-2	First sentence (bottom of page): Delete "for the Oroville Facilities"
Table 5.1-3	5-3	Delete "of recreation use" from the title of Table 5.1-3; Change the Net fiscal impact value (last row of Table) for County of Butte from "-$114.2" to "-$116.2"

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3.0 ACKNOWLEDGMENTS

DWR and the study report authors are grateful for the innumerable hours devoted by RSWG participants in the development of the Study Plans which guided the implementation of the 19 Recreation and Socioeconomics studies. Furthermore, the additional substantial efforts made by many individuals to review the study reports and provide valuable input and comments are appreciated. We are confident that these important and generous contributions have resulted in significantly-improved technical study products than would have been possible without this participation and dedication throughout the study process, from issue development to production of the Final Study Reports.