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Department of Natural Resource Recreation and Tourism*

A Study of Boater Recreation On Lake Berryessa, California

FINAL REPORT

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Executive Summary

A Study of Boater Recreation on Lake Berryessa

This report details the findings of a study conducted on Lake Berryessa during the summer of 1998. Lake Berryessa (Figure 1) is a man-made reservoir managed by the US Bureau of Reclamation (BOR). The purpose of this study was to gather information about the recreational boating use of Lake Berryessa and the perceptions and preferences of boaters concerning the natural, social, and managerial conditions on the lake. The information collected provides a baseline for evaluating existing boating conditions and targeting management actions to protect and improve the quality of recreation on the lake and to protect natural resources as demands for recreational use increase and the characteristics of that use change.

The measurements used in the study have been developed and tested on various wildland recreation areas over the past two decades. More recently these measurements have been modified and tested on more than a dozen US Army Corps of Engineers' (Corps) lakes. A combination of survey procedures was used to obtain visitor perceptions and document use patterns. Boating use levels were measured through observations conducted from a plane flying over the lake. Additional counts were conducted at all public launching facilities to estimate the contribution of those access points to overall boat traffic.

Information on boaters, their boating use of the lake, and their perceptions were obtained through on-site exit interviews at access areas. Interviews with public launch ramp users were conducted between June 6 and August 15, 1998. Other boaters who keep boats at private docks, resorts and marinas were contacted through a mail survey. A total sample of 653 Lake Berryessa boaters was obtained, with 325 exit interviews completed and 328 mail questionnaires returned through the course of the study.

Selected Findings

Description of Boaters and their Use of Lake Berryessa

Extent of Boaters' Experience. Many ramp users and resort/marina boaters at Lake Berryessa are ***seasoned boaters, reporting an average of 15 and 25 years of boating experience***, respectively. Most also have extensive experience boating at Lake Berryessa. The 95% of ramp users who had visited the lake before averaged 13 years of experience; resort/marina boaters averaged an even greater 17.5 years of experience at the lake.

Frequency of Use of Lake Berryessa and Other Lakes and Rivers. Lake Berryessa boaters tend to make very frequent use of the lake. *Public ramp users reported an average of 21 days of use last year, and resort/marina boaters reported nearly twice as much use, with an average of 40 days of use.* About 60% of both groups' visits were on weekends. A great majority of ramp users also boat on other lakes and rivers in the region, although they generally boat most often on Berryessa, while most resort/marina boaters do not boat anywhere else.

Length of Visits to Lake Berryessa. Most ramp users interviewed were at the lake for that day only while most resort/marina boaters visited for two or more days. Ramp users visiting for more than one day stayed an average of nearly four days while resort/marina boaters' multiple-day visits averaged about six days in length. Most of the resort/marina boaters and many of the ramp users visiting for more than one day stay in mobile homes on long-term lease sites. *Boat outings for both groups average about five and one-half hours in length.*

Place of Residence and Distance Traveled to Lake Berryessa. Most boaters using Lake Berryessa are from the region with about *three-quarters of ramp users and two-thirds of resort/marina boaters living within 75 miles* of the lake. However, approximately 21% live within 25 miles and can therefore be considered "local residents."

Type, Size and Horsepower of Boats Used. *Runabouts and ski boats dominate on the lake* with about one-half of the boaters in each group using those types of boats. However, *personal watercraft (PWC) (e.g., jet skis, SeaDoo's, etc.) and fishing boats were also common at the ramps*, comprising about 24% and 16%, respectively, of the boats used. *Pontoon boats are common at the resorts and marinas*, comprising about 20% of that groups' boats. Although average boat engine horsepower (HP) was about 180 HP for both groups, resort/marina boats had a considerably larger average boat length due to the much greater presence of pontoon boats and the presence of houseboats, which averaged 40 feet in length. Houseboats comprised six percent of those boats utilized by resort/marina boaters.

Boater Activities. Activities common to both groups include *pleasure cruising as well as swimming, relaxing and sunbathing* while the boat is stationary. Resort/marina boaters with more common multiple-day visits and larger boats place the most emphasis on these stationary-boat activities. About one-half of each group spent time water-skiing or engaging in other related water sports. Thirty to 40 percent of each group spent time fishing but it was more often the primary or only activity for ramp users who fished.

Boater Motivations. Ramp users place more emphasis on experiencing

the outdoors in an undisturbed natural setting while at the same time, reducing stress or tension and being with friends and family. Resort/marina boaters seek more opportunities to socialize with friends and family in the scenic outdoor setting that Lake Berryessa provides.

Boater Perceptions of and Preferences for Conditions

Favorite Locations on Lake Berryessa and Why. The majority of boaters (from 69 to 90%) were able to name one or more favorite locations on Lake Berryessa. Three areas were especially favored by boaters from both groups: the ***Narrows at the southeast arm of the lake; the Twin Bridges area (Pope & Putah Creek) at the northwest quarter; and the western shore of the main basin*** of the lake where most of the day-use parks and resorts/marinas are located. All boaters put a special emphasis on locations that offered ***opportunities to enjoy relative solitude and quiet and less boat traffic***. Favored locations were identified as having characteristics that enhance popular activities such as water-skiing, cruising, swimming, and relaxing in the boat.

Locations Boaters Avoid on Lake Berryessa and Why. About 60% of the boaters in both groups said they avoid at least one area of the lake. Interestingly, these are often the same locations mentioned as favorite places. They are avoided primarily due to the heavy boat traffic found on those parts of a lake. At Lake Berryessa, this is especially true of the ***Twin Bridges area***, which was avoided by 20% of the ramp users and 40% of the resort/marina boaters. Ramp users also frequently avoid the ***open water of the main basin***, primarily due to the wind, waves, and wakes that have a greater effect on them in their smaller boats. Resort/marina boaters mentioned several locations they avoid along the western shore. Both groups mentioned many non-specific areas, characterizing them as locations where heavy boat traffic and/or undesirable or unsafe behavior by other boaters keep them away. In general, resort/marina boaters are less affected by undesirable water conditions (rough water, numerous wakes) than ramp users are. Like most recreation areas, Lake Berryessa boaters demonstrate preferences for a diversity of settings.

Best and Least Liked Features of Lake Berryessa. Boaters in both groups mentioned ***good water quality, calm water, beautiful scenery, and lake-size*** as the most attractive features associated with the lake setting. The fact that the lake was close, convenient and familiar was also frequently mentioned. On the negative side, both groups gave indications that they believe social conditions have declined at the lake, with ***more undesirable boats and boating activity (e.g., too many jet skis) and more unsafe and discourteous boaters***. Ramp users in particular indicated unhappiness with increases in boat traffic and crowding. A moderate number of complaints surfaced from both groups about specific

lake resource conditions, such as the presence of afternoon winds causing rough, choppy water, extreme summer heat, and the general lack of beaches.

Comparison to Other Lakes in the Region. As mentioned previously, about one-quarter of the resort/marina boaters and over 80% of the ramp users also boat other places. Clear Lake, Lake Shasta, the Sacramento River Delta, and Lake Sonoma are among the most frequently visited sites. By a large margin, ***boaters choose Lake Berryessa over those other options for its closeness and convenience to their permanent or summer homes.*** Natural resource features such as good water quality and scenery were described as better at Lake Berryessa.

Changes Boaters Have Noticed at Lake Berryessa. More than two-thirds of the ramp users and nearly 90% of resort/marina boaters have noticed recent changes at the lake. Ramp users cited ***more positive than negative changes,*** while resort/marina boaters found positive and negative changes to be about equal. Uppermost among the positive changes noticed by both groups were a ***higher and/or more consistent water level*** followed by improvements to facilities and services. Resort/marina boaters also felt that ***lake patrolling and the regulation of boaters had improved.*** The most common negative changes cited by ramp users were the changes in policies and regulations, ramp fees, law enforcement as well as ***increased boat traffic and incompatible user types and behavior (especially personal watercraft).*** Resort/ marina boaters had similar observations regarding PWC but made fewer complaints about regulations, law enforcement and increased boat traffic. Frequent complaints were also made about the July “rap concert”, an unauthorized event occurring at Oak Shores.

Effects of Changes on the Use and Enjoyment of the Lake. For ramp users, ***positive effects (boating improved, more enjoyable)*** greatly outnumbered ***negative effects (boating less enjoyable).*** Less than 10% of the effects mentioned included spatial or temporal displacement (avoidance of busy areas or days and times of day). Only about 4% said they had altered their activities or use the lake less due to the negative changes they had witnessed. Positive and negative effects were more equal among resort/marina boaters. Along with their boating experience being improved and more enjoyable, a good number felt ***boating was safer*** due to more lake patrol by law enforcement authorities. Contradicting this was the most common negative effect listed that boating was less safe. In comparison with the ramp users, a higher number of resort/marina boaters claimed their boating was less enjoyable, or that they felt it necessary to ***avoid busy areas or days and times, or had changed their activities due to negative changes.***

Perceptions about Increased Development of Adjacent Lands. When

boaters were asked how they thought more shoreline and adjacent lands development might affect their enjoyment or use of the lake, about one-half felt there would be some affect and nearly 90% of the expected effects were negative. ***Ramp users fear negative effects on natural resource conditions, while resort/marina boaters expressed more concern about increases in boat traffic and more people at the lake.*** About 16% of ramp users and 10% of resort/marina boaters cited direct statements in opposition to further development. About 14-17% of each group made more neutral or positive comments about further development.

Changes Boaters Would Like to See at Lake Berryessa. Most boaters had at least one request for a change they would like to see at the lake. Respondents often made ***requests related to changes in management policies and regulations, especially for the control or banishment of personal watercraft from the lake.*** Also mentioned were the control of excessive alcohol consumption by boaters and bringing forth an end to, or at least controlling, future "rap concerts". Most of the ramp users' remaining requests were for various improvements to public ramps and facilities, resort and marina facilities and services, floating restrooms, and campgrounds. Over 20% of the resort/marina boaters' requests were for increased patrol and law enforcement, as were about 8% of ramp users' requests. About 9% of each group expressed a desire for increased limits on, zoning, or dispersal of boat traffic with such requests as "designate a jet ski only area" and "limit PWC".

Problems and Conflicts with Other Boaters on Lake Berryessa. When asked directly about conflicts they may have experienced, about 23% of ramp users and 38% of resort/marina boaters mentioned specific conflicts. The two groups mentioned similar instances ***of discourteous or unsafe behavior by boaters and other lake users.*** While the majority of resort/marina boaters expressed their dissatisfaction with the ***July "rap concert"*** and the resulting traffic that it caused, many ramp users expressed their dismay with ***boaters who don't use the launch ramps properly.*** About 23% of the ramp users' and 18% of the resort/marina boaters' comments singled out personal watercraft as being an additional cause of conflict. Ramp users identified specific conflict locations close to resorts and marinas and also frequently mentioned the Narrows region. Resort/marina boaters who specified the location of conflicts most often mentioned locations along the west side of the lake.

Boaters' Perceptions of Use Levels

Expectations for the Number of Boats on the Lake. Perceptions of the amount of boat traffic on the lake during the summer of 1998 differ between the two boater groups. Although both groups are characterized by boaters with

several years of experience with lake conditions, nearly 40% of ramp users said they *saw fewer boats than they expected* the day they were interviewed while less than 10% of resort/marina boaters gave a similar response. About 74% of the resort/marina boaters and 44% of the ramp users *reported seeing about as many boats as they expected* while about 16.5% of each group said they saw more than they expected. Staff/researcher observations of boat traffic seemed to indicate reduced boat traffic for a portion of the 1998 season, perhaps due to cool, rainy weather.

Preferences for the Number of Boats on the Lake. A similar contrast is apparent between the two groups regarding encounter preferences. About 24% of the resort/marina boaters and 46% of ramp users indicated they saw more boats than they wanted to their last time on the lake. Part of the reason for the difference in responses may be the greater proportion of resort/marina boaters responding in reference to a weekday, when boat traffic is typically much lighter. (Ramp users' visits are weighted more toward weekends and most exit interviews were conducted on weekend days.)

Estimation of Use Levels and Distribution of Boats

Two weekend and three weekday overflights were conducted over the entire lake to determine the number and distribution of boats. All were conducted in the afternoon. Considerable variability in the type and amount of recreational boating was observed. As would be expected, use was much higher on weekends than on weekdays, with counts ranging from 493 to 538 boats on weekends and 90 to 188 boats on weekdays.

About one-third of the boat traffic observed on the lake was in the Narrows. An additional one-quarter of the boat traffic occurred in the middle section of the lake where the majority of resorts, marinas and day-use areas, as well as Big Island and Small Island are located. Considerable boat traffic was also observed in the Spanish Flat area and the Twin Bridges area. Three-quarters of the boat traffic observed consisted of runabouts and ski-boats. Personal watercraft made up the second most observed boat type.

Suggestions for Using the Data

The survey data as a whole supports management actions to protect the conditions necessary for certain types of recreation experiences. The experiences boaters are seeking and the threats they perceive to those experiences have been defined. Based on input from participants in a recent workshop* held in California to discuss the Lake Berryessa study results, the data supports management actions aimed at:

- 1) Increasing and improving ***lower-density and dispersed camping opportunities*** in order to accommodate the variety of users at Lake Berryessa. Boat-in camping opportunities should be provided for the public at no charge in those areas that are designated as Class IV Semi-Primitive and Class III Dispersed Recreation. Boat-in camping is defined as an activity characteristic of these land use classifications in the Lake Berryessa RAMP (1993) Preferred Actions (#3,8,9,10,&12) but yet current Berryessa policy doesn't allow boat-in camping. Opportunities for boat-in camping would help disperse use and satisfy public demand for short-term usage of the lake. Areas where this should be considered include the Narrows, Spanish Flat, Big and Small Island, Pope and Putah Creek, and the North Shore. In Class III Dispersed Recreation Areas, improvements should also include access trails, sanitation facilities, garbage collection, visitor information signing, etc. to provide for the health and safety of the public and protection of resources.
- 2) ***Coordinating with law enforcement personnel*** (Napa County Sheriff, CA Fish and Game Warden, CA Highway Patrol, Coast Guard, Boat Patrol, etc.) to maintain a controlled presence and force compliance on rules and regulations in a consistent manner. Specific zoning and/or restrictions for water surface uses and activities to promote public health and safety, foster compatibility of recreational uses, and protect and enhance natural resources are also supported by the RAMP Preferred Actions (#17 &21).
- 3) Reducing boater conflicts by ***increasing boater education efforts and visitor information services***. RAMP Preferred Action #14 mentions an expansion of visitor information services which could include interpretive center facilities and activities, overlooks at appropriate locations, interpretive trails, interpretive displays in developed access points and concession areas, and additional signing.
- 4) ***Not designating another cove for exclusive use by professional water-ski club***. RAMP Preferred Action #18 states that the closure of coves or other areas for limited special uses (such as water skiing instruction or slalom courses) is prohibited unless such uses are not exclusive nor incompatible with other recreational activities.
- 5) ***Developing partnerships*** for more effective and efficient lake management and to protect and maintain water and visual resources by increasing coordination efforts between BOR, the concessionaires, and other government entities. This could involve the purchase of conservation easements, land acquisitions, and/or land exchanges to provide

recreational access and services and minimize impacts to adjoining lands. RAMP Preferred Actions #1&2 discuss the topic of land acquisition and land disposal.

- 6) Providing ***additional overnight/short-term lodging facilities*** (e.g., motels and hotels) at the resorts and marinas to accommodate the ramp users whom currently must stay at one of the undesirable campgrounds. These actions are supported by RAMP Preferred Actions #29&36.
- 7) Creating ***limits on boat speed, size and/or horsepower*** in order to reduce conflicts and increase boater safety. RAMP Preferred Action #17 says to establish and implement (after coordination with the Napa County Sheriffs Department) specific zoning and/or restrictions for water surface uses and activities to promote public health and safety, foster compatibility of recreational uses, and protect and enhance natural resources, including water supplies, wetlands, and riparian habitats. Furthermore, activities or areas subject to zoning restrictions could include, but are not limited to, jet skiing in Oak Shores, speed zones for specific areas, and establishment of boat traffic patterns on the lake surface.
- 8) ***Increasing public access*** to shoreline in concession-operated areas by limiting the use of permanent sites in exchange for more short-term use. RAMP Preferred Action #36 calls for additional short-term facilities (day use, camping, etc.) in designated shoreline locations currently occupied by long-term uses.

* A Lake Berryessa Boating Carrying Capacity Workshop was held in Davis, CA on March 18 & 19, 1999 to discuss the results of the 1998 Lake Berryessa Boater Recreation Study conducted by Colorado State University for the US Bureau of Reclamation. Call (707) 966-2111 for information.

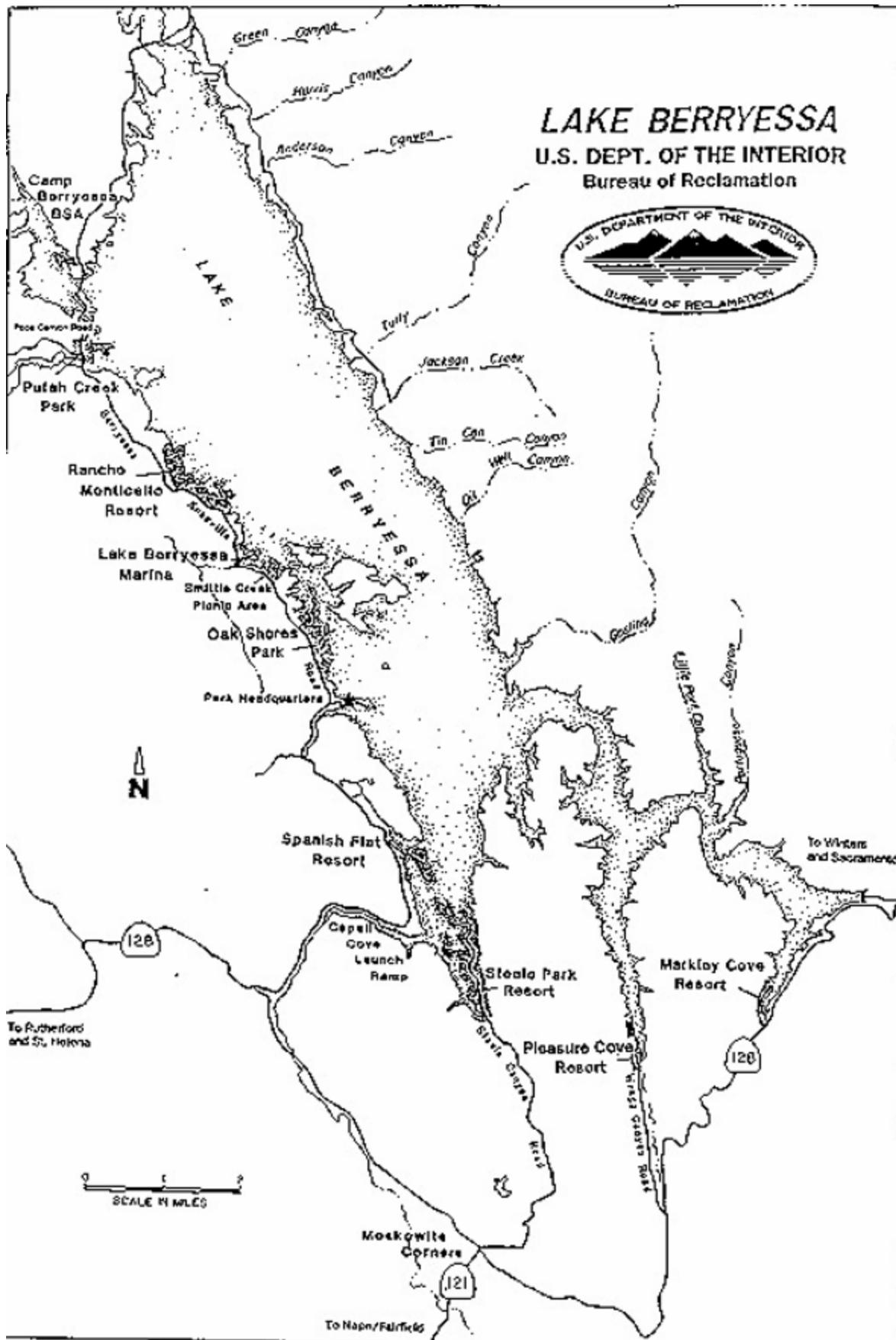


Figure 1.

I. Introduction

A. The Problem: Increasing Use, Insufficient Public Access, and Development Pressure at Lake Berryessa

Following a Public Use Plan (PUP) prepared for the US Bureau of Reclamation (BOR) by the National Park Service, Lake Berryessa became officially open for public use in 1959. The PUP included a General Development Plan to guide development according to (1) the capacities of the land and water to accommodate public use and (2) the recreation needs and desires of the people who would use the area. In 1958, Napa County entered into a Management Agreement with BOR to administer the development of federally owned lands at Lake Berryessa. Because of the county's limited resources and because a large majority of the public recreation use was by non-county residents, Napa County chose to rely on concessionaires to provide most of the recreation services and facilities. Under concession agreements, the following seven resorts were developed on 1,700 acres of land and water under the terms of the 1959 PUP: Lake Berryessa Marina, Putah Creek Park, Rancho Monticello, Spanish Flat, Pleasure Cove Resort, Markley Cove, and Steele Park.

In 1971, the United States General Accounting Office (GAO) completed a study of public recreation facilities at Lake Berryessa and found them not adequately developed. The study was a result of public concern that the lake had become inaccessible to the general public and virtually private in its administration. The GAO report found that all seven concessionaires had concentrated on the development of mobile home parks instead of the PUP's recommendations for campground and day-use areas. In general, the mobile home development had occurred on prime public access areas encumbering the shoreline with exclusive long-term uses. The development of these sites were not only on gentle sloping levels but also on steep hillsides creating massive road cuts and spills degrading the physical and visual environment and accelerating erosion.

In 1974, Napa County withdrew from the Management Agreement thus prompting the passage of the Reclamation Development Act of 1974 (PL 93-493) authorizing Reclamation to assume the management role of Lake Berryessa and further appropriating \$3 million for developments described in the Act. BOR then set about to better define recreation and land use objectives for the lake.

As authorized by Public Law 93-493, Reclamation developed the first non-resort, public day-use facilities at Oak Shores Park, and a no-fee boat launch ramp at Capell Cove. These improvements were immediately accepted by the

public; thus demonstrating the demand for short-term use facilities at the lake. Lake Berryessa now has three day-use facilities located on the west side of the lake, which are still insufficient to meet the recreation demand especially on summer weekends.

Lake Berryessa receives about 1.5 million annual visitors who mostly reside within the San Francisco and Sacramento metropolitan areas. An estimated 75% of the total visitation occurs from Memorial Day through Labor Day. Lake Berryessa, like many other Western lakes and reservoirs, is experiencing increased use which is projected to continue as the population of the region and the popularity of water-based recreation increase.

Lake managers recognize they must take advantage of the "lead time" prior to an expected surge of visitation and proposals for development like those that are occurring at other nearby lake communities. They hope to use this time to prepare for the expected increased use of the lake and pressure for more shoreline access and adjacent land development. Managers are preparing to address concession resort/marina lease renewals, increasing permit requests for docks or new marina facilities, and water-based recreation services (e.g., boat or personal watercraft rentals, water-ski events) that are occurring now and that they expect to occur in future years. They are also interested in preserving the quality and diversity of recreation opportunities the lake has historically provided while maintaining adequate levels of resource protection.

BOR personnel have the responsibility to consider the needs and preferences of the lake users in a fair and effective manner in order to strike a balance between private exclusive use and general public use. Having baseline information about the current perceptions and preferences of boaters on Lake Berryessa, as well as the current levels and type of use, will help to develop management objectives and actions pertinent to the Reservoir Area Management Plan (RAMP) for Lake Berryessa.

In 1998, the Bureau of Reclamation contracted with Colorado State University to conduct a boater recreation study that would fulfill the following objectives:

- 1) Describe the boaters using Lake Berryessa and their boating activity.
- 2) Document boaters' perceptions of and preferences for resource, social and managerial conditions on Lake Berryessa.
- 3) Measure and document the amount and character of recreational boating use occurring on Lake Berryessa during the primary boating season.

B. Study Site Description

Lake Berryessa is located in north central California approximately 90 miles west of Sacramento, CA. The lake is within two and one-half hour drive from the San Francisco Bay and Sacramento metropolitan areas and within one hour from the cities of Napa, Fairfield, and Davis. Lake Berryessa (Figure 1) was authorized as part of the US Bureau of Reclamation Solano Project in 1948. The Solano Project was authorized for flood control and to supply water for irrigation, municipal, and industrial uses. The primary project facility was the Monticello Dam, which was constructed to capture flows from the 576-mile Putah Creek watershed in 1957.

Lake Berryessa has a total storage capacity of 1.6 million acre-feet and is approximately 23 miles long and three miles wide, at the widest point. Lands owned in fee and withdrawn by BOR at Lake Berryessa total approximately 28,916 acres. Of this acreage, 19,328 acres comprise the water surface at full pool and 9,588 acres are in lands surrounding the water. A total of 8,135 acres of land is currently available for recreational use.

The lake is situated in the steep eastern foothills of the famed Napa Valley wine country and is rimmed with picturesque mountains studded with oak woodlands, stands of gray pine, and thickets of manzanita and chemise. The countryside around Berryessa remains largely rural and is utilized primarily for ranching and cattle grazing operations. Napa County has zoned most of the private land adjacent to the federal take-line as "AW" - Agricultural Watershed thus keeping the surrounding countryside open and relatively free from development. However, other smaller areas have been zoned as "PD" Planned Development, "CL" Commercial Limited, "RS: B-1" Residential Single, Building Sites, and "RC" Residential Country, such as Berryessa Pines and Berryessa Highlands, two small and limited residential subdivisions located near the lake but without direct lake access.

The lake is accessible to recreation boaters with boat launching ramps available for a fee at the seven concession-operated resorts and one no-fee launch ramp at Capell Cove. Most of the seven resorts provide rudimentary day-use and camping facilities, in addition to their long-term lease sites. While short-term users will utilize the resort facilities to capacity on occasion, many prefer to use Reclamation developed day-use areas or areas that are undeveloped. At the BOR managed Smittle Creek and Oak Shores Park day-use areas, there are lakeshore picnic sites with BBQ grills, water fountains, restrooms, walking trails, and vehicle parking. Demand for Reclamation developed day-use areas is extremely high as it is not uncommon to have all facilities full on most weekends with moderate to heavy use on weekdays during the peak recreation season.

C. Study Methods

The study population consisted of boaters accessing Lake Berryessa from the seven concession-managed resorts and Capell Cove launch ramp. For the purpose of sampling, the boaters were separated into two survey groups by their means of access to the lake: public launch ramp users and resort/marina boaters.

1. Public Ramp Users

Boaters using public launch ramps were interviewed after they had removed their boat from the water onto a boat trailer at the eight launch ramps located on the lake. To ensure representation of the full range of boaters using launch ramps, a stratified random sampling procedure was used in scheduling the exit interview periods. The days on which exit interviews would be conducted at the ramps were selected by numbering the 21 "peak days" (weekends and holidays) and the 50 weekdays available during the data collection period of June 6 to August 15, 1998. 24 weekend days and 24 weekdays on which interview periods would be scheduled were then randomly selected by drawing numbers from a random number table. The 24 weekend and 24 weekday interview periods were evenly divided (eight periods each) between morning (8:00 a.m. to 12:00 noon), afternoon (12:00 noon to 4:00 p.m.), and evening (4:00 p.m. to 8:00 p.m.) interview periods. After the date and time slot for each of the 48 exit interview periods were chosen, the ramp locations were chosen by assigning numbers to the eight launch ramps and drawing numbers from the random number table to make the selections.

A total of 325 exit interviews were conducted at the public launch ramps over the 48 four-hour exit interview periods, an average of almost seven interviews per period. For a full explanation of study methods please see Appendix A.

2. Resort/Marina Boaters

Resort/marina boaters were contacted through mail-back surveys. Letters signed by the Lake Berryessa Resource Manager requesting lists of resort/marina customers and long-term site holders with dock slips were sent to each resort/marina. A total of 978 usable names and addresses of resort/marina boaters were compiled for the final sample pool. 489 (50 percent) of those persons (every other name on the mailing lists) were sent mail-back surveys. Dillman's (1978) "Total Design Method" for mail surveys was used. The first questionnaires were mailed in mid-July with the expectation that most boaters intending to boat on Lake Berryessa in 1998 would have done so and could respond to the survey having had recent experience with boating conditions on

the lake. One week after the initial mailings, reminder postcards were sent out. After two weeks, a replacement questionnaire and letter were sent to non-respondents.

Good return rates were realized for the resort/marina boater population contacted through the mail-back surveys with an initial return rate of 71%. For a full explanation of study methods please see Appendix A.

NOTE: Some resort/marina boaters who keep their boat in dry storage access the lake via public launch ramps. However, these boaters were not interviewed at the launch ramps since they are considered to be “resort/marina boaters” and were to be sampled through the mail-back survey method. Furthermore, visitors who engage solely in land-based recreation activities (e.g., picnickers and sightseers) and other non-boaters (e.g., beach users or other non-boating swimmers) were not contacted since they were not considered in the scope of this study.

3. Aerial Boat Counts

A total of five aerial boat counts were completed for this study to document use levels and boat traffic distribution. Lake Berryessa park rangers have been conducting aerial boat counts for several years and already had count zones established for the lake. This demonstrated that it was possible for an airborne observer to see and mark on a map the locations and approximate number of boats. The person conducting the aerial boat observations sat next to the pilot (on the right-hand side of the plane) and marked on a map the approximate number, type, and location of boats on the lake.

The five flights occurred between 1:00 and 2:00 p.m. in order to focus the limited number of flights during peak boating use times. Counts were scheduled on both weekdays and weekends to allow comparison of use levels and boat traffic distribution. Additional information on flight routes, schedule, and procedures and the limitations of this method can be found in Appendix A.

4. Boat Trailer Counts

Counts of boat trailers at public launch ramps were conducted concurrent with exit interviews of boaters in order to estimate the amount of use the ramps receive. Interviewers counted the number of boat trailers present at the beginning, two hours into and at the end of each four-hour exit interview period. Following this schedule, a total of 144 counts were possible over the 48 interview periods (three trailer counts x 48 interview periods=144 counts). See Appendix A for further information.

D. Data Analysis

The boater survey sampling was structured by the existence of two different "access groups" (ramp users and resort/marina boaters). The survey data analysis continues this structure by tabulating and comparing survey responses from these two groups. Frequency distributions and means were computed for all response items. Open-ended questions were analyzed for content and the comments were grouped into salient categories and frequencies computed (Babbie, 1992). A detailed explanation of the survey data analysis can be found in Appendix B.

Specific management actions to meet future needs at Lake Berryessa were then deciphered from the data during a two-day Boating Carrying Capacity Workshop held in Davis, CA on March 18 and 19, 1999. For more information on the workshop look in Chapter III, Section E.

II. Results

This section of the report presents the results of the exit interviews conducted with boaters using public launch ramps, the mail-back survey of resort/marina boaters, and the aerial and boat trailer counts. An example of the survey questionnaire used in the exit interviews and mail-back surveys is presented in Appendix E and F.

The results of the boater survey are presented in three parts. First, the **descriptive data** are reviewed in section A. This is largely numeric data that tell "who the boaters are" in each survey group and that allow some comparison among groups. The ability to compare among groups is useful when managers seek to answer such questions as:

- "Are the long-term boaters coming from resorts and marinas different from the boaters launching from ramps?"
- "Are there differences among boater groups that might affect how the boaters perceive conditions on the lake?"
- "Are there differences that could influence which boater groups are most affected by certain changes?"

Secondly, in section B, a summary and comparison of responses to the open-ended questions is presented which reveal **boaters' perceptions and preferences regarding natural resource, social, and managerial conditions**. Finally, in section C, survey results are given for **boaters' perceptions regarding the amount of boat traffic on the lake**.

In Sections D and E, results are given for the **aerial boat counts** and the **boat trailer counts**, respectively.

A. Description of Boater Groups

The boater survey describes boaters through six types of descriptive information:

- a. Length of experience on the lake.

- b. Frequency of visits to the lake.
- c. Length of visits to the lake.
- d. Location of primary residence and distance traveled to the lake.
- e. Type, size, and horsepower of boat used.
- f. Activities participated in on the lake and the proportion of boaters' outings devoted to each activity.

Each of these pieces of information describes and differentiates the various boater populations that use the lake. However, descriptive information alone is not sufficient to make defensible management decisions. This type of information becomes most useful when it is linked to boaters' responses about their perceptions of and preferences for conditions given in sections B and C. The descriptive data in section A are used to connect boaters' statements about lake conditions to specific types or groups of boaters. Knowing such things as the length of boaters' experience at Lake Berryessa, how much they use the lake, the types of watercraft they use, and the water-based activities they participate in helps explain boaters' perceptions and preferences. Both types of information are necessary to reach an understanding of what boaters are looking for at Lake Berryessa and how those recreation opportunities may be improved.

1. Length of Experience on Lake Berryessa

Boaters were asked the total number of years they have been boating in general and at Lake Berryessa.

- Many ramp users and resort/marina boaters at Lake Berryessa are seasoned boaters, reporting an average of 15 and 25 years of total boating experience respectively (Table A1). Most also have extensive boating experience at Lake Berryessa.
- The 95% of ramp users who had visited the lake before averaged 13 years of experience. Resort/marina boaters averaged an even greater, 17.5 years of experience at the lake.
- Although each boating group contains many long-time visitors, nearly one-quarter of the resort/marina boaters and almost one-half of the ramp users were found to be relative newcomers (i.e., those with five or fewer years of experience on the lake). A majority of the ramp users have been coming to the lake 10 years or less although a significant proportion (29%)

have 16 or more years of experience at the lake. Similarly, more than one-half of the resort/marina boaters have been boating on the lake for more than 16 years with the largest percentage of these boaters (37%) having more than 20 years of boating experience on Lake Berryessa!

TABLE A1 LENGTH OF BOATING EXPERIENCE		
	Ramps (n = 325)	Resort/Marina (n = 328)
Overall Boating Experience (average years)	15	25
Boated at Lake Berryessa before (%)	95	100 ^a
First time visitors (%)	5	0
Boating Experience at Lake Berryessa (avg. years)	12.6 ^b	17.5
<= 5 years (%)	41	24
6 - 10 years (%)	18	14
11 - 15 years (%)	12	11
16 - 20 years (%)	9	14
> 20 years (%)	20	37
No data (%)	0	0
<p>a. Resort/Marina boaters were assumed to be repeat visitors. b. Repeat visitors only (first time visitors not included in calculation).</p>		

2. Frequency of Use of Lake Berryessa

Boaters were asked the approximate number of days they boated on Lake Berryessa in 1997 and how many of those days were weekend days or weekdays.

- Both of the boating groups reported more weekend than weekday use of the lake, with resort/marina boaters reporting the greatest proportion of weekday use (Table A2). From about 55 to about 65 percent of all visits were on weekend days.
- For the purpose of comparison, boaters can be divided into the following

four frequency of use categories, which are based on the number of days that boaters reported coming to Lake Berryessa in 1997:

- "Occasional" visitors.....1-10 days
- "Regular" visitors..... 11-30 days
- "Frequent" visitors..... 31-50 days
- "Very frequent" visitors>50 days

- Following this categorization, the greatest percentage of ramp users (51 percent) did not visit Lake Berryessa in 1997 or can be characterized as "occasional" visitors. Overall, ramp users were found to be a mix of occasional and more regular visitors, averaging about 21 days of use in 1997.
- In contrast, the greatest percentages of resort/marina boaters are "regular" users of the lake while more than one-third of these boaters are "frequent" or "very frequent" users. The resort/marina boaters averaged about 40 days of boating on the lake in 1997.

**TABLE A2
NUMBER OF DAYS SPENT AT LAKE BERRYESSA IN 1997**

	Ramps ^a (n = 325)	Resort/Marina ^b (n = 328)
Weekdays - 1997 (average)	7.9	16.8
Weekend days - 1997 (average)	13.1	22.9
Total days - 1997 (average)	20.9	40.3
<i>Days spent at Lake Berryessa in 1997</i>		
0 days (%)	8	2
1 - 10 days (%)	43	14
11 - 20 days (%)	17	16
21 - 30 days (%)	14	21
31 - 40 days (%)	5	12
41 - 50 days (%)	2	16

> 50 days (%)	10	6
No data (%)	1	1
a. Ramp user calculations include only those who boated on Lake Berryessa prior to 1998. b. Five resort/marina boaters were new to Lake Berryessa in 1998 and were unable to answer this question.		

3. Length of Visits to Lake Berryessa

Boaters were asked the number of days they were visiting Lake Berryessa during their last visit. Ramp users were also asked what time they got on the water the day of the interview while resort/marina boaters were asked to report when they had departed and returned to their dock, marina slip, etc. during their last boat outing. In both cases, the number of hours refers to time spent on the lake during their last visit.

- Most ramp users interviewed were at the lake for that day only while most resort/marina boaters visited for two or more days (Table A3).
- Ramp users visiting for more than one day stayed an average of nearly four days while resort/marina boaters' multiple-day visits averaged about a week in length.

**TABLE A3
LENGTH OF BOATERS MOST RECENT VISIT TO LAKE BERRYESSA**

	Ramps (n = 325)	Resort/Marina (n = 328)
Visiting Lake Berryessa for one day only (%)	68	24
Length of last visit to Lake Berryessa (avg. days)*	3.6	5.8
Number of hours on lake last visit (average)	5.6	5.5
<= 2.0 hours (%)	3	6
2.1 - 4.0 hours (%)	17	24
4.1 - 6.0 hours (%)	30	35
6.1 - 8.0 hours (%)	27	11
8.1 - 10.0 hours (%)	10	8
> 10.0 hours (%)	3	5

No data (%)	10	11
*Calculation includes only those boaters staying at Lake Berryessa for at least two days or more.		

- The duration of boater outings at Lake Berryessa was fairly consistent among ramp users and resort/marina boaters. Among both groups, the average amount of time boaters spent on the lake during their last visit averaged about 5.5 hours. About 60 percent of resort/marina boaters' visits were between two and six hours long while about 60% of ramp users' visits were between four and eight hours long.
- There is little difference between the two groups regarding the amount of time spent on the lake. However, resort/marina boaters engaged in shorter boat outings (less than four hours) than ramp users.

4. Where Boaters Stay at Lake Berryessa

Boaters who were staying at Lake Berryessa more than one day were asked where they were staying while visiting the lake.

- Most of the resort/marina boaters and many of the ramp users visiting for more than one day stayed in mobile homes that are located on long-term lease sites (Table A4).
- A large percentage of ramp users also stay at one of the concession-managed campgrounds located on the lake.

**TABLE A4
LOCATION WHERE BOATER STAYED DURING LAST VISIT TO LAKE
BERRYESSA^a**

	Ramps (n=325)	Resort/Marina (n=328)
Type of Lodging		
Campground (e.g., tent, RV)	41%	8%
Long-term site (e.g., trailer)	43%	79%
Resort lodging/motel	7%	3%
Stay on boat	9%	10%

^aCalculation includes only those boaters staying at Lake Berryessa for at least two days or more.

- About 10% of both groups spend the night on their boats either out on the lake or while secured at a berth or slip.

5. State of Residence and Distance Traveled to Lake Berryessa

Boaters were asked the location of their residence and how far that residence is from the point where they access the lake.

- All of the ramp users and most of the resort/marina boaters reported that they reside in California. Most of the boaters using Lake Berryessa are from the nearby region with about three-quarters of ramp users and two-thirds of resort/marina boaters living within 75 miles of the lake (Table A5).
- However, only a minority of each group could be considered “local” residents since only about 20% live within 25 miles. Most of the boaters in both groups reported living in Vacaville, Napa, or Fairfield. The average distance traveled to Lake Berryessa by both groups is about 60 miles.

**TABLE A5
DISTANCE OF LAKE BERRYESSA ACCESS POINT FROM HOME**

	Ramps (n = 325)	Resort/Marina (n = 328)
Distance from home (average)	57.8 miles	61.3 miles
<= 10 miles (%)	2	9
11 - 25 miles (%)	19	9
26 - 50 miles (%)	31	22
51 - 75 miles (%)	21	17
76 - 100 miles (%)	18	20
> 100 miles (%)	8	8
No data (%)	1	15

6. Type, Size, and Horsepower of Boats Used on Lake Berryessa

Boaters were asked the type of boat or boats they were using their last day

out on the lake (for resort/marina boaters) or on the day of the exit interview (for the ramp users). They were also asked for the length of their boat in feet and the boat engine size in terms of horsepower rating.

- Throughout this study, boat types are classified based on the following criteria:
 - **Houseboat:** Any vessel that currently has a houseboat permit with the Bureau of Reclamation. All other large vessels similar in size and shape are classified as Pontoon Boats.
 - **Pontoon Boat:** Any pontoon or hulled vessel with covered flat deck including patio and deck boats.
 - **Fishing Boat:** Those vessels designed especially for fishing (e.g., Bass Boats).
 - **Personal Watercraft:** All personal watercraft (e.g., Jet Ski, Ski-Doo, Bombadier, etc.)
 - **Sailboat:** All vessels with the capacity to be under sail (e.g., catamarans, sailboards, etc.)
 - **Ski Boat:** Those vessels designed especially for ski purposes (e.g., Ski Nautique, Sanger, MasterCraft, etc.) with inboard motors.
 - **Runabout/speedboat:** Any multi-purpose recreational vessel of any size which does not fit into any one of the other categories, including aluminum outboards, fiberglass, etc.
 - **Cabin cruiser:** Any large vessel designed for overnight use with the presence of a cabin or "cutty-cabin" below the main deck.
 - **Rowboat/canoe:** Any non-motorized vessel excluding sailboats.
- At Lake Berryessa the "runabout" category encompasses a wide range of boat sizes and power ratings. Although the smaller to mid-range boats (16-20 feet long and 150-250 hp) are more common, many larger and more powerful boats (often referred to as "cigarette boats," "low-profile boats," or "muscle boats") are also present at the ramps, and

resorts/marinas. These larger boats were often 20 to 25 feet long and several had power ratings over 300 horsepower. The largest boat of this type identified during the survey was 28 feet long and 750 hp and was kept at a resort.

- Runabouts and ski boats dominate the lake with about half the boaters in each group using these types of boats (Table A6). However, personal watercraft and fishing boats were also common at the ramps, comprising about 24% and 16%, respectively, of the boats used.
- Pontoon boats are more common at the resorts and marinas, comprising about 20% of the reported boat types.
- Although average horsepower was about 180 for both groups, resort/marina boaters had a considerably larger average length due to the much greater presence of pontoon boats and houseboats, which averaged 24 ft. and 40 ft. in length, respectively.
- Fishing boats were not a large segment of the boats used on Lake Berryessa. They comprised about 16% of ramp users' boats and only 5% of resort/marina boats.

**TABLE A6
BOAT TYPES, SIZES, AND HORSEPOWER**

	Ramps ^a (n = 325)	Resort/Marina ^b (n = 328)
Average length of boats	16.7 ft.	21.5 ft.
Average horsepower of boats	177 hp	180 hp
Runabout/speed boat/ski boat (%)	52	49
Fishing boat (%)	16	5
Personal watercraft (%)	24	9
Sailboat/Sailboard (%)	1	2

Pontoon boat (%)	1	20
Cabin cruiser (%)	5	8
Rowboat/canoe (%)	0.5	0.5
Houseboat (%)	0	6
Other types (%)	0.5	0.5
a. 16 of the 325 ramp users surveyed had more than one boat (all were pwc's). b. 76 of the 328 resort/marina boaters reported having more than one boat.		

7. Boating Activities on Lake Berryessa

All boating groups were asked to report the activities and an estimated percentage of their time that they spent on those activities, during their most recent boat outing at Lake Berryessa.

- Boaters in both groups usually participate in several activities while out on the lake, such as pleasure cruising along with activities conducted while the boat is stationary, such as swimming, relaxing, and sunning (Table A7). Swimming from the boat was the activity participated in by the highest percentage of resort/marina boaters (67%), followed in popularity by relaxing/sunning in boat (65%) and cruising (63%).
- The more vigorous activities of water-skiing and similar water sports were participated in by about 50 percent of ramp users and resort/marina boaters. This activity represented the highest percentage of participation among ramp users at 54%.

TABLE A7 PARTICIPATION IN BOATING ACTIVITIES		
PERCENT PARTICIPATION IN:	Ramps (n = 325)	Resort/Marina (n = 328)
Cruising	48%	63%
Swimming from boat	49	67
Relaxing/sunning in boat	42	65
Water-skiing/water-sports	54	48

Shoreline picnicking/sunning	19	21
Fishing	31	39
Other activities (fixing boat, sailing, eating, etc.)	2	7
No data	0	0

- Boaters participated less in fishing at Lake Berryessa than on the previously discussed pleasure boating activities. About 30-40% of each group participated in fishing.
- Shoreline activities such as picnicking and sunbathing were also a relatively minor activity among both groups. About 20% of each group reported participation in shoreline activities.
- Boaters were given the opportunity to list activities not specifically mentioned on the questionnaires. The two to seven percent who participated in these “other” activities most often mentioned fixing their boat, sailing, and visiting restaurants.

8. Time Spent on Boating Activities at Lake Berryessa

All boating groups were asked to report the activities and an estimated percentage of their time that they spent on those activities, during their most recent boat outing at Lake Berryessa.

- Table A7 illustrated that water-skiing and similar sports were the number one activity at Lake Berryessa, in terms of participation, for ramp users. Table A8 reveals that water-skiing also occupied a substantial portion (almost half) of ramp users’ time. In comparison, swimming from the boat was the number one activity, in terms of participation, for resort/marina boaters but it generally occupied less than one-quarter of their time.
- The popularity of water-skiing varied little among the boater groups. Nearly half the ramp users and resort/marina boaters water-skied and on average, it consumed from over one-third to about one-half of their time.

TABLE A8 TIME SPENT ON BOATING ACTIVITIES		
	Ramps	Resort/Marina

PERCENTAGE OF TIME SPENT ON:	(n = 325)	(n = 328)
Cruising	42%	31%
Swimming from boat	29	23
Relaxing/sunning in boat	28	30
Water-skiing/water-sports	47	36
Shoreline picnicking/sunning	27	25
Fishing	57	44
Other activities (fixing boat, sailing, eating, etc.)	56	6

- The activity of fishing is a good example of why participation rates alone, are not sufficient to describe the relative importance of activities. Many of the 31 % of ramps users and 39 % of resort/marina boaters who did fish spent a large percentage of their time (about 50 % on average) on that activity.
- The typical activity pattern for ramp users at Lake Berryessa is to spend from 40-60 percent of the boat outing (perhaps two to four hours) on a primary activity, typically water-skiing, fishing, or cruising, with the remaining time divided between two or three secondary activities like swimming, relaxing in boat or picnicking on shore.
- The typical activity pattern for resort/marina boaters at Lake Berryessa is to spend about two to three hours on a primary activity like water-skiing and/or fishing with the rest of the boat outing devoted to secondary activities such as swimming, picnicking on shore, cruising, or relaxing in boat.

9. Boaters' Motivations for Coming to Lake Berryessa

Boaters were asked to rate the importance of 13 reasons for visiting Lake Berryessa on a scale from 1 to 5 with 1 being "not at all important" and 5 being "extremely important".

TABLE A9 BOATERS' MOTIVATIONS FOR COMING TO LAKE BERRYESSA^a		
REPORTED MEAN SCORES OF:	Ramp ^b (n = 325)	Resort/Marina ^b (n = 328)

To do something with the family	4.1	4.4
To be with friends	4.0	3.8
To be with people of similar values	3.5	3.3
To experience new and different things	3.2	2.7
To develop my skills and abilities	3.5	2.6
To experience excitement	4.0	2.7
To be outdoors	4.6	4.3
To view the scenery	4.3	4.2
To be close to nature	4.1	3.9
To think about personal values	3.0	3.0
To release or reduce built-up tensions	4.1	3.7
To get away from other people	3.5	3.2
To experience solitude/quiet	3.3	3.5
Gave no response for motivations (%)	<1	<5
a. Motivation statements were designed from previous research on Recreation Experience Preference (REP) scales (Driver, 1977,1983). b. 1=not at all important; 2=slightly important; 3=moderately important; 4=very important; 5=extremely important		

- Ramp users gave high scores for the motives “to be outdoors”, “to view the scenery”, “to be close to nature”, “to release or reduce built-up tensions”, “to do something with the family” and “to be with friends” (Table A9). Ramp users rated these motivations for pursuing recreation activities at Lake Berryessa as very important to extremely important.
- Resort/marina boaters gave high scores for the motives “to do something with the family”, “to be outdoors”, and “to view the scenery”. Resort/marina boaters rated these motivations for pursuing recreation activities at Lake Berryessa as very important to extremely important.

B. Boater Perceptions of and Preferences for Conditions: An Analysis of Responses to Open-Ended Questions

Boaters' responses to each of the open-ended survey questions about their perceptions of current conditions and preferences for future conditions may give us information about one or more of the following:

- a.* The settings or conditions that are desired for the experience(s) sought by different boater groups and by boaters participating in different activities.
- b.* The current status of these settings or conditions.
- c.* Changes in these conditions that boaters are aware of and the effect of those changes on their use or enjoyment of the lake.

Understanding the recreation resource requires this understanding of what draws boaters to the lake and what attributes of the setting (conditions) are essential to providing quality recreation experiences for the diverse range of boaters using the lake. Boater survey questions about perceptions of and preferences for conditions include the following:

- a.* Favorite and avoided locations (and why they are favored or avoided).
- b.* Favorite and least favorite features of Lake Berryessa.
- c.* Other lakes or rivers used (and why they choose Lake Berryessa).
- d.* Changes noticed and effects of those changes on recreation.
- e.* Changes desired.
- f.* Problems and conflicts with other boaters.

Explanatory Notes on Tables of Categorized Responses to Open-Ended Questions

The tables in this section of the report summarize the responses to the open-ended questions elicited from both of the boater groups surveyed. ***Except where noted otherwise, the figures in the tables are the percentage of responses given by each survey group that fall into the response categories listed on the left side of the table.*** They are intended to facilitate direct comparison of perceptions and preferences between the groups.

To make this comparison possible, the same survey response categories were used for the groups' responses to each question. There was enough similarity in responses to make this a meaningful way to present this complex data, although there are a few categories for which there were no or only few responses. A category was preserved if a significant number of responses fell into that category from at least one group or if the category of responses was judged to be of enough management interest to be worth separating from the "other" category. An effort was made to limit the number of responses left to the "other" category.

The response categories with the highest percentage of each boater groups' responses are highlighted (shaded) in each table. Detailed lists of the specific open-ended responses can be found in

1. Boaters' Favorite Locations on Lake Berryessa

Boaters were asked to name or describe their favorite place(s) to go on Lake Berryessa.

- Sixty-nine percent of ramp users and 90 percent of resort/marina boaters were able to identify at least one favorite location (Table B1).

TABLE B1 FAVORITE LOCATIONS		
	Ramps (n = 325)	Resort/Marina (n = 328)
Have favorite location (%)	69	90
Narrows	36%	26%
Twin Bridges (Pope Creek & Putah Creek)	13	9
Western shore (USBR headquarters to Putah Creek Resort)	13	29
Spanish Flat area	11	7
Skiers Cove	9	5
Backwater Creeks (Pope and Putah)	5	9
Eastern shore	4	3
Northern shore	3	7
Non-specific areas	6	5

- Three areas were especially favored by boaters from both groups: (1) the **Narrows** at the southeast arm of the lake, (2) the **western shore** of the main basin of the lake where most of the lakeshore parks and resort/marinas are located, and (3) the **Twin Bridges area** at the northwest quarter of the lake.
- Favorite Narrows locations most frequently mentioned include the **Dam, Pleasure Cove, Markley Cove, Haines Cove, and Portuguese Canyon**. The favorite areas on the western shore include **Oak Shores Park, Smittle**

Creek, and the coves surrounding **Big Island and Little Island.**

2. Attributes of Favorite Locations

- Both boater groups frequently characterized their favorite locations as having characteristics and **conditions beneficial to popular recreation activities** such as water-skiing, swimming, and cruising (activities best enjoyed in sheltered areas away from heavy moving boat traffic and rough water) (Table B2).

TABLE B2 ATTRIBUTES OF FAVORITE LOCATIONS		
	Ramps (n = 325)	Resort/Marina (n = 328)
Solitude; Quiet; Fewer boats	17%	26%
Water Quality; Other Water Attributes	3	2
Close to Home/Convenient/Familiar	6	11
Scenery; Other Natural Features	8	8
Good Conditions for Recreation Activities	37	27
Good Beaches	7	3
See Friends/Family; Social Opportunities	8	6
Good Facilities/Services	4	7
Good Fishing	9	10
Other Reasons	1	0

- Resort/marina boaters and ramp users, to a lesser degree, put a special emphasis on locations that offered opportunities to enjoy relative **solitude and quiet and less boat traffic.**

3. Locations Boaters Avoid on Lake Berryessa

Boaters were also asked if they are any parts of Lake Berryessa that they deliberately avoid.

- Approximately 60 percent of the boaters in both groups stated they avoid at least one area of Lake Berryessa (Table B3). As with favorite locations, boaters mentioned scores of specific locations as places they

avoid. Many respondents gave more than one avoided location.

**TABLE B3
AVOIDED LOCATIONS**

	Ramps (n = 325)	Resort/Marina (n = 328)
Avoided a Location (%)	60	60
Main Basin; Open Water; Middle of Lake	30%	5%
Twin Bridges (Pope Creek & Putah Creek)	20	40
Spanish Flat area	12	8
Narrows	8	11
Western shore	5	15
Skiers Cove	3	0
Northern shore	2	2
Eastern shore	1	2
Non-specific area	19	17

- 20% of the ramp users and 40% of the resort/marina boaters avoid the **Twin Bridges area** (Pope Creek and Putah Creek). A majority of the ramp users also frequently avoid the **open water of the main basin**, primarily due to the wind, waves, and wakes that have a greater effect on them in their smaller boats. Resort/marina boaters mentioned several locations they avoid along the **western shore**. Both groups mentioned many **non-specific areas** (e.g., “crowded areas”) they keep away from.

4. Attributes of Avoided Locations

- Most of the reasons boaters avoided certain areas were related to **heavy boat traffic, undesirable boating behavior, and undesirable water conditions** (Table B4).
- The greatest number of reasons given by resort/marina boaters complained specifically about **too many boats** while the greatest number of reasons given by ramp users centered on the **water conditions**. **Rough/choppy water** makes cruising less comfortable and water-skiing difficult.

- The category of "Undesirable Behavior; Unsafe Boating" commonly included responses such as **"reckless boaters and jet skiers," "dangerous personal watercraft," "risk to personal safety"** and **"lots of drinking"**. These data suggest that, in high-density boating conditions, such problems are compounded and safety concerns frequently cause boaters to avoid certain areas.

TABLE B4 ATTRIBUTES OF AVOIDED LOCATIONS		
	Ramps (n = 325)	Resort/Marina (n = 328)
Too Many Boats; Too Much Traffic	25%	35%
Undesirable Water Conditions	33	12
Incompatible Boat Types or Activities	14	19
Poor Fishing	2	0
Undesirable Behavior; Unsafe Boating	19	32
Insufficient Facilities/Services	2	0
Other Attributes of Avoided Locations	5	2

- Approximately 15 to 20 percent of both groups' reasons for avoiding an area were centered on **incompatible boat types or activities**. Many of the responses in this category included complaints about **"too many personal watercraft," "water-skiers and jet skiers,"** and **"rap concert"**.
- **NOTE: The reference to "rap concert" or "July rap concert" will appear frequently throughout this report. In actuality, there was no real concert with singers, stages, loud speakers, etc. However, an unauthorized gathering of over 5,000 people did occur at Lake Berryessa in July of 1998 thus causing extreme traffic problems and other challenges.**

5. Features Boaters Like Best About Lake Berryessa

Boaters were asked what they like best about Lake Berryessa. Lake users' opinions of the best features of the lake may be similar to the descriptions they give of their favorite locations. However, asking about the "best features" provides information about the entire lake (and the recreation opportunities there) as a whole, while asking about favorite locations provides information about conditions at specific places on the lake. Many boaters did not specify a

favorite location but nearly all mentioned at least one "best" feature of Lake Berryessa.

- Almost all of the ramp and resort/marina were able to name at least one feature they like best about the lake (Table B5).

TABLE B5 FEATURES BOATERS LIKE BEST ABOUT LAKE BERRYESSA		
	Ramps (n = 325)	Resort/Marina (n = 328)
Gave a response	99%	95%
Water Quality; Calm Water; Other Water Attributes	29%	24%
Scenery; Wildlife; Other Natural Features	22	24
Close; Convenient; Familiar	21	19
Quiet; Relaxing; Peaceful; Low Density Recreation	6	9.5
General Enjoyment; Good for Chosen Activity	8	7
Good Facilities/Services	6	5
Family and Friends; Social Opportunities	3	4
Good Fishing	5	7
Other Features	0	0.5

- Boaters in both groups highlighted natural resource features such as **good water quality, calm water, warm water, beautiful scenery**, and the **size of the lake** as the most attractive features of the lake. The **closeness to their homes**, and the associated **convenience and familiarity** of the lake, were also mentioned often by both groups.

6. Features Boaters Like Least About Lake Berryessa

Boaters were also asked what they least like about Lake Berryessa. As with the "like best" responses, the answers differ from reasons to avoid specific places. The "like least" responses generally refer to the entire lake and the recreation opportunities there instead of particular locations.

- Slightly fewer respondents were able to name at least one feature they "like least" than were able to name features they "like best" (Table B6). However, about 85 percent of group mentioned at least one unfavorable

attribute. Boaters' frequent use of the lake and many years of experience on Lake Berryessa may account for the especially high percentage with complaints.

- Both groups gave indications that they believe social conditions have declined at the lake, with **more undesirable boats and boating activity** and **more unsafe and discourteous boaters**.

TABLE B6 FEATURES BOATERS LIKE LEAST ABOUT LAKE BERRYESSA		
	Ramps (n = 325)	Resort/Marina (n = 328)
Gave a response	86%	84%
Increased Boat Traffic; More Crowded	22%	14%
Incompatible Boat Types or Activities	18	22
Undesirable Natural Features or Water Conditions	16	15
Insufficient Facilities/Services	14	7
More Unsafe/Inexperienced/Discourteous Boaters	10	16
Policy/Regulations/Rules; Law Enforcement	8	11
Decreased Natural Resource Quality	3	1
Undesirable Behavior/Events	2	9
Water Hazards	2	0
Other "Least Liked" Attributes	5	5

- Ramp users in particular indicated unhappiness with a perceived **increase in boat traffic** and **crowding** with complaints about **incompatible boat types** (e.g., jet skis, too many jet skis) being the next most frequent response.
- While some resort/marina boaters also felt the least favorable feature of Lake Berryessa is **overcrowding, boater behavior** complaints and complaints targeted at **incompatible boat types** (especially pwc) were more prominent. Typical responses from these boaters include **"too many jet skis,"** and **"noisy boats and jet skis"**. Resort/marina boaters in particular had many complaints about the **behavior of personal watercraft operators**

citing their careless and reckless operation, lack of courtesy to other boaters, and lack of respect for boating regulations.

- A moderate number of complaints surfaced from both groups about **undesirable natural features or water conditions**, such as the presence of afternoon winds causing rough, choppy water, extreme summer heat, and the general lack of beaches.
- Ramp users also expressed more dissatisfaction with the facilities and services at the lake citing such discrepancies as **not enough public launch ramps with adequate parking** and **poor camping conditions**.

7. Other Lakes and Rivers Used by Lake Berryessa Boaters

Boaters were asked if they use other lakes to carry out boating activities. Knowing the other lakes and rivers boaters choose to visit indicates the range of opportunities for water-based recreation available in the region.

- Most of the lakes in northern California were mentioned as alternate boating destinations. A total of 81 lakes/rivers were mentioned by ramp users and 43 by resort/marina boaters. Most of the boaters whose boat is kept at Lake Berryessa (i.e., resort and marina boaters) do not use any other lakes or rivers. Only 27% of resort/marina boaters listed another lake that they use (Table B7).

TABLE B7 OTHER LAKES USED BY LAKE BERRYESSA BOATERS		
	Ramps (n = 325)	Resort/Marina (n = 328)
Boat at other lakes	81%	27%
Days spent on other lakes in 1997 (average) ^a	14	10
Other lakes visited by Lake Berryessa boaters ^b		
Delta	10%	5%
Lake Shasta	9	10
Clear Lake	7	13
Lake Sonoma	7	6

Folsom Lake	5	5
Lake Don Pedro	5	3
Lake Tahoe	4	10
a. Calculation includes only those boaters who boat at other lakes. b. Lakes not mentioned by at least five percent of one group are not included in the table.		

- More than three-fourths of the ramp users reported they boat at lakes other than Lake Berryessa. The **San Francisco Bay Delta** was the most often mentioned alternate by ramp users with about 10% of them boating there.

8. Why Boaters Come to Lake Berryessa

Boaters were also asked why they come to Lake Berryessa instead of one of the other lakes in the region.

- **Proximity** of the launch site to their homes and **familiarity** with the lake were the primary reasons both groups gave for choosing to come to Lake Berryessa (Table B8). Water qualities such as **cleaner water** or **warmer water** and the fact that Lake Berryessa is a **bigger lake** than most alternates were also frequently mentioned.

**TABLE B8
REASONS FOR CHOOSING TO COME TO LAKE BERRYESSA**

	Ramps (n = 325)	Resort/Marina (n = 328)
Gave a reason for coming to Lake Berryessa	83%	88%
Close; Convenient; Familiar	52%	70%
High Water Quality; Other Natural Features	11	14
Friends; Family; Social Opportunities	8	2
Less Crowded; Quiet; Peaceful	2	2
New; Change of Pace	7	0
Good for Chosen Activity	2	1

Good Fishing	6	1
Facilities/Services Available	3	4
Special Events	1	0
Like Lake Berryessa Better; Favorite Lake	7	6
Other Reasons for Choosing Lake Berryessa	1	0

9. Changes Boaters Have Noticed on Lake Berryessa

Boaters were asked if they have noticed any positive or negative changes at Lake Berryessa in the last five years (or since they have been coming).

- More than two-thirds of the ramp users interviewed and nearly 90% of resort/marina boaters have noticed changes occurring on Lake Berryessa in the last five years (or since they have been boating on the lake, if they have been coming less than five years) (Table B9).
- Ramp users cited more positive than negative changes, while positive and negative changes were about equal among resort/marina boaters. Uppermost among the positive changes noticed by both groups were a **higher and/or more constant water level** and **improvements to facilities and services**. Resort/marina boaters also felt that **patrol and regulation** of boaters had improved.

TABLE B9 CHANGES BOATERS HAVE NOTICED AT LAKE BERRYESSA		
	Ramps (n = 325)	Resort/Marina (n = 328)
Noticed at least one change (positive and/or negative)	68%	88%
Noticed at least one positive change	78%	75%
<i>Positive Changes on Managerial/Facility Conditions</i>		
More Regulation/Patrol; Improved Policies	9%	20%
More/Improved Facilities or Services	26	26
<i>Positive Changes in Natural Resource Conditions</i>		
Water Level Up/More Constant	52	42
Water Quality Good/Improved	8	9

Other Positive Changes	4	3
Noticed at least one negative change	37%	73%
Negative Changes in Social Conditions		
More Boats/Boat Traffic/People	24	9
More Undesirable Boats/Activities (e.g. pwc)	22	27
More Undesirable Behavior/Events (e.g. July rap concert)	0	20
More Unsafe Boating/Inexperienced Boaters	11	16
Negative Changes in Managerial/Facility Conditions		
Policies/Regulations/Fees; Law Enforcement	30	16
Facility Decline/Insufficient Facilities and Services	3	9
Negative Changes in Natural Resource Conditions		
Water Quality Decline	5	2
Other Negative Changes	5	1

- Contradicting this, ramp users' most common negative comments regarded **policies, regulations, and law enforcement**. (The increase in launch fees at the resorts and marinas topped this category.) At the same time, these boaters made numerous complaints about **increased boat traffic** and **more undesirable boating activity** (especially personal watercraft).
- Resort/marina boaters had similar observations about **too many pwc** but made fewer complaints about regulations and enforcement and increased boat traffic. Frequent mention was also made of the **July "rap concert"**, an unauthorized event held at Oak Shores Park in recent years.

10. Effects of Changes Noticed on Enjoyment and Use of Lake Berryessa

The perceived changes summarized in the previous section may have positive or negative effects on boaters' use of the lake. Boaters were asked if these perceived changes have affected their enjoyment or use of Lake Berryessa and if so, in what way(s)?

- More than one-half to about three-quarters of the boaters who noticed changes on Lake Berryessa mentioned an effect of those changes on their

enjoyment or use of the lake (Table B10).

- Over three-fourths of the ramp users said that the changes they have noticed had positive effects resulting in **more enjoyable and safer boating** and causing them to **boat more often**. In contrast, only about one-third of the resort/marina boaters felt the changes they have noticed had positive effects.
- Only 12% of ramp users but almost 40 percent of the resort/marina boaters reported that the changes they noticed made their lake use **less enjoyable** and/or **less safe**. The **July “rap concert”** and the increase in **noisy and dangerous PWC** were especially annoying to resort/marina boaters.
- Ramp users expressed the same concerns about personal watercraft with statement like “not as safe with PWC’s,” “jet skis make me nervous,” and “getting more dangerous”. As a result, some lake users especially resort/marina boaters reported that they are **avoiding busy days, times, and areas** or are **using the lake less**.

TABLE B10 EFFECTS OF CHANGES NOTICED AT LAKE BERRYESSA		
	Ramps (n = 325)	Resort/Marina (n = 328)
Mentioned an Effect of Change(s) Noticed	56%	72%
Positive Effects		
Lake Use More Enjoyable/Safer; Boat More	64%	34%
Facilities and Services Improved	0	5
Better Lake Resource Conditions	9	4
Fishing Improved	3	0
Other Positive Effects of Changes	0	0.5
Negative Effects		
Lake Use Less Enjoyable/Less Safe	12	39

Avoid Busy Days/Times/Areas	8	9
Caused Change in Activities/Use Lake Less	4	7.5
Other Negative Effects of Changes	0	1

11. Boaters' Perceptions of Increased Adjacent Lands Development

Boaters were asked if the subdivision or development of lands adjacent to the lake would affect their enjoyment or use of Lake Berryessa.

- At least one-half of each boater group were able to name at least one effect that the subdivision or development of adjacent lands would have on their enjoyment or use of Lake Berryessa (Table B11).
- From more than one-quarter to about one-half of both boater groups expressed their concern with **more boat traffic** that would occur as a result of adjacent lands development. The comments "more people and crowds" and "increased traffic on roads and lake" occurred most often among both groups.
- About one-quarter to one-third of both groups are worried about the effects of development on the **natural resource conditions** at Lake Berryessa. A majority of both groups are concerned that development will "spoil open lands" and "ruin the beauty of the surrounding area". There is additional concern about **increased pollution** from boats and sewage holding tanks.

TABLE B11 BOATERS' PERCEPTIONS OF MORE LAKE DEVELOPMENT		
	Ramps (n = 325)	Resort/Marina (n = 328)
Mentioned an Effect of More Lake Development	50%	55%
Negative Effects to Natural Resource Conditions	31%	23%
More Boats/Traffic/People	27	48
Against Development/Any Further Development	16	10
Negative Effects to Recreation Experience	9	5

Positive Effects of More Lake Development	6	6
Undecided; Buffered Statement	11	8

- Ten percent of resort/marina boaters and 16% of ramp users are simply **opposed to further development** because they choose to recreate at Lake Berryessa in order “to get away from development”.
- About six to eight percent of each group made more **neutral or positive comments** about further development with such comments as “it would depend on type and density” and “I would buy a house”.

12. Changes Boaters Would Like to See at Lake Berryessa

Boaters were asked if they are any changes they would like to see at Lake Berryessa and if so, to describe them.

- A large majority of both boater groups, about 75% and more, mentioned at least one change they would like to see at Lake Berryessa (Table B12). Both groups most often made requests related to changes in **management policies and regulations**, especially for the control or banishment of PWC from the lake, the control of excessive alcohol consumption by boaters, and bringing forth an end, or at least controlling, future “rap concerts”.
- Most of the ramp users’ remaining requests were for various **improvements to public ramps and facilities, resort and marina facilities and services, floating restrooms, and campgrounds**. Specific requests included “more free public ramps,” “more day use and picnic areas,” “cheaper launch rates,” “more floating restrooms,” and “more overnight camping spots”.

TABLE B12 CHANGES BOATERS WOULD LIKE TO SEE AT LAKE BERRYESSA		
	Ramps (n = 325)	Resort/Marina (n = 328)
Mentioned change would like to see occur	74%	85%
Facility Additions/Improvements		
Improvements to Public Ramps/Launch Facilities/Public Access	18%	0%

Improvements/Additions to Resorts and Marinas	14	13
Additional/Improved Camping Facilities	5	0
Improvements/Additions to Floating Restrooms	6	0
Improvements/Additions to Public Facilities/Services	7	8
<i>Changes to Boating Regulations and Lake Management Policies</i>		
Boater Training/Education; Better Boater Behavior	4	3
Limit/Zone/Disperse/Restrict Use	9	9
Changes in No Wake Zones	2	3
Improvements to Hazard Markers	1	2
Changes to Management Policies/Regulations	23	39
<i>More Patrol/Enforcement of Boating Regulations</i>	8	21
<i>Improve Water Quality/Pollution Control</i>	3	1
<i>Other Changes Desired</i>	0	1

- Over 20% of the resort/marina boaters' and 8% of ramp users' requests were for **increased patrol and law enforcement** (especially in 5 mph no wake zones). 9% of each group also expressed a desire for **increased limits, zoning, or dispersal of boat traffic** with such requests as "designate a jet ski only area" and "limit PWC".

13. Problems and Conflicts with Other Boaters on Lake Berryessa

Boaters were asked if they had any problems or conflicts with other boaters while on Lake Berryessa.

- About 23% of ramp users and 38% of resort/marina boaters have had problems or conflicts with other boaters on Lake Berryessa (Table B13).
- The two groups mentioned similar instances of **discourteous or unsafe behavior** by boaters and other lake users. While the majority of

resort/marina boaters expressed their dissatisfaction with the **July “rap concert”** and the resulting traffic it caused, the ramp users expressed their dismay at **boaters who don’t use launch ramps properly**. Both groups expressed further dissatisfaction with **boaters who consume too much alcohol, ignore rules and regulations, and come too close to their boat**.

- About 23% of the ramp users’ and 18% of the resort/marina boaters’ comments singled out **personal watercraft** as being the cause of conflict. These boaters accuse their operators of being discourteous and dangerous and coming too close to other boats.

TABLE B13 PROBLEMS/CONFLICTS WITH OTHER BOATERS		
	Ramps (n = 325)	Resort/Marina (n = 328)
Mentioned problems or conflicts	23%	38%
Unsafe/Reckless/Illegal Boating Behavior; Inexperienced Boaters	36%	32%
Discourteous Behavior/Other Boater Conflicts	36	50
Problems with Personal Watercraft	23	18
Other Problems/Conflicts	5	0

14. Locations of Problems/Conflicts with Other Boaters

Boaters were also asked to name or describe the location(s) where the problem/conflict(s) occurred.

- The **west side** of the lake (where the majority of resorts, marinas, and public use areas are located) showed the highest concentration of problems for resort/marina boaters (Table B14).

TABLE B14 BOATER PROBLEM/CONFLICT LOCATIONS		
	Ramps (n = 325)	Resort/Marina (n = 328)
Mentioned problem/conflict and identified location	96%	51%

West side of lake	16%	68%
Narrows	21	9
Spanish Flat area	12	3
Resort/marina locations	22	0
Non-specific locations	29	20

- Among those ramp users who gave specific locations where conflicts have occurred, locations close to **resorts and marinas**, and the **Narrows** area were mentioned most often. 29% of ramp users and 20% of resort/marina boaters reported problems in **non-specific locations**, often generalizing the problem location as “all over/everywhere”.

C. Boaters' Perceptions Regarding Use Levels and Crowding

Information from boaters about their perceptions of crowding on the lake was obtained through two questions on the survey. These questions measured their expectations and preferences regarding the number of other boats they saw on

Lake Berryessa during their visit. Use of these questions is supported by the notion that perceptions of crowding are not influenced by density alone, but by both expectations and preferences for contacts with others while recreating (Womble and Studebaker, 1981, Shelby et. al., 1983).

1. Expectations for Number of Boats on Lake Berryessa

Boaters were asked to compare the number of boats they saw on Lake Berryessa the last day they boated with the number they expected to see on that day.

- The majority of each boating group surveyed (44 and 73 percent) said they saw “about as many” boats as they expected to see during their last outing (Table C1).

TABLE C1 EXPECTATIONS FOR NUMBER OF BOATS ON LAKE BERRYESSA		
	Ramps (n = 325)	Resort/Marina (n = 328)
Saw "about as many" as expected	44%	73%
Saw "more" than expected	16	16
Saw "fewer" than expected	39	10
No response	1	1

- Only 16 percent of each boater group reported seeing “more” boats than they expected.
- Conversely, a surprising 39 percent of the ramp users said they saw “fewer” boats than they expected. Only 10% of resort/marina boaters gave a similar response.

2. Preferences for Number of Boats on Lake Berryessa

Boaters were asked to compare the number of boats they saw during their

last visit on Lake Berryessa with the number of boats they would have preferred to see that day. Preferences for the number of boats visitors encounter is an indicator of satisfaction with existing conditions and an expression of desired conditions.

- Although a majority of both boating groups reported seeing “about as many” boats as they would have preferred, from nearly one-quarter to almost one-half of the boaters in each group said they saw “more” boats than they would have preferred (Table C2). Very few boaters said they saw “fewer” boats than they would have liked to during their last visit.

TABLE C2 PREFERENCES FOR NUMBER OF BOATS VERSUS NUMBER SEEN		
	Ramps (n = 325)	Resort/Marina (n = 328)
Saw "about as many" as would have liked to have seen	50%	70%
Saw "more" than would have liked to have seen	45	24
Saw "fewer" than would have liked to have seen	4	5
No Response	1	1

3. Expectations and Preferences Taken Together

Table C3 places the "expectation" and "preference" data together to help portray a complete picture of boaters' opinions regarding use levels.

- There is a strong contrast between the two boater groups in their expectations and preferences for the amount of boat traffic on the lake during the summer of 1998.
- The majority of resort/marina boaters who reported they saw “about as many” or “fewer” boats than they expected to see, saw “about as many” boats as they preferred. This indicates that crowding is not much of an issue with the majority of resort/marina boaters with the exception of those who did indicate they saw “more” boats than they preferred to see. These are the folks who may eventually be displaced, or simply put, quit coming to Lake Berryessa.

- Moving the focus of discussion to ramp users who feel the lake is too crowded, sizable percentages of these boaters reported they saw “about as many” or even “fewer” boats than they expected to see but this number was “more” than they preferred. From one-third to more than one-half of the ramp users felt this way.

TABLE C3 BOATERS' EXPECTATIONS AND PREFERENCES FOR NUMBER OF BOATS		
	Ramp (n = 325)	Resort/Marina (n = 328)
<i>Saw "about as many" as expected and . . .</i>		
Saw "about as many" as would have liked to have seen	43%	77%
Saw "more" than would have liked to have seen	54	20
Saw "fewer" than would have liked to have seen	3	2
Gave no response for preference	0	1
<i>Saw "more" than expected and . . .</i>		
Saw "about as many" as would have liked to have seen	47	39
Saw "more" than would have liked to have seen	53	56
Saw "fewer" than would have liked to have seen	0	5
Gave no response for preference	0	0
<i>Saw "fewer" than expected and . . .</i>		
Saw "about as many" as would have liked to have seen	59	72
Saw "more" than would have liked to have seen	34	3
Saw "fewer" than would have liked to have seen	7	22
Gave no response for preference	0	3

- Taken together, the responses indicate that, even among visitors who encountered fewer boats than they expected, about one-half of the ramp users and about one-quarter of resort/marina boaters would prefer less boat traffic.

D. Results of Aerial Boat Counts

A total of five aerial boat counts were completed for this study to document use levels and boat traffic distribution. Lake Berryessa park rangers have been conducting aerial boat counts for several years and already had the eight following count zones established for the lake: (Also See Figure 2)

- **Zone 1:** The area from Monticello Dam to a point adjacent to the Quail Ridge peninsula. The area includes Markley Cove Resort and both Portuguese Canyons.
- **Zone 2:** The area of the Narrows west of Quail Ridge peninsula to the mouth of the Narrows. The area includes Pleasure Cove Resort and Haines Cove.
- **Zone 3:** The area from the mouth of the Narrows west to the south side of Government Point (Park Headquarters) and south to Steele Canyon. The area includes Skiers Cove, Steele Park, Spanish Flat, and Capell Cove Public Launch.
- **Zone 4:** The area from Government Point east to the Gunn Ranch, north to Oilwell Canyon and Smittle Creek. The area includes Oak Shores, Big Island, Small Island, and the Concession Area of Lake Berryessa Marina.
- **Zone 5:** The area north of Berryessa Marina up to Pope Creek Bridge then over to Tully Canyon on the east side. The area includes Rancho Monticello, Schoolhouse Island up to the concession boundary of Putah Creek Park. The area does not include the area within the 5 MPH zone of Pope Creek.
- **Zone 6:** The area north of Pope Creek to Eticuera and the rest of the east side. The area includes Putah Creek Park and the North end. The area does not include Putah Creek upstream of the Putah Creek Bridge.
- **Zone 7:** The area upstream of Putah Creek Bridge. The area includes the west launch ramp of Putah Creek Park and upstream to Berryessa Estates.

- **Zone 8:** The area surrounding Pope Creek Bridge. The area includes the 5

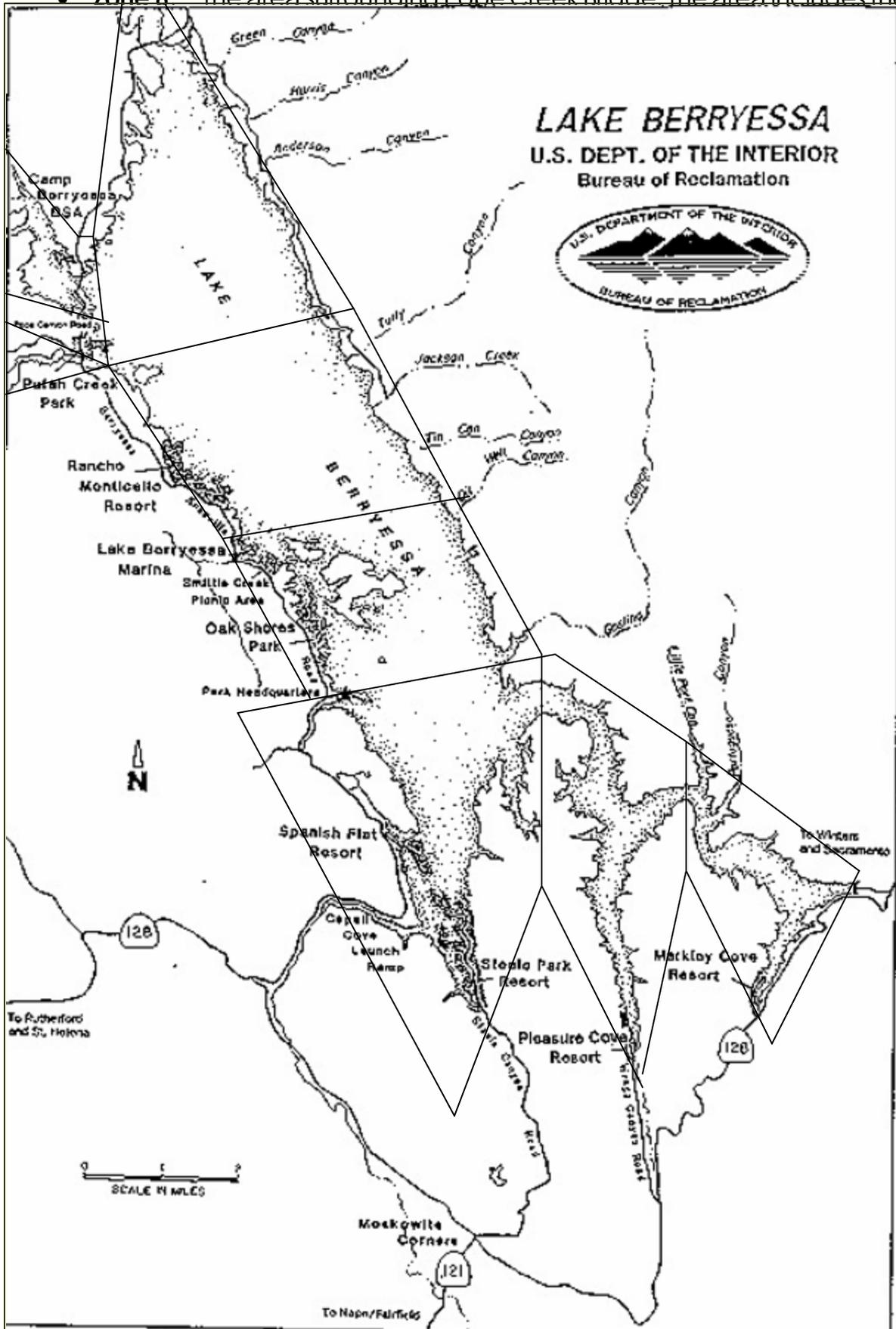


Figure 2.

The five flights occurred on both weekdays and weekends between 1:00 and 2:00 p.m. Additional information on flight routes, schedule, procedures, and the limitations of this method can be found in Appendix A.

1. Boat Count Data

- The total number of boats observed during each flight was tallied from the maps and is reported in Table D1. Weekday afternoon counts ranged from 90 to 188 boats. (The 90 count was observed in June when boating use was uncharacteristically low due to cold, wet weather).

TABLE D1 LAKE BERRYESSA BOAT COUNTS									
COUNT DAY AND DATE	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	TOTALS
Weekend Days									
Sunday, July 26	59	109	60	85	65	37	22	56	493
Sunday, August 18	75	77	91	77	64	36	48	70	538
Weekdays									
Tuesday, June 23	17	22	28	6	6	4	5	2	90
Monday, July 27	24	31	50	22	28	11	11	11	188
Monday, August 17	19	23	31	19	13	5	10	12	132

- Weekend counts were three to six times as high and ranged from 493 to 538 boats.

2. Boat Type and Traffic Distribution

- About one-third of the boat traffic observed on the lake was in the Narrows (Count Zones 1 and 2) (Table D2). An additional one-quarter of boat traffic occurred in the middle section of the lake (Count Zones 4 and 5) which contains the majority of resorts, marinas, and day-use areas, as well as Big Island and Small Island. Considerable boat traffic was also observed in the Spanish Flat area (Count Zone 3) and the Twin Bridges

area (Count Zones 7 and 8).

- Three-quarters of the boat traffic observed consisted of runabouts and ski-boats. Personal watercraft made up the second most observed boat type (14%). About one-third of the runabouts and ski-boats were observed in the Narrows area. The majority of the personal watercraft was observed in the middle section of the lake where they tend to congregate around Oak Shores Park and the Islands.

**TABLE D2
LAKE BERRYESSA BOAT TYPE COUNTS (FOR ALL COUNT DAYS COMBINED)**

TYPE OF BOAT	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	TOTALS
Runabout/ski-boat	141	209	187	136	120	68	69	130	1060
Personal watercraft	29	28	40	37	33	13	13	8	201
Fishing boats	13	12	16	14	9	3	7	4	78
House/patio boats	11	11	12	18	13	9	7	9	90
Sailboats	0	2	5	4	1	0	0	0	12
TOTALS	194	262	260	209	176	93	96	151	1441

E. Results of Trailer Counts at Launch Ramps

Counts of boat trailers at public launch ramps were conducted concurrent with exit interviews of boaters in order to estimate the amount of use the ramps receive. Interviewers counted the number of boat trailers present at the beginning, two hours into and at the end of each four-hour exit interview period. Following this schedule, a total of 144 counts were possible over the 48 interview periods (three trailer counts x 48 interview periods = 144 counts). (See Appendix A for further information)

- The trailer counts indicate that weekday use is low throughout the day, with only a slight rise in use in the afternoon (between 2:00 and 4:00 p.m.). An average of nine trailers per ramp were counted at 8:00 a.m. increasing to about 17 per ramp by late afternoon (Table E1).

**TABLE E1
LAKE BERRYESSA TRAILER COUNT DATA: ALL LAUNCH
RAMPS**

Average Number of Trailers Present		
Count Time	Weekday Counts	Weekend Counts
8:00 a.m.	9.1	31.4
10:00 a.m.	10.7	44.9
12:00 a.m.	13.9	63.4
2:00 p.m.	16.9	63.8
4:00 p.m.	17.1	70.5
6:00 p.m.	13.3	40
8:00 p.m.	11.8	24.1

- The trailer count data show that weekend use of launch ramps is clearly much greater than weekday use. Weekend afternoon counts peaked (typically at 4:00 p.m.) at between 30 and 109 trailers and averaged 70.5.

III. Discussion and Implications

A. Information Provided by the Study

The survey methods used during this study were successful in obtaining a wide variety of baseline information about boaters on Lake Berryessa. A rich pool of data now exists that describes their boating activity and their perceptions of and preferences for the conditions that most effect their use and enjoyment of the lake.

This report utilizes averages and grouped responses for the reporting of results. We believe this allows immediate and accessible presentation of the data and expands understanding of current conditions. Reporting of the data in this form can support discussions among Lake Berryessa managers and the public about management directions and options. The survey data, presented to managers in the form of SPSS database files, can be used for any further analysis and reporting which may be desired (see Section C).

B. Baseline Data-Gathering Results

The following section of this discussion will focus on providing concise summaries of the survey data for the following themes:

1. The characteristics of boaters and their boating activities on Lake Berryessa.
2. The immediate problems boaters perceive to be impacting the lake and their enjoyment of it.
3. Boaters' desired future conditions for the lake.

The reason for collecting each type of information and its potential usefulness to managers will also be discussed.

1. The Boaters Using Lake Berryessa and their Boating Activity

Overall, the boaters using Lake Berryessa have substantial experience on the area. They average at least a dozen years of use at Lake Berryessa. Yet, over 40% of the ramp users have five years or less experience on the lake, attesting to the continued growth and interest in boating on Lake Berryessa.

Boaters' length of boating experience determines the time frame in which they have had the opportunity to observe changes. Previous boater recreation studies at other lakes (Titre and Vogel, 1994; Vogel et. al., 1995) have shown that long-time visitors often develop a sense of ownership of a lake and tend to have

a greater sensitivity to and concern about changes in the conditions they have become accustomed to. The data suggests that the ramp users would be the least aware of changes occurring at Lake Berryessa. They could also be expected to express less attachment to past conditions. In contrast, resort and marina boaters would be most acutely aware of changes and would be expected to express the attachment to or desire for a return to past conditions.

Frequent use of Lake Berryessa is the norm. This is especially true among resort and marina boaters who averaged twice as many days on Lake Berryessa per year than ramp users. This should be expected since resort/marina boaters have made an investment in gaining convenient lake access. Boaters who are frequent users of Lake Berryessa can be expected to have more knowledge of current conditions than boaters who visit less frequently. Frequent visits also result in more opportunities to notice (and a greater probability of being affected by) changes that are detrimental to the experiences those boaters are seeking on Lake Berryessa. A majority of visits took place on weekends thus contributing to the lakes' reputation as a heavily used weekend lake.

Most ramp users interviewed were at the lake for that day only while most resort/marina boaters visited for two or more days. Ramp users visiting for more than one day stayed an ***average of nearly four days*** while resort/marina boaters' ***multiple-day visits averaged about six days in length.*** ***Boat outings for both groups average about five and one-half hours in length.***

Previous boater recreation studies have shown that the length of visits is related to the frequency of visits and the distance boaters live from the lake (Titre and Vogel, 1993,1994). It has been found that boaters who travel greater distance to a lake typically visit less often, but those less frequent visits are longer in duration.

Many Lake Berryessa boaters, especially the ramp users, boat at other lakes although primary boating use occurs at Lake Berryessa. Knowing the other lakes and rivers boaters choose to visit indicates the range of opportunities for water-based recreation available in the region. The other lakes that boaters visit can then be compared to the conditions found on Lake Berryessa.

Boating use of Lake Berryessa is primarily regional with a strong majority of boaters living within 75 miles of their usual access point. Obviously, the distance boaters live from Lake Berryessa can be expected to affect how much they use the lake. This is also a factor in how boaters may be reached for boater education efforts and whether they are likely to attend public meetings regarding lake management issues.

Runabouts and ski boats dominate use at the lake although personal watercraft and pontoon boats are also common. Knowing the types of boats being used by each boating group provides some indication of the nature of their boating activity. Boaters using runabouts, pontoon boats, and fishing boats can be expected to use the lake differently. For example, there are differences in how far and how fast they travel, the areas they prefer to use, and the activities they participate in. Also, some conflicts between boaters appear to be closely related to the types of watercraft being used; for example, previous studies at Corps lakes have revealed frequent conflicts between smaller fishing boats and runabouts (Vogel et. al., 1995). Tracking changes in the types, sizes, and power of boats being used allows managers to anticipate changes in use patterns and increases in conflicts among boater types.

Water-skiing (and related water sports) and swimming from the boat are prominent activities among boaters although their use of the lake is often devoted to several boating activities such as cruising, relaxing/sunning in boat, picnicking on shore, and fishing. Anglers spend a large amount of their boat outing devoted to fishing so managers might expect this group to be vocal (out of proportion to their numbers) about perceived negative changes or desired improvements to the fishery or fishing opportunities.

Ramp users and resort/marina boaters spend most of their time in the Narrows region and along the western shore of the lake's main basin where most of the day-use areas and resort/marinas are located. Many boaters also frequent the Twin Bridges area (Pope & Putah Creek) and Spanish Flat. Identifying favorite locations (and the characteristics that distinguish them) reveal the conditions boaters considered most important or desirable. These locations provide important components of the recreational setting boaters need for enjoyable boating experiences on the lake.

Ramp users place more motivational emphasis on experiencing the outdoors in an undisturbed natural setting while at the same time, reducing stress or tension and being with friends and family. Resort/marina boaters seek more opportunities to socialize with friends and family in the scenic outdoor setting that Lake Berryessa provides. These boaters, most of who have mobile homes on long-term lease sites, often serve as guests to friends and family since they have immediate access to the lake as well as convenient lodging. Motivations for recreation describe why people engage in recreation behavior in the manner they do and why they seek a certain setting that are likely to facilitate those desired experience outcomes (Manfredo et al., 1996).

2. Conditions Boaters Desire on Lake Berryessa

Boaters are most interested in enjoying places on the lake that offer good conditions for popular recreation activities such as water-skiing, swimming, and cruising (activities best enjoyed in sheltered areas away from heavy moving boat traffic and rough water). They find these conditions at many of the coves and straits located in the Narrows region. **Boaters are also very interested in seeking areas on the lake which offer opportunities for solitude, quiet, and less boat traffic.** The lake's many coves and beaches along Spanish Flat, the Narrows, and the northern shore offer these kinds of opportunities.

Though many Lake Berryessa boaters also boat at other places, **the basic attribute of closeness and convenience makes the lake preferable to other places**, especially to those who trailer their boat to public ramps. Boaters are also attracted to Lake Berryessa for its' **calm, clear and warm water, beautiful scenery and wildlife, and because it's such a big lake.** Knowing what boaters like about the lake gives an indication of what characteristics of the recreation experience they value most and why they return.

3. Problem Conditions of Most Concern to Boaters on Lake Berryessa

A majority of the boaters deliberately avoid certain areas where they have encountered conditions detrimental to the recreation experience they are seeking. The survey data established that **ramp users most frequently avoided the open water of the main basin, primarily due to the wind, waves, and wakes** that have a greater effect on them in their smaller boats. The Twin Bridges area, Spanish Flat, and parts of the western shore are also **avoided by many boaters due to the presence of heavy boat traffic, reckless boaters and PWC operators, and too much alcohol consumption by boaters.** Information about deliberately avoided locations tells what conditions are detrimental to certain boaters' recreation experience and where boaters encountered those conditions. As these locations become more numerous and widespread (and more difficult to avoid), the quality of the recreation experience are negatively impacted and satisfaction diminishes.

Boaters have noticed many negative changes over the last five years especially in regards to the **proliferation of personal watercraft on the lake and the overall increase in boat traffic and congestion.** Ramp users and resort/marina boaters also regard the increase in launch ramp fees and long-term lease site fees as a negative change. Boaters are a good source of information about changes occurring on the lake because most have spent more time there than the lakes' managers and many have several years' experience at the lake. They may also be more aware of changes that affect

their recreational enjoyment or use than managers who may not often recreate at the lake.

The survey data also confirms that ***these mostly negative changes in conditions are having negative effects on boaters' use and enjoyment of Lake Berryessa***. The majority of boaters who noticed negative changes said those changes were causing their boating use to be less enjoyable and/or less safe. Many boaters especially resort/marina boaters reported that they are avoiding busy days, times, and areas or are using the lake less.

Boaters are concerned that any future subdivision or development of lands adjacent to Lake Berryessa will spoil the beauty of the area and cause an even greater increase in boat traffic. Lake managers are also concerned that uncontrolled use and unconstrained development will have significant impacts on water quality and on the recreational experiences available at Lake Berryessa. By knowing the perceptions of Lake Berryessa visitors regarding the effects of shoreline and adjacent lands development on their enjoyment or use of the lake, lake managers are better prepared to make informed decisions regarding this issue.

4. Changes and Improvements Desired by Lake Berryessa Boaters

The changes boaters would like to see on Lake Berryessa are related to the data just reviewed on desired and problem conditions. The survey data demonstrates that good conditions for recreation activities, opportunities for solitude, good water quality, and beautiful natural scenery are of fundamental importance to Lake Berryessa boaters. The data also provided evidence that boaters are most concerned about increased boat traffic, reckless boat and PWC operation, and insufficient facilities/services. The majority of boaters' requests for changes parallel these interests and concerns in that they are aimed at enhancing the conditions they most desire and alleviating the effects of the changes that they consider undesirable.

Most requests called for changes to social conditions especially those related to management policies and regulations such as the ***control or banishment of PWC from the lake, the control of alcohol on boats, and regulating any future "rap concerts"***. Many resort and marina boaters would like to see ***increased patrol and law enforcement*** in order to improve boaters' compliance with regulations and observation of boater courtesies. Ramp users, who depend more on public access and short-term facilities, requested ***more launch ramps, day-use areas, campgrounds, and floating restrooms***.

5. Boater Conflicts and Safety on Lake Berryessa

In addition to the generally negative effects that changes, such as more boat traffic, PWC, and reckless boaters, have had on their boating experience, boaters also describe problems or conflicts they experienced with other boaters. As the number of boats on the water increases and changes occur in the types of boats being used (e.g., more PWC, and larger and faster boats); conflicts are likely to increase. Many of the conflict problems are also safety issues. Though the number of boating accidents may not immediately increase with these changes, boaters often reported feeling less safe out on the water and may have reported more "close calls".

Less than 40% of the boaters reported any conflicts they experienced while boating on Lake Berryessa. Most of the complaints were targeted at discourteous or unsafe boaters such as those who come too close to your boat, ignore rules and regulations, or speed in 5 mph no wake zone areas. Ramp users expressed problems with inexperienced boaters who don't use the launch ramps properly (i.e., take too much time, don't know how to load or unload boat, etc.). Personal watercraft were also singled out as being a cause of conflict due to their sometimes discourteous and dangerous operation.

6. Boaters' Expectations and Preferences Regarding Use Levels on Lake Berryessa

The majority of Lake Berryessa boaters saw "about as many" boats on the lake during their last outing as they expected, a result typical of areas that primarily receive local and regional use by visitors familiar with conditions. However, nearly 40% of ramp users said they saw "fewer" boats than they expected, which may signify somewhat reduced use levels in 1998. Indeed, boat traffic was reduced for a portion of the 1998 season due to cool, rainy weather. The fact that ***many boaters reported increased boat traffic, more people, and conflicts even though 80% or more of each group saw as many or fewer boats than they expected***, indicates that use levels greater than what boaters expected were not a major contributor to perceptions of crowding. This justifies giving increased attention to crowding concerns.

Although the ***number of boats on Lake Berryessa*** did not exceed most boaters' expectations, it ***did exceed from one-quarter to nearly one-half of each groups' preference for number of boats***. Preferences for the number of other boats visitors encounter is an indicator of satisfaction with existing conditions and an expression of desired conditions. This measure is a good indicator of the effect increasing numbers of boats have on boaters, and it should be a part of future monitoring. If an increasing number of boaters feel their recreation experience is being diminished by the presence of too many

other boats, the number of boaters reporting they saw “more” boats than they would have liked will probably increase over time (unless displaced users are replaced by those with a higher threshold for encounters).

One limitation of this method of measuring boaters’ perceptions of crowding is that it does not account for displacement, a phenomenon that is not measured during on-site or mail-back surveys. ***Displacement is a change in visitors’ use of the recreation resource in response to an undesirable change in conditions*** (e.g. increasing numbers of boats or a change in the nature of boating activity by others). Boaters who no longer come to Lake Berryessa due to undesirable changes are completely displaced and were not contacted by the survey methods used in this study, which were limited to contacts with current users. In other words, there may be boaters who would have responded that there are more boats than they would like to see on Lake Berryessa, but because these boaters have ceased boating on Lake Berryessa, they are absent from the sample of current users.

C. Potential Uses of the Data

With specific baseline data now available about many of the most critical recreation issues on Lake Berryessa, ***managers can suggest alternatives and/or amendments already based on public input for inclusion in the Reservoir Area Management Plan (RAMP) for Lake Berryessa***. A RAMP is a comprehensive land and water use document that establishes development and use priorities for specific areas. It serves to update the Public Use Plan (PUP) which was prepared in 1959 by the National Park Service (NPS).

The basis has also been provided for open discussion with the public about planning for desired future conditions. Continued public involvement can occur with less danger of discussion becoming bogged down in opinions and conjecture regarding current recreation activities and problems.

Lake management is often complex in its requirement to meet sometimes conflicting recreational needs and changing physical and social conditions. ***Management actions designed to meet diverse needs and to respond to physical and social changes can be evaluated based on their effects on the recreation opportunities and experiences*** that BOR intends to provide and protect. Returning to Schreyer (1987), the question can be asked regarding each proposed management action “What effect will this action have on the recreation opportunities the lake provides and will those effects hinder or facilitate boaters’ attainment of their desired experiences?”

The data can also serve to prioritize immediate problems, some of which might be acted upon before any further planning steps are taken. For example,

the data could support an immediate increase in resources for boating regulation enforcement. ***Carrying capacity objectives aimed at regulating or controlling the type or amount of use can also be formulated based on the baseline data generated by this study.*** For example, the potential exists to increase boaters' tolerance of greater numbers of boats on the lake thereby increasing "social carrying capacity" if the unsafe and discourteous behaviors, exacerbated by higher density conditions, can be reduced through increased boater awareness, zoning, and regulation enforcement. Furthermore, requests for relatively minor improvement to public launching facilities (e.g., better parking and traffic control) might be met.

With the original SPSS database and syntax files presented to Lake Berryessa management, ***further statistical analyses*** can be generated to describe the different boater groups using the lake. For example, by selecting a certain boat type category defined by the survey (e.g., PWC), all the survey results given by boaters that reported using PWC's can be tabulated. This type of information is useful for ***market segmentation efforts*** aimed at determining the needs and wants of particular user groups.

D. Implications of the Data for Maintaining Quality Recreation on Lake Berryessa

Much has been learned during this study about the extent of boaters' experience on Lake Berryessa and how frequently they use the lake. These are factors in how boaters react to changes they see occurring on the lake and in what they perceive to be quality recreation opportunities.

The prevalence of boaters with more than five years experience and the presence of significant numbers of those with more than 15 years of Lake Berryessa use increases the ***demand for a return to historical conditions***. Ten or 15 years ago, these boaters likely encountered fewer other boats on the lake, and they would have seen hardly any PWC. Resource conditions would have been somewhat different also, especially in areas most prone to water quality degradation and soil erosion. It is from this reference point that these boaters may define quality boating for Lake Berryessa.

On the other hand, ***relative newcomers (i.e., those with less than five years of boating on Lake Berryessa) may accept higher density conditions and more frequent conflicts because they do not have a reference point based on conditions in previous years*** (Schreyer et al., 1976, Vaske et al., 1980). As these boaters become a larger part of the boating population, and more long-time visitors stop using the lake (a few resort/marina boaters indicated they no longer boat), complaints about crowding and conflicts may decrease. However, this should not be interpreted as a decrease in the occurrence of conflicts or a

lessening of the need to provide lower density boating opportunities. These lower density conditions will remain important to the many boaters who desire a sufficient amount of space to boat without undue concern about other traffic, or for those who enjoy some measure of solitude and peace on the water.

Much has also been learned about how boaters spend their time on the lake. Although ***water-skiing and cruising are two of the most popular activities***, many boaters also spend a considerable amount of time fishing and engaging in “stationary boat” activities such as picnicking on shore. Boaters may do these “stationary boat” activities in congested areas where boats congregate but most look at least part of the time for secluded places. The experience these boaters are interested in can be ***easily disturbed by PWC or other boats coming too close and causing excessive noise and concern for safety***. Increasing boat traffic, which many boaters are noticing, means quiet, secluded areas become harder to find, and these types of disturbances become harder to avoid.

The ***need to preserve quiet areas*** is particularly important to Lake Berryessa because, as indicated by the reasons given for favorite locations, avoiding locations, and features liked best about Berryessa, these areas of the lake are important to many of the lake users contacted.

Activities like fishing, swimming, picnicking, and water-skiing, which were frequently mentioned when boaters described their favorite locations, are also less enjoyable when too many boats are using an area. The survey data indicates that ***many boaters avoid some locations and the reasons were often because of high numbers of boats, incompatible boat types in the area or unsafe boating behavior***. The unsafe behaviors mentioned include reckless boaters and jet skiers, and excessive alcohol consumption by boaters. ***High density boating*** often exacerbates these behaviors. Data now exists showing that some boaters’ enjoyment is being affected by problems related to high density boating. This conclusion is further supported by the fact that many boaters have been aware of ***increasing boat traffic, the presence of more personal watercraft***, and that many associate this as having a negative effect on their enjoyment and use of Lake Berryessa.

Looking at the data as a whole (and for recurring evidence) tells managers about the experience(s) boaters are seeking and the threats they perceive to those experiences. Based on this information, management actions or objectives to protect the conditions necessary to provide opportunities for these types of experiences are supported.

E. Management Actions to Improve the Quality of Recreation (*Results from the Lake Berryessa Boating Carrying Capacity Workshop*)

A workshop forum was held on March 18 and 19, 1999 in Davis, CA in order to develop an action plan using the data collected from the Lake Berryessa Boater Recreation Study. The workshop was hosted by the US Bureau of Reclamation (Putah Resource Area-Lake Berryessa) and facilitated by study coordinators John Titre (Waterways Experiment Station), Bill Jackson (Colorado State University-Department of Natural Resource Recreation and Tourism), and Jim Vogel (Colorado State University-Department of Natural Resource Recreation and Tourism). There was a total of ten workshop participants representing the US Bureau of Reclamation, US Army Corps on Engineers, US Forest Service, Washington County (Oregon) Parks, and two of the Lake Berryessa resort concessions (Rancho Monticello and Pleasure Cove).

The first day of the workshop focused on presenting the study design and results as well as touring Lake Berryessa by boat. The second day was devoted to formulating management actions and additional information needs based on the data results and lake observations. Based on input from workshop participants the data supports management actions aimed at:

- 1) Increasing and improving ***lower-density and dispersed camping opportunities*** in order to accommodate the variety of users at Lake Berryessa. Boat-in camping opportunities should be provided for the public at no charge in those areas that are designated as Class IV Semi-Primitive and Class III Dispersed Recreation. Boat-in camping is defined as an activity characteristic of these land use classifications in the Lake Berryessa RAMP (1993) Preferred Actions (#3,8,9,10,&12) but yet current Berryessa policy doesn't allow boat-in camping. Opportunities for boat-in camping would help disperse use and satisfy public demand for short-term usage of the lake. Areas where this should be considered include the Narrows, Spanish Flat, Big and Small Island, Pope and Putah Creek, and the North Shore. In Class III Dispersed Recreation Areas, improvements should also include access trails, sanitation facilities, garbage collection, visitor information signing, etc. to provide for the health and safety of the public and protection of resources.
- 2) ***Coordinating with law enforcement personnel*** (Napa County Sheriff, CA Fish and Game Warden, CA Highway Patrol, Coast Guard, Boat Patrol, etc.) to maintain a controlled presence and force compliance on rules and regulations in a consistent manner. Specific zoning and/or restrictions for water surface uses and activities to promote public health and safety, foster compatibility of recreational uses, and protect and enhance

natural resources are also supported by the RAMP Preferred Actions (#17 &21).

- 3) Reducing boater conflicts by **increasing boater education efforts** and **visitor information services**. RAMP Preferred Action #14 mentions an expansion of visitor information services which could include interpretive center facilities and activities, overlooks at appropriate locations, interpretive trails, interpretive displays in developed access points and concession areas, and additional signing.
- 4) **Not designating another cove for exclusive use by professional water-ski club**. RAMP Preferred Action #18 states that the closure of coves or other areas for limited special uses (such as water skiing instruction or slalom courses) is prohibited unless such uses are not exclusive nor incompatible with other recreational activities.
- 5) **Developing partnerships** for more effective and efficient lake management and to protect and maintain water and visual resources by increasing coordination efforts between BOR, the concessionaires, and other government entities. This could involve the purchase of conservation easements, land acquisitions, and/or land exchanges to provide recreational access and services and minimize impacts to adjoining lands. RAMP Preferred Actions #1&2 discuss the topic of land acquisition and land disposal.
- 6) Providing **additional overnight/short-term lodging facilities** (e.g., motels and hotels) at the resorts and marinas to accommodate the ramp users whom currently must stay at one of the undesirable campgrounds. These actions are supported by RAMP Preferred Actions #29&36.
- 7) Creating **limits on boat speed, size and/or horsepower** in order to reduce conflicts and increase boater safety. RAMP Preferred Action #17 says to establish and implement (after coordination with the Napa County Sheriffs Department) specific zoning and/or restrictions for water surface uses and activities to promote public health and safety, foster compatibility of recreational uses, and protect and enhance natural resources, including water supplies, wetlands, and riparian habitats. Furthermore, activities or areas subject to zoning restrictions could include, but are not limited to, jet skiing in Oak Shores, speed zones for specific areas, and establishment of boat traffic patterns on the lake surface.
- 8) **Increasing public access** to shoreline in concession-operated areas by limiting the use of permanent sites in exchange for more short-term use. RAMP Preferred Action #36 calls for additional short-term facilities (day

use, camping, etc.) in designated shoreline locations currently occupied by long-term uses.

F. Additional Information Needs/Future Studies

The intent of the somewhat labor-intensive survey methods used was to be as comprehensive and inclusive as was practical. Exit interviews were conducted at ramps over a ten-week period. The mail surveys of resort/marina boaters were based on the most complete population lists as could be compiled in the time available. These methods left few boaters without the opportunity to be included in the survey sample. However, during the workshop held in California to discuss study results, participants suggested that the following information should be gathered to further complement the study results:

- 1) ***Ethnic, economic and demographic trend of Lake Berryessa visitors.*** Having this information may provide a clearer picture as to what types of facilities and services should be provided for visitors based on such measures as income level (condos vs. campgrounds), gender, age, ethnic background (larger picnic areas for large families), etc.
- 2) ***Perceptions and preferences of non-boating visitors*** who tend to utilize the day-use areas and pullouts along Highway 128. These visitors make up a substantial portion of Lake Berryessa users (especially on the weekends and holidays) although they don't access the lake by means of watercraft. What specific changes would these folks like to see implemented at Lake Berryessa?
- 3) ***Perceptions and preferences of anglers*** who access Lake Berryessa more frequently during the off-season (Fall and Spring) and during non-peak hours (sunset to sunrise). Have their needs been addressed by the summer boater study or were they underrepresented?
- 4) ***Perceptions and preferences of specific boater groups*** such as PWC operators and water-skiers to ensure their specific needs and wants have been addressed. Market segmentation efforts could be carried out with further analyses of the existing SPSS data.
- 5) ***Specific visitor response to potential management actions*** in order to predict public sentiment for proposed actions. Future studies could incorporate specific management questions.

G. Potential Changes in Data Collection Procedures

The exit interview methods used for this study functioned well and no changes are foreseen at this time. However, the high number of boats passed at the boat ramps during weekend afternoon interview periods suggests ***greater efficiency may be achieved by scheduling two interviewers at the ramps*** at those times and reducing the total number of interview periods.

The mail survey procedures also functioned well. A possible change for future studies would be to ***ensure 100% compatibility between the wording on exit interview and mail-back questionnaires*** to facilitate data reporting and comparison. For example, differences in question wording led to some inconsistency in the location of problems and conflicts reported by resort/marina boaters. They were simply not asked to list the specific location unlike the ramp users who were specifically asked during the exit interview. Resort and marina boaters were also asked to separate between the two boat types "runabout/speedboat" and "ski boat" unlike the ramp users with whom these two boat types were merged into the same boat type category "runabout/speedboat/ski boat". While these differences are relatively minor, modifications would facilitate data analysis and reporting.

Additional aerial overflights conducted at peak-use hours would be desirable in order to obtain the broadest picture of use levels over the length of the summer and to lessen the effect of extreme high and low counts on use estimation. The additional counts would allow more precise estimations of boat traffic originating at the ramps and would allow estimation of use of individual ramps. If boat trailer counts could be conducted concurrent with aerial overflights, more precise estimations of the contribution of the public ramps to overall boat traffic could also be made.

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APPENDIX A

DETAILED STUDY METHODS

The first step in collecting data on Lake Berryessa was a two-week reconnaissance visit of the area by the study coordinator from 21 May through 4 June 1998. The reconnaissance consisted of identifying and describing boater access points, including public launch ramps, resorts and marinas, and privately owned docks on the lake. This was accomplished through map observations, discussions with rangers and resource managers, and extensive field checking and observation.

A. Boater Survey

The boater survey portion of the study was conducted from 6 June to 15 August 1998.

Study and Sample Populations

The study population consisted of boaters accessing Lake Berryessa from the seven resorts and marinas and Capell Cove launch ramp. The survey was designed to allow information to be gathered from all boater groups using the lake including those who launch their boat at public launch ramps and those who have a boat stored or moored at a resort/marina.

For the purpose of sampling, the boaters were separated into two survey groups by their means of access to the study area: public ramp users and resort/marina boaters.

Boaters using public launch ramps were interviewed after they had removed their boat from the water. They were contacted at the eight launch ramps located on the lake. Resort/marina boaters were contacted through mail back surveys. Some resort/marina boaters who keep their boat in dry storage access the lake via public launch ramps. These boaters were not interviewed at the launch ramps since they are considered resort/marina boaters and were to be contacted through mail back surveys. Several of the resorts and marinas also rent a limited number of runabouts, fishing boats and personal watercraft. Interviews were not conducted however, for two reasons: 1) the primary resort/marina customers (slip renters) were surveyed through the mail, and 2) it would not have been practical with the number of interviewers available to interview the relatively few boat renters.

Exit interviews were conducted by Bureau of Reclamation park rangers who underwent interviewer training prior to the start of data collection. The rangers also assisted with the mail surveys. Sampling and data collection were directed by the study coordinator, Bill Jackson, a Colorado State University graduate student who was employed as a park ranger to coordinate and carry out the study.

B. Inventory of Boater Access Points

A thorough inventory of all public ramps, resorts, and marinas with dock or launch facilities was completed during the reconnaissance phase in late May/early June of 1998 as the first step towards establishing a sampling plan. Public ramps were located based on information contained in Lake Berryessa Resource Area records and maps, and through field checks. Visits to the public launch ramps were used to note location, condition, accessibility, and likely user types and use levels. Resorts and marinas were also visited in order to make observations about the facilities provided and to establish the location of road access to the sites.

1. Launch Ramps

To ensure representation of the full range of boaters using launch ramps, a stratified random sampling procedure was used in scheduling the exit interview periods. For the purpose of setting up an exit interview - sampling schedule, the ramps needed to be categorized by the type and/or level of use they receive. From the reconnaissance phase and in discussions with lake personnel it became apparent that the eight launch ramps were considered to be equal in the amount of use they receive since they all receive very heavy use on the weekends and considerably lighter use on the weekdays. For this reason, all ramps were considered to be similar in use and thus treated as one population.

All seven resorts and marinas have launch ramps and parking available to the general public for a fee. There is also one free public use ramp located at Capell Cove, which is managed by BOR. The eight launch ramps have at least a two-lane asphalt or concrete ramp, courtesy dock, and 50 to 100-trailer paved parking areas. The ramps typically serve all pleasure boats (including large cabin cruisers) and fishing boats.

2. Resort/Marinas

All seven concessionaire-operated resorts and marinas serving Lake Berryessa were visited to document the size of each operation. The seven resorts vary in size with some resorts offering around 100 boat slips and others with over 300. A majority of the resorts offer long-term lease sites, most with private trailers

or mobile homes occupying them, launch ramps, camping, and some day-use facilities. The seven resort/marinas in Table A-1 comprise about 1,500 boat slips.

TABLE A-1 RESORT/MARINA INVENTORY: LAKE BERRYESSA	
Resort/Marina	Approximate Number of Slips
Putah Creek Resort	130
Rancho Monticello Resort	330
Lake Berryessa Marina	200
Spanish Flat Resort	350
Steele Park Resort	100
Pleasure Cove Resort	150
Markley Cove Resort	230

Some of the marinas apparently have unrented slips, as numerous vacant slips were observed at several of the resorts/marinas during reconnaissance and field observations, and the lists of slip renters provided by the resorts/marinas in some cases contained substantially fewer names than the number of slips present. This was especially the case for Pleasure Cove Resort although numerous attempts were made to obtain a more complete list. Pleasure Cove was still included in the survey.

C. Sampling Methods

Two different sampling methods were used to contact ramp users and resort/marina boaters with docks, dry storage, and marina slips. The public ramp users were contacted during 48 randomly selected, four-hour long interview periods. All other boaters were contacted through a mail survey, with 50 percent of the persons on the mailing lists (every other name) selected to receive a questionnaire.

1. Exit Interview Schedule

The days on which exit interviews would be conducted at the ramps were selected by numbering the 21 "peak days" (weekends and holidays) and the 50 weekdays available during the data collection period of June 6 to August 15, 1998. 24 weekend days and 24 weekdays on which interview periods would be scheduled were then randomly selected by drawing numbers from a random number table.

The numbers chosen were inserted into a three-part matrix with a cell designated for morning (8:00 a.m. to 12:00 noon), afternoon (12:00 noon to 4:00 p.m.) and evening (4:00 p.m. to 8:00 p.m.) interview periods (Figure A-1). This procedure was repeated two times: once each for weekends and weekdays. The 24 weekend and 24 weekday interview periods were evenly divided (eight periods each) between morning, afternoon, and evening interview periods.

	Morning	Afternoon	Evening
Weekday	(8)	(8)	(8)
Weekend	(8)	(8)	(8)

Schedule Summary

Weekdays: 24 interview periods
Weekends: 24 interview periods
Total: 48 interview periods

Figure A-1. Exit Interview Period Scheduling Matrices

After the date and time slot for each of the 48 exit interview periods were chosen, the ramp locations were chosen by assigning numbers to the eight launch ramps and drawing numbers from the random number table to make the selections.

A restriction was implemented such that none of the ramps would be scheduled more than once on the same day. Also, due to personnel limitations, a restriction was placed on the scheduling of interview periods such that interviewing would not occur more than twice on the same given day, and if they did occur twice on the same day, they would not occur at the same interview time period (i.e., morning, afternoon, or evening).

Results of Exit Interviews

A total of 325 exit interviews were conducted at the public launch ramps over the 48 four-hour exit interview periods, an average of almost seven interviews per period. Researchers conducting the exit interviews enjoyed a good response from most boaters throughout the season. Only two refusals occurred, and the occasional boater was encountered who was not in a condition to answer questions, but most seemed pleased to participate.

The greatest number of interviews were completed during June (46%). Survey activity slowed down slightly in July, when only 35% of the interviews were conducted although 13% of all interviews occurred over Independence Day

weekend, one of the busiest boating weekends of the year. Interviews picked up again in August, at the end of the survey season, when 62 interviews (19%) were conducted during the first two weeks of the month.

The 24 survey periods (50%) scheduled on weekend days and holidays (or “peak days”) comprised about 78% of all interviews conducted due to extremely high weekend use of the lake. This ratio of weekend to weekday interviews approximates the ratio of overall weekend to weekday boating traffic, as near as can be estimated using the aerial boat count data. Nearly eleven interviews were conducted per weekend interview period versus just three per weekday interview period.

The times interviews were conducted throughout the day also follows the general use distribution, with the majority of interviews (53%) occurring during the evening (4:00 p.m. to 8:00 p.m.) interview periods. Only about 16% of the interviews were conducted in the morning. Substantial numbers of boats may put in and be on the lake before noon, but most of these boats do not take out until the mid to late afternoon.

Interview Locations

Interviews were conducted at the eight launch ramps located on Lake Berryessa (Table A-2). The majority of interviews took place at Capell Cove and Markley Cove launch ramps.

TABLE A-2 EXIT INTERVIEWS COMPLETED AND EXITING BOATERS PASSED BY LAUNCH RAMP		
RAMP	INTERVIEWS	PASSES^a
Putah Creek Resort	24	20
Rancho Monticello Resort	47	38
Lake Berryessa Marina	24	7
Capell Cove Ramp	60	54
Spanish Flat Resort	36	13
Steele Park Resort	37	6
Pleasure Cove Resort	37	35
Markley Cove Resort	60	60
TOTAL	325	233

a. The 233 passes listed include two refusals to participate.

Boaters Passed During Interview Periods

Overall, 42% of the exiting boaters were “passed” and not interviewed. Passes were much more frequent during busy weekend interview periods when 91% of all “passes” occurred. Most passes occurred when boaters exited the lake and left the ramp area while the interviewer was interviewing other boaters. This was especially common during the late afternoon, when there tended to be a rush of boaters exiting the lake. The longer interview questionnaire than had been used in past studies and the use of a lake map to record spatial data extended the interviews and increased the number of boaters passed.

Gender of Boaters Interviewed and Ramp User Party Size

Eighty-two percent of the boaters interviewed were male. Though data on the gender of the boaters using the ramps was not collected, females were clearly observed to comprise about 18%. However, most of the boaters interviewed were male because males were more apt to speak up or volunteer to be interviewed when the boating party included both sexes. No attempt was made by the interviewer to select which boater in parties of greater than one would participate in the interview.

The average number of people using ramp users’ boats was slightly more than three persons (Table A-3). About 11% were solo boaters, and the greatest proportion of parties contacted contained two members.

TABLE A-3 RAMP USER PARTY SIZE		
Average Party Size: 3.1 people		
# of people in party	Frequency	Percentage (%)
1	36	11
2	109	34
3	57	18
4	67	21
5	29	9
>5	27	7

2. Mail-back Survey

Letters signed by the Lake Berryessa Resource Manager requesting lists of resort/marina customers and long-term site holders with dock slips were sent to each resort/marina. All of the resorts/marinas provided the requested lists, containing a total of 978 usable names and addresses. 489 (50 percent) of those persons (every other name on the mailing list) were sent questionnaires.

Questionnaires accompanied by a cover letter and postage-paid return envelope were sent to the selected resort/marina boaters. Dillman's (1978) "Total Design Method" for mail surveys was used. The first questionnaires were mailed in mid-July with the expectation that most boaters intending to boat on Lake Berryessa in 1998 would have done so and could respond to the survey having had recent experience with boating conditions on the lake. One week after the initial mailings, reminder postcards were sent out. After two weeks, a replacement questionnaire and letter were sent to non-respondents.

Good return rates were realized for the resort/marina boater population contacted through a mail survey with an initial return rate of 71% (Table A-4). A high number of vacant private docks and marina slips were observed during the inventory in late May and early June which led to the expectation that some individuals may be maintaining a dock but no longer boat, though this could not be presumed from observation alone. In an attempt to identify non-boaters in the initial sample, mail survey recipients were asked to return the blank questionnaire if they no longer boated on the lake.

**TABLE A-4
ADJUSTED SAMPLE SIZES AND MAIL SURVEY RETURN RATES**

	Q'naires Sent	Q'naires Returned	Percent Returned	Non-boaters	Adjusted Returned
Resort/Marina Boaters	489	345	71%	(-) 17	70%

Six of the 489 resort/marina boaters who were mailed a questionnaire returned it not completed with a note explaining that they no longer owned a boat or were not currently boating. These individuals were subsequently deleted from the sample since they were no longer a member of the target population for the study. Furthermore, eleven of the 489 questionnaires were returned because of an incorrect or "insufficient" address. These individuals were also deleted from the survey sample since they could not be contacted.

D. The Survey Instrument

One area of emphasis during the boater recreation studies conducted at several Corps lakes is the development of explicit and low-cost procedures to inventory existing conditions. An important aspect of this has been the development of a short set of questions to ask visitors about their perceptions of "quality" conditions on the area. This set of questions has been used at several areas supporting land-based and water-based recreation and were used during previous pilot tests and studies at five Corps lakes ranging in size from 3,000 to over 43,000 acres. Information is obtained about visitor and visit characteristics, site characteristics, how the study area compares to other similar areas in the region, visitors' perceptions and preferences for use levels and perceptions of conflicts, and changes occurring.

The questions have been kept short and easy to administer and tabulate, features, which keep with the manager-oriented, low-cost approach that has been chosen. This set of questions was used as the initial template for the questionnaire to be used during launch ramp exit interviews on Lake Berryessa. The questionnaire was also reviewed and commented on by Lake Berryessa staff.

Additional information was gathered during the boater survey regarding boaters' motivations for visiting Lake Berryessa, their level of specialization, and their perception and preferences for increased development on adjacent lands. This was agreed upon and resulted in the addition of five questions on the survey. (The specialization data did not reveal any significant patterns or relationships so results and discussion are not presented herein). The final draft of the questionnaire used for exit interviews on Lake Berryessa is in Appendix E.

A map of Lake Berryessa was used in conjunction with the exit interview questionnaires to record the location of boaters' activities, their "favorite" and "avoided" areas, and problem locations. The survey instruments used for the mail-back survey groups (Appendix F) contained the same core questions as those used for the exit interviews.

E. Aerial Boat Counts

Lake managers indicated during the planning phase of the study their interest in obtaining better information on the types and numbers of boats using specific areas of the lake. Project managers were also interested in identifying areas where congestion occurs. To meet these use estimation needs a tentative plan was drawn up for conducting boat observations and counts from a boat traveling a designated route through the study area. This method had been

devised for use on Corps lakes as an alternative to costly and weather-limited aerial photography as a means of measuring boating activity.

However, it was soon learned that Lake Berryessa park rangers have been conducting aerial boat counts for several years and already had count zones established for the lake. The aerial boat count flights were contracted for with a private charter service from the nearby Davis airport. The aerial boat counts they conducted in the past usually corresponded only with busy holiday weekends so a new count schedule for the 1998 summer boating season was laid out.

A total of six counts were scheduled with counts scheduled on a weekday and weekend day of each month of June, July, and August. (Due to scheduling difficulties with the private charter service the June weekend count was not carried out). All counts were scheduled to begin in the afternoon after 1:00 p.m. in order to focus the limited number of flights during peak use times.

Count Method and Routes

The person conducting the aerial boat observations sat next to the pilot (on the right-hand side of the plane) and marked on a map the location and number of boats on the lake. All counts originated at the south end of Lake Berryessa beginning with the Narrows region. A clockwise loop route for the flights was pre-planned and cleared with the pilot to allow the observer an unobstructed view of the lake out of the right side of the plane. The plane first circled the Narrows region followed by another clockwise loop made around the main body of the lake covering the west, north, and east sides of the lake. Each flight required around one hour to complete.

Limitations of Count Method

Conducting counts from the air has some advantages as well as disadvantages as compared to on-the-water counts. Aerial counts have the advantage of providing the possibility for accurate counts that are near to being "snapshots" of conditions at a particular time or for a short period of time. In contrast, because each on-the-water count takes several hours to complete, and because boats move about and may enter and leave the lake during that time, on-the-water counts do not offer a "snapshot" count for one particular time. Also, the study area would have had to have been divided into smaller "count zones" for on-the-water counts, removing the possibility of measuring and describing use for the entire study area at any one time.

Boat counts using aerial photography can be quite expensive and require the additional expense of purchasing, developing and interpreting the film. The

count methods used for this study cannot claim the 100 percent accuracy of aerial photos but have the advantage of much lower cost. In areas where a plane is available near to the study area, plane rental may be considerably less expensive than the cost of a greater number of hours of boat use (and fuel) that would be needed to cover the same area from the water.

An important advantage of the on-the-water counts, in addition to being unaffected by such factors as overcast weather or low cloud cover, is the ability to differentiate between different types of boats (e.g., fishing boats, speedboats, pontoon boats, houseboats, and personal watercraft). This is not always possible with aerial photographs because small and slow-moving boats may leave little wake, and because different types of boats may look very similar from above.

Although every effort was made to conduct thorough observations, there is an increasing possibility that accuracy will decrease as the number of boats on the lake increases. Boats may be double counted on the return leg of the count flights. Also, when areas of the lake become congested, the number of boats may be under-counted. Finally, boats may be missed in remote backwater areas or where shoreline trees hide them. In general, it is believed these errors balance each other out. Although an exact count cannot be claimed for peak use periods (i.e., weekend afternoons), when errors are most likely to occur, the counts can be used to provide a "ball park" estimation of use levels and indicate the relative amounts of use various parts of Lake Berryessa receive.

Trailer Counts

In order to estimate the proportion of boats using the study area originating from public launch ramps, information on the number of boats launching from individual ramps was needed. These data were obtained in conjunction with the exit interview periods scheduled at the launch ramps. Interviewers counted the number of boat trailers present at the beginning, two hours into and at the end the interview period. Following this schedule, a total of 144 counts were possible over the 48 interview periods. In this way, the amount of use ramps receive on weekdays and weekends and at various times of day can be estimated.

All of the aerial boat counts discussed in this report were conducted between approximately 1:00 and 2:00 p.m. The intent was to obtain boat traffic data primarily for the busiest times of the day on the lake during the limited number of flights that would be conducted. Local managers estimated that boat traffic peaked in the mid-afternoon on both weekdays and weekend days, perhaps around 2:00 or 3:00 p.m. The boat trailer count data for these

peak-use times can be used, with the aerial count data, to arrive at some approximation of the proportion of boat traffic originating at those times from the ramps.

The highest aerial count of boats on Lake Berryessa was 538 boats on Sunday, August 16. However, this count was conducted from 1:00 to 2:00 p.m., somewhat earlier than the apparent peak use of the public launch ramps. A count of 493 boats was recorded about one month earlier on Sunday, July 26 also between 1:00 and 2:00 p.m. The weather was similar during both counts, with the sky mostly sunny and temperature at about 90° F. These aerial counts suggest that the peak-use level for Lake Berryessa between 1:00 p.m. and 2:00 p.m. be about 500 boats.

The trailer count data also indicates that the estimated number of boats occurring on Lake Berryessa at 2:00 p.m. is around 500. (63.8 trailers x 8 launch ramps = 510.4) However, this figure does not include the number of boats that originate from marina or private dock slips. Since there are over 1,500 boat slips on Lake Berryessa the actual number of boats on Lake Berryessa between 1:00 and 2:00 p.m. on a weekend day can be assumed to be much greater than 500.

Using the peak-time (4:00 p.m.) trailer count data the approximate number of boats on Lake Berryessa that originate from ramps is 564. (70.5 trailers x 8 launch ramps = 564) Without knowing the approximate number of boats that originate from resort and marina boat slips it is difficult to estimate the percentage of boats on Lake Berryessa coming from launch ramps. A conservative estimate, based on the aerial boat count data, would indicate that at least 50% of all boat traffic originates from the launch ramps.

APPENDIX B

METHOD OF ANALYSIS OF SURVEY DATA

Numerous studies have established that visitors have widely varying attitudes, preferences, and motivations for recreation. Thus, in presenting the analysis of the data collected through exit interviews and mail surveys of Lake Berryessa boaters, the primary purpose is to describe the distinct user groups present on the lake and their preferences for and perceptions of existing conditions.

This survey documentation of boaters' perceptions and preferences is the most important potential contribution of the survey data toward improving management. In this way, managers may take advantage of boaters' many seasons of experience on the lake to plan and target management actions. Survey data can indicate the conditions that are most important to the experience sought by different users and which of these conditions they perceive to be most threatened. The data can also guide management response to problems toward a particular boater or activity group that appears most affected (e.g., ramp users, or fishermen, etc.).

The boater survey sampling was structured by the existence of two different "access groups" (ramp users and resort/marina boaters). The survey data analysis continues this structure by tabulating and comparing survey responses from these two groups. This user group segmentation recognizes that these groups may have significant differences in how they use the lake, how they perceive existing conditions, and in their preferences for conditions. However, analysis may be structured in other ways. For example, boaters may be classified as to their "activity groups" (e.g., fishermen, pleasure boaters, water skiers, etc.) taken from both of the "access groups." This would be based on the expectation that boaters seeking similar recreation opportunities will likely have similar preferences for conditions.

Finally, the mode of access, activities, past experience on Lake Berryessa, and the conditions sought can be described for the group of respondents who reported particular problems or whose survey responses indicated they are most affected by a particular condition they have encountered on the lake such as crowding or congestion.

Analysis of Responses to Open-Ended Questions

Scientific analysis involves the reduction of data from unmanageable details to manageable summaries (Babbie, 1992). Boaters' responses to the survey questions provide a wealth of "unmanageable details" which, after careful analysis, can be reduced to "manageable summaries." Because most of the questions on the survey questionnaires about boater perceptions and preferences are open-ended, that portion of the analysis presented some unique challenges.

In using open-ended questions, respondents were not limited to giving "yes/no" answers or responding to a limited range or scale of provided responses. Instead, respondents' spoken answers to questions were written down by interviewers or, in the case of mail-back questionnaires, respondents wrote down their answers. The advantage of open-ended questions is that they allow the most latitude for boaters to communicate their responses to the questions without the limitations imposed by a predetermined list. A wider range of responses and more specific information are obtained.

Previous experience at gathering perception data from boaters at Corps lakes has shown that using this form of response is worthwhile, although they are more difficult to analyze. These studies demonstrated that visitors' opinions lie *between* "yes" and "no" and that they have many considerations related to our questions. It profits managers to understand the full complexity of the issues that are of most importance to visitors.

However, some means is needed to make the many and varied responses received accessible to the managers for whom the information was collected. Not only may there be a wide range of responses to open-ended questions, respondents may express what is essentially the same response in different words. These responses, taken as is, would be difficult for managers to use. The primary task during analysis of the survey data, then, is to sort out these responses into meaningful categories that have meaning in relation to management concerns.

This sorting can be more broadly referred to as "data reduction," the process of which is detailed below. The next step "data display" occurs in the form of the survey response tables which form the heart of this report, and which flow from the data reduction (Miles and Huberman, 1994). Finally, conclusions can be drawn, using the tables as a guide, by noting patterns and anomalies and proposing explanations.

Coding of Open-Ended Responses

The first level of sorting of responses occurs as the responses are assigned code numbers and stored in a computer database. Very similar responses are assigned the same code number and entered into the database as identical. For example, the responses "good fishing," "better fishing," and "fishing" and similar responses given by ramp users to the question "Why are those your favorite places?" were all coded and entered in the database as response No. 1 for the ramp users.

Frequently, several responses were given to a question. For example, a boater may have noticed three different changes that have occurred on the lake. In the case of mail surveys, respondents may have written several lines in response to a question (sometimes overflowing onto the back of the page) and the person coding must first pick out the separate responses within all the "extra" words. Most responses can be pared down to just a few words.

Though coding is a somewhat subjective process, the goal throughout is to differentiate between responses that are sufficiently different to require separate codes and those that can be treated as the same response. The degree of detail in coding depends on the research question, the "richness" of the data, and the researcher's purposes (Neuman, 1991). In this study, the responses to the open-ended survey questions have proven to be rich in variety and detail. In keeping with the research objective of providing managers with a full understanding of boaters' perceptions, data coding, analysis, and presentation has tended towards *preserving* what are admittedly small differences in responses.

Tabulation and Categorization of Responses

After all the survey data has been entered and all responses to open-ended questions coded, the number of respondents in each survey group who gave each response are tabulated (for example, the "good fishing" responses listed in the preceding paragraph were given 24 times by ramp users.) The tabulation is done using a simple program within SPSS which produces a printout listing the number of times each code number (response) appears in the data set.

After tabulation, the list of responses received for each question is grouped into logical categories. An individual response category may have many different responses, or it may contain just one or a few. Table B-1 contains a typical set of responses to the question "Why is that your favorite place?" from the ramp users interviewed in the "Solitude; Quiet; Fewer Boats" category.

**TABLE B-1
EXAMPLE OF CODED RESPONSE LIST**

<i>Response category: "Solitude; Quiet; Fewer Boats"</i>		
CODE NO.	RESPONSE	NO. OF RESPONSES
9	Less boats/boaters	13
11	Not as crowded	12
15	Quiet	18
35	Not many jet skis	5
42	Stay away from fishermen	1
44	No skiers/less skiers	3
51	Jet skis have to go slow in 5 mph zone	1
55	Not many people	7
60	Keep away from idiots	1
61	Safe area	1
64	Relaxing	3
75	Calm area	2
88	Less alcohol	1
Question: Why is that your favorite place?		

Typically, several obvious groups stand out. For example, the ramp users' exit interview responses to the question "Why is that your favorite place?" were grouped into the ten categories shown in column one of Table B-2. Each category contained from three to twenty-one different responses (and corresponding code numbers).

The total number of responses given to each question should equal the sum of the number of responses in each response category. If the numbers do not balance, a check is made for missed responses or arithmetic errors. Dividing the number of responses in each category by the total number of responses then yields the percentage of responses in each category. It is these responses that are displayed in the data tables for the open-ended questions. For the question shown in Table B-2, a total of 401 responses were given with over one-half of the responses falling into the first two categories listed.

TABLE B-2 EXAMPLE OF CATEGORIZED RESPONSES TO OPEN-ENDED SURVEY QUESTION		
RESPONSE CATEGORY	NUMBER OF RESPONSES	PERCENT OF RESPONSES
Good conditions for recreation activities	147	37%
Solitude; Quiet; Fewer boats	68	17%
Good fishing	36	9%
Scenery; Other natural features	32	8%
See friends/family; Social opportunities	32	8%
Good beaches	27	7%
Close to home; Convenient; Familiar	25	6%
Good facilities/services	17	4%
Water quality; Other water attributes	12	3%
Other reasons	5	1%
TOTAL	401	100%
Question: Why is that your favorite place?		

An effort was made to choose response category names which best characterize the majority of responses in the category. However, some category names may be broad and the specific responses contained in the category may not be apparent. In those instances, the reader of this report may turn to the coded list of responses in Appendix C and D and find listed all of the responses given in each response category by the boater groups surveyed. Typically, *a few responses make up a majority of the responses in a category*, though 20 or more different responses may have been given.

Survey Response Tables

Boater Group Profile Data

The descriptive boater group profile tables (Table A1 through Table 9) are largely self-explanatory. These tables present the percentage of each boater group that falls into a specified descriptive categories (e.g., the proportion of boaters who have been coming to Lake Berryessa five years or less) or the percentage who meet a specified attribute (e.g., used a fishing boat). Here the purpose is to give a general description of each boater group and to highlight the major differences between the boater groups and how they use the lake.

Perception Data

Tables B1 through B14 contain the categories of responses to each open-ended question and the percentage of all responses in each category given by each survey group. Survey results are reported in terms of percent of responses rather than percent of respondents because one respondent may give several different responses in the same category. For example, a respondent may have listed several changes they would "like to see occur", each stored in the database separately, but that all fall into the "improvements to public ramps" category.

It is hoped this categorization of responses will prove to be the most appropriate degree of "lumping" of survey responses for application to management questions and decisions. However, because it is not possible to predict all of the questions or management issues to which managers may want to apply the survey data, the data needs to be easily accessible in its ungrouped form. A user of the survey data may want to know how often a specific response to a question was given, or perhaps may want to re-categorize responses to meet a particular need. The SPSS program in which the survey data is stored allows this accessibility. Lists of responses given and the number of times each response was given (as shown for a single response category for one survey group in Table B-1) are provided in Appendix C and D.

It is appropriate to provide a warning here concerning comparison of responses between survey groups. Though survey groups may have similar percentages of responses within a category, the number of responses may be quite different. This is because there may be much fewer responses to the same question from one group than another, especially when the number of respondents (the sample size) is much smaller.

For the same reasons, fewer responses in a category to a question that had few total responses may make up as high a percentage of responses as another larger group of responses to a question with more total responses. For example, 68 ramp user responses in the "Solitude; Quiet; Fewer boats" category made up 17 percent of the total number of responses to the "favorite location" question. However, a nearly equal 63 ramp user responses in the "Too many boats/Too much traffic" category to the "why avoid" question, with about 38 percent fewer total responses, made up 25 percent of responses.

APPENDIX C

1998 Lake Berryessa Ramp User Survey Coded and Categorized Responses to Open-ended Survey Questions

Note: Throughout Appendix C, the figures on the left-hand side of the page represent the frequency of the responses listed on the right. The responses given are listed with their assigned code numbers as entered in the survey database and are listed by the response categories used in the report tables.

N = 325

Question 4a: Do you use other lakes to do the same type of boating you did today?

- 263/325 (81 percent) mentioned at least one other location where they boat
- 526 responses were given

Other Rivers and Lakes (alphabetized list of locations)

1	67.	Alpine Lake
1	56.	American River
11	37.	Anderson Reservoir
1	20.	Antelope Creek
1	46.	Bass Lake
1	70.	Beardsley Lake
1	44.	Black Butte
1	78.	Blue Lake
1	42.	Bodega Bay
3	51.	Buck Lake
8	6.	Bullards Bar
2	64.	Calero
19	9.	Camanche Lake
9	61.	Camp Far West
35	2.	Clear Lake
10	32.	Collins Lake
6	58.	Coyote Reservoir
3	12.	Davis Lake
52	7.	Delta
1	24.	Diamond
3	18.	Donner Lake
3	71.	Eagle Lake

14	13.	East Park Reservoir
3	59.	Englebright Reservoir
1	50.	Feather River
27	4.	Folsom Lake
2	40.	Frenchman Reservoir
1	69.	French Meadows
4	39.	Icehouse
3	35.	Indian Valley
1	76.	Isabella
1	38.	June Lake
1	25.	Konn Lake
9	52.	Lake Almanor
2	26.	Lake Amador
27	15.	Lake Don Pedro
3	53.	Lake Hennessy
1	80.	Lake Klamath
6	17.	Lake McClure
1	66.	Lake Mead
8	10.	Lake Mendocino
21	3.	Lake Oroville
4	5.	Lake Pillsbury
47	1.	Lake Shasta
34	28.	Lake Sonoma
19	8.	Lake Tahoe
1	22.	Lexington
1	73.	Loughlin
1	14.	Milleton
2	48.	Modesto
1	60.	Nacimiento
1	54.	Napa River
7	27.	New Hogan Lake
12	34.	New Melones Lake
1	57.	Oakdale
6	31.	Ocean
1	81.	Pardee Lake
1	75.	Paris Lake
1	72.	Payette Lake
1	77.	Pyramid Lake
2	29.	Rio Vista
6	43.	Rollins Lake
1	74.	Ruth
11	36.	Sacramento River
1	62.	San Antonio
3	65.	San Francisco Bay

1	63.	San Jose
4	33.	San Pablo Reservoir
1	68.	Spicer
1	19.	Stampede
1	21.	Stevens Creek
5	30.	Stony Gorge Reservoir
2	11.	Stumpy Meadows
1	41.	Tamales Bay
11	45.	Tollock
13	16.	Trinity Lake
1	79.	Union Valley
1	55.	Vallejo
6	49.	Whiskeytown
4	47.	Woodward

Question 4c: Why did you come here today instead of one of those other places?

- 270/325 (83 percent) gave a reason for coming to Lake Berryessa
- 361 responses were given

Close; Convenient; Familiar

146	1.	Close to home
2	2.	Grew up here
15	3.	Long-term site here
2	4.	Tradition
9	5.	Familiarity
1	43.	Close by for friends
1	44.	Houseboat here (Markley Cove)
2	46.	Have a boat pass
6	55.	Boat is stored here
1	64.	Member of Pacific campground

High Water Quality; Other natural features

8	6.	Clean water
1	7.	Clean lake (overall)
3	8.	Good size body of water; big
2	10.	Beautiful place
9	20.	Warm water
4	23.	Calm water
1	24.	Places to hide
5	28.	Weather is nicer here

- | | | |
|---|-----|-------------------|
| 1 | 32. | Cleaner here |
| 2 | 34. | Water is high |
| 1 | 51. | Coves |
| 1 | 57. | No wind |
| 1 | 66. | Nice surroundings |

Friends; Family; Social Opportunities

- | | | |
|----|-----|----------------------------|
| 13 | 19. | Friends |
| 9 | 21. | Family |
| 6 | 22. | Friend with long-term site |
| 1 | 59. | Socialize |
| 1 | 61. | Party lake |

Like Lake Berryessa better; Favorite lake

- | | | |
|----|-----|--------------------------|
| 11 | 9. | Like the lake; nice lake |
| 4 | 25. | Love it here |
| 7 | 41. | Better lake |
| 3 | 45. | Favorite lake |
| 1 | 48. | More fun here |
| 1 | 62. | Hate Lake Sonoma |

New; Change of Pace

- | | | |
|----|-----|--|
| 1 | 12. | See how lake has changed |
| 1 | 27. | Recommended in CA Recreation Lake Book |
| 1 | 30. | To come alone |
| 15 | 31. | For a different experience |
| 1 | 42. | Found it on a map |
| 1 | 50. | Haven't been here in a while |
| 4 | 53. | Heard about it |

Good fishing

- | | | |
|---|-----|------------------------------|
| 1 | 13. | Fishing tournament next week |
| 2 | 14. | To catch fish |
| 1 | 15. | Bigger/more fish here |
| 5 | 26. | Good trout fishing |
| 9 | 29. | Good fishing |
| 1 | 38. | Smaller but more fish here |
| 1 | 40. | Good bass fishing |
| 1 | 52. | Catch crappie |

Facilities/Services Available

3	16.	Good facilities
5	37.	Camping availability
2	49.	Monticello ski course
2	56.	RV camping at Lake Berryessa Marina
1	66.	Nice surroundings

Less crowded; Quiet; Peaceful

2	33.	Not many people during week
1	58.	Courteous boaters
3	60.	Not busy here
1	67.	To relax
1	68.	More quiet

Good for chosen activity

1	35.	Practice for jet ski race
1	36.	Joy ride
3	39.	Good water skiing
1	54.	To jet ski

Special events

1	17.	Davis swim race
2	63.	PWC poker run

Other reasons for choosing Lake Berryessa

3	18.	Testing boat
1	47.	Worked out a deal with president of Steele Park resort
1	69.	Have a new, bigger boat

Question 10a: Do you have a favorite place to go on Lake Berryessa?

- 223/325 (69 percent) had a favorite location
- 301 responses were given

Narrows

35	1.	Narrows (in general)
25	3.	Dam area
3	4.	Between Pleasure Cove and Dam

15	11.	Pleasure Cove
6	14.	Markley Cove
3	20.	Under powerlines (in Narrows)
8	26.	Haines Cove
6	29.	Portuguese Canyon
1	37.	Between Markley Cove and Dam
3	39.	Little Portuguese Canyon
1	41.	Barefoot Cove
1	48.	Decker Cove
1	49.	1 st cove on west side from Pleasure Cove ramp

Twin Bridges (Pope Creek and Putah Creek)

17	2.	Putah Creek Bridge area
21	5.	Pope Creek Bridge area
1	17.	Boy Scout Camp
1	50.	Bridges (Pope and Putah)

Western Shore (From USBR headquarters to Putah Creek Resort)

9	8.	Big/Small Island coves (5-mph zones)
3	9.	Rancho Monticello area
6	10.	Big/Small Island
1	13.	School House Island
1	23.	Between Rancho Monticello and Steele Park resorts
1	24.	Manny's Cove
2	30.	Lake Berryessa Marina
1	31.	North of Big Island
12	34.	Oak Shores
1	36.	Coyote Beach
1	40.	Goat Island
1	45.	Cove at Rancho Monticello resort campground

Spanish Flat area

9	15.	Spanish Flat
8	22.	Capell Cove
8	28.	Steele Park
1	35.	South-facing cove in Capell Cove area
1	38.	North of Steele Park, in front of Berryessa Highlands
5	42.	Between Spanish Flat and USBR headquarters
1	43.	Spanish Flat/Steele Park area

Skiers Cove

21	16.	Skiers Cove
3	21.	Monticello Ski Course
3	44.	Large cove on east side of Skiers Cove

Backwater creeks (Pope and Putah)

10	6.	Putah Creek
5	7.	Pope Creek

Eastern Shore

4	12.	Gunn Ranch (in front of)
6	33.	East Side
2	47.	Vineyards

Northern Shore

5	27.	North end
4	32.	Northeast section

Non-specific areas

9	18.	Coves
4	19.	Flat areas
3	25.	Secluded coves
1	46.	Main body, middle of lake
1	51.	Open water areas

Question 10b: Why is that/are those you're favorite place(s)?

- 222/223 (99 percent) gave a reason(s) for their favorite location(s)
- 401 responses were given

Good Conditions for Recreation Activities

20	6.	Good skiing
61	7.	Calm/smooth water
7	8.	Less wind
4	10.	No wakes
2	24.	Coves for skiing
6	29.	Kids can swim there

11	33.	5 mph no wake zone area
4	36.	Slalom course
2	37.	No big rocks
1	41.	Set up buoys for jet ski practice
10	47.	Good place to swim
1	48.	Rocks to jump off into water
1	53.	Good place for wakeboarding
1	66.	Barefoot water-ski
6	69.	Rope swing
5	71.	Smooth water for skiing/wakeboarding
1	80.	Coves to swim in
1	83.	Allows for greater speed
1	84.	Fun
1	85.	Good wakes
1	87.	Good place to coast/cruise

Solitude; Quiet; Fewer boats

13	9.	Less boats/boaters
12	11.	Not as crowded
18	15.	Quiet
5	35.	Not many jet skis
1	42.	Stay away from fishermen
3	44.	No skiers/less skiers
1	51.	Jet skis have to go slow in 5-mph zone
7	55.	Not many people
1	60.	Keep away from idiots
1	61.	Safe area
3	64.	Relaxing
2	75.	Calm area
1	88.	Less alcohol

Good Fishing

24	1.	Good fishing
2	26.	More fish
7	27.	Catch fish
1	28.	Good trolling
2	34.	Good trout fishing

Scenery; Other natural features

2	14.	More sheltered; enclosed area
4	19.	Natural scenery

6	25.	Protected cove
6	40.	Secluded
1	52.	Looks nice
4	56.	Pretty area
1	62.	Close to shore
1	73.	Coves
1	74.	Enjoy sun and weather
1	77.	Interesting ride
5	82.	Shaded area

See friends/family; Social opportunities

3	4.	Places to hang out
2	22.	Close for family to reach
1	38.	Parents there
12	39.	Everyone goes there; social
2	43.	Friendly people
2	49.	Parking for friends
2	63.	Connect boats together
3	65.	People watch
1	70.	Good place for family to hang out
1	72.	Women
1	78.	Partying
1	81.	Watch people dive off rocks
1	86.	Easy for friends to find

Good Beaches

2	12.	Easy access to banks
6	16.	Kids can play (on beach)
15	18.	Beaches
4	50.	Good area to park boat and beach

Close to home; Convenient; Familiar

15	17.	Close by
5	23.	Familiar with area
4	58.	Convenience/accessibility
1	76.	Close to camp

Good facilities/services

3	13.	Good campsites
1	32.	Good place to launch

7	45.	Picnic spots
1	46.	Best food on the lake
1	54.	Free launching
1	59.	Can keep boat on the water
2	68.	Nice facilities
1	79.	No fee

Water quality; Other water attributes

9	3.	Good water
1	30.	Warm water
1	31.	Clean water
1	67.	Clean area

Other reasons

3	2.	Nice area
1	5.	Excitement
1	57.	Different

Question 11a: Are there any parts of Lake Berryessa you deliberately avoid?

- 195/325 (60 percent) avoided at least one location on Lake Berryessa
- 234 responses were given

Main basin; Open water; Middle of lake

70	1.	Main basin; open water; middle of lake
----	----	--

Twin Bridges (Pope Creek and Putah Creek)

31	9.	Pope Creek Bridge
12	19.	Putah Creek Bridge
1	28.	Putah Creek Resort campground area
1	29.	Upper Putah Creek
1	37.	The Bridges

Spanish Flat area

4	6.	Steele Park area
2	14.	Capell Cove boat ramp
18	17.	Spanish Flat
1	22.	Between Capell Cove and Spanish Flat
2	23.	Capell Cove

2 26. Spanish Flat/Steele Park area

Narrows

12 5. Narrows
4 11. Markley Cove
2 32. Dam
1 35. Portuguese Canyon

Western Shore

3 30. Putah Creek Resort area
4 31. West side of lake where resorts are
3 34. Oak Shores Park
1 36. North of Big Island

Skiers Cove

6 13. Skiers Cove

Northern Shore

1 10. Northeast end
4 12. North end

Eastern Shore

3 8. East Side

Non-specific areas

3 2. Where skiers are
9 3. Where personal watercraft (pwc) are
5 4. 5 mph zones
6 7. Wherever skiers and jet skiers are
9 15. Heavy traffic areas
1 16. Everywhere after 11:00 am
1 18. Wherever people are
1 20. Shallow areas
1 21. Windy places
2 24. Places with fast boats
1 25. Places with big rocks
5 27. Boat ramp/marina areas
1 33. Coves

Question 11b: Why do you avoid that/those parts of the river?

- 194/195 (99 percent) gave a reason(s) for the location(s) avoided
- 250 responses were given

Undesirable water conditions

63	2.	Rough/choppy water
7	6.	Windy
1	7.	Trees coming out of water
3	18.	Shallow water
1	22.	Big rock which can damage boat
1	25.	Too wide
1	26.	Hazards; hazard buoys
1	32.	Debris in water
1	35.	Not good (water) for skiing
2	36.	Too narrow
2	40.	Wakes

Too many boats; too much traffic

38	4.	Too many people; crowded; congested
23	8.	Too many boats
1	16.	Too much other use
1	44.	Too busy on weekends

Undesirable behavior; unsafe boating

7	3.	Dangerous
13	9.	Crazy/rowdy people
3	11.	People acting like idiots
9	17.	Heavy drinkers; drunken boaters
1	21.	No one paying attention
1	23.	Jet skiers coming too close
1	24.	General attitude of pwc operators
1	30.	Hoodlums
1	31.	Crazy, stupid jet skiers
1	33.	Not good for younger kids
3	34.	Too many fast boats
2	39.	New, inexperienced boaters
1	43.	Hard to predict pwc's movements
1	46.	Not a family-type crowd
1	47.	Alcohol

Incompatible Boat Types or Activities

8	1.	Skiers and jet skiers
15	12.	Jet skis
4	13.	Water skiers
6	27.	Too many pwc
1	37.	Too many kids on jet skis
1	38.	Jet skis in 5-mph zone

Poor fishing

3	15.	Not good for fishing
2	28.	Wakes disrupt fishing
1	45.	Catch all the fish I need south of Big Island

Insufficient facilities/services

1	5.	No facilities (docks, marinas, etc.)
1	20.	Poor camping and picnic conditions
1	41.	Not as nice as Lake Berryessa Marina
1	42.	Too expensive

Other attributes of avoided locations

1	10.	Nothing of interest there
7	14.	Too far
2	19.	Dirty and dusty
3	29.	Have to go slow

Question 12: What do you like best and like least about the lake?

- 324/325 (99 percent) mentioned a feature they liked **best**
- 573 responses were given

Water quality; Calm water; Other water attributes

12	2.	Full of water
58	5.	Clean water
2	18.	Beautiful water
8	23.	Clear water
9	24.	Lake is clean
56	32.	Warm water
10	34.	Calm water
2	37.	Not as rough as Clear Lake

- 2 45. Good water quality
- 2 53. Freshwater
- 2 54. Deep water

Scenery; Wildlife; Other natural features

- 60 3. Big size; big lake
- 1 11. Plenty of beaches
- 5 15. Coves
- 25 17. Good natural scenery; pretty
- 2 26. Clean shoreline
- 7 28. Beautiful lake
- 9 33. Nice weather
- 3 36. No wind
- 1 42. Sheltered places to picnic
- 6 47. Places to hide/escape
- 1 51. Areas that are nice and calm
- 3 61. Can spread out; lots of room
- 2 64. Narrows/Straits
- 1 70. Access to shore
- 2 77. Private, quiet coves

Close; Convenient; Familiar

- 119 1. Close to home; convenient; familiar
- 2 48. Have a place here

General enjoyment; Good for chosen activity

- 13 8. Nice lake
- 2 14. Beaches for kids
- 2 27. Lots of places to ride
- 2 35. Slalom course
- 4 43. Great lake for a variety of things
- 2 49. Everything; it's paradise
- 1 52. Places for everything
- 1 56. Jet skiing
- 3 57. Fun lake
- 1 60. Love being out on the water
- 4 62. Good skiing
- 1 63. Lake Berryessa is a pleasant place to stay
- 1 65. No speed limit on water
- 3 66. Atmosphere at lake
- 1 69. Good water for water sports

- 1 72. Nicest lake around
- 1 80. Early morning skiing
- 1 83. Houseboats
- 1 85. Good lake for boating
- 1 86. Some wind for sailing

Good facilities/services

- 2 10. Well taken care of; well kept/maintained
- 1 21. No theft (Rancho Monticello resort)
- 1 31. Launch ramps
- 9 38. Accessibility
- 1 40. Amenities at Rancho Monticello resort
- 4 50. Free launch at Capell Cove
- 1 55. Resort boating (Steele Park resort)
- 1 58. Lots of different ramps
- 2 59. Security of parking at Putah Creek resort
- 1 67. Like Spanish Flat resort
- 2 76. Camping facilities
- 3 78. Resorts
- 1 81. Nice docking facilities at Lake Berryessa Marina
- 1 82. Nice facilities
- 1 84. Campsites at Pleasure Cove resort
- 1 87. Reasonable fees at Steele Park resort
- 1 91. Floating restrooms
- 1 92. Spots to picnic
- 1 93. Clean restrooms at Smittle Creek

Quiet; Relaxing; Peaceful; Low-density recreation

- 12 6. Not crowded
- 4 7. Can always find a quiet place to ski
- 1 9. Not densely populated
- 5 19. Not crowded (during the week)
- 1 29. Less boats
- 2 41. Not dangerous
- 4 68. Relaxing/getting away
- 1 71. Not as crowded as the Delta
- 1 75. When it's not crowded
- 1 90. Recreate/get away

Good fishing

- 19 4. Good place to fish; good fishing

2	12.	All three bass species
1	13.	Good water (for fishing)
2	16.	Lots of fish
1	25.	Lots of structure (for fishing)
1	30.	Trout fishing
2	44.	Fishing in the winter and spring
1	79.	Big bass
1	88.	Variety of fish

Family and friends; Social opportunities

3	20.	Nice people here (Rancho Monticello resort)
1	22.	Available to kids
10	39.	People in general; friendly
1	46.	Friends/togetherness
1	73.	Party bridge (Pope Creek)
1	74.	Friend has trailer here
1	89.	Family oriented

Question 12: What do you like best and like least about the lake?

- 279/325 (86 percent) mentioned a feature they liked **least**
- 390 responses were given

Increased boat traffic; More crowded

19	5.	Crowded on weekends
43	15.	Too many people/crowded
9	28.	Traffic on water
2	29.	Holiday weekend crowds
2	30.	Crowded camp at Capell Cove
4	56.	Too many boats
1	60.	Capell Cove crowded on weekends
1	75.	Crowded in Spanish Flat area
1	76.	Boats coming in all directions
3	90.	Crowded launch ramps
1	95.	Lake becoming too popular

Incompatible Boat Types or Activities

51	2.	Jet skis/jet skiers
4	19.	Ski boats/water skiers
2	21.	Skiers coming too close to fishing line
1	22.	Amount of skiers/wakeboarders on water

4	25.	Jet skiers and water skiers
5	33.	Too many jet skis
1	61.	Too many jet skis at Spanish Flat entrance
1	84.	Jet skiers in coves
1	86.	Kids on jet skis
1	106.	Skiers come too close to boat
1	110.	High speed boats

Undesirable Natural Features or Water Conditions

17	3.	Wind
25	18.	Rough, choppy water
1	26.	Muddy banks
6	27.	Hot in summer
1	39.	Trees in water
6	43.	Lack of beaches
3	58.	Too many wakes
1	59.	Lack of shade
1	65.	Rocks
1	85.	Brown grass is ugly
1	113.	Tougher to water ski

Insufficient facilities/services

1	8.	Lake accessibility
1	9.	No shoreline areas to picnic
2	13.	No boat camping
1	14.	No free, overnight public use ramp
3	20.	Not enough location information
1	32.	Only one slalom ski course
1	37.	Not enough launch ramps
3	38.	Parking (Rancho Monticello resort)
5	48.	Not enough parking at Capell Cove ramp
1	49.	Not enough parking at Oak Shores
2	51.	Public ramp (Capell Cove) not big enough
2	52.	Only one public launch ramp
2	63.	Camping is bad at lake (crowded, all dirt, no shade)
1	64.	Campsites at Putah Creek
1	67.	Facilities at Putah Creek
1	72.	No RV hookups at Lake Berryessa Marina
1	73.	Restrooms at Pleasure Cove resort
1	74.	Restrooms at Spanish Flat resort
1	77.	Maintenance of Spanish Flat resort
1	78.	Camping for five days (bad)

- 1 79. Litter at resorts
- 1 80. Hard to get a camping spot
- 1 81. Not enough day-use areas with picnic tables
- 1 82. Not enough campsites at Spanish Flat resort
- 2 87. Not enough parking at Markley Cove resort
- 2 91. Resort fees
- 1 93. Trash at campgrounds
- 1 99. Campsites at Pleasure Cove resort
- 1 100. Crowded campsites at Pleasure Cove resort
- 1 102. Lousy shower facilities at Pleasure Cove resort
- 1 104. The way Pleasure Cove resort is managed
- 1 105. Quality of lake concessions
- 1 108. No patrolling of Spanish Flat resort launch ramp
- 1 109. Not enough boat races/events
- 1 112. Parking at Steele Park resort
- 1 115. No shoreline camping
- 1 116. Mobile homes
- 1 117. Noisy campgrounds
- 1 120. Unfixed landslide at Capell Cove ramp
- 1 122. Not enough free launch ramps

More unsafe/inexperienced/discourteous boaters

- 2 6. Crazy/rowdy people on weekends
- 8 31. Dumb boaters; inexperienced boaters
- 1 34. Jet skiers speeding in Capell Cove
- 3 35. Discourteous boaters
- 8 40. Drinking (alcohol) on lake; drunk boaters
- 2 41. Boaters disregard laws/ 5-mph rule
- 1 47. Too many places renting jet skis to inexperienced boaters
- 8 55. Jet skiers not responsible
- 1 68. Having to keep an eye on other boaters
- 1 98. Reckless driving (pwc, speedboats)
- 1 118. Being cut off by other boaters
- 3 119. Dangerous boaters; reckless

Policy/Regulations/Rules; Law Enforcement

- 17 1. High launch ramp fees
- 1 11. No security (Lake Berryessa Marina)
- 5 12. Too many 5 mph no wake zones
- 1 50. 5-mph zone too far out at Oak Shores
- 1 66. Sheriff patrol

- | | | |
|---|------|---|
| 2 | 89. | Not enough patrol |
| 1 | 92. | Given ticket and harassed for speeding |
| 1 | 101. | Speed limit not enforced at Pleasure Cove resort campground |
| 1 | 107. | 5 mph no wake zones too large |

Decreased natural resource quality

- | | | |
|---|-----|---------------------------------------|
| 3 | 23. | Litter on beaches |
| 2 | 44. | People littering in the water |
| 1 | 54. | Fish contamination |
| 1 | 57. | Polluted lagoon at Putah Creek resort |
| 2 | 62. | Noise pollution from pwc |
| 2 | 97. | Floating algae |

Undesirable behavior/events

- | | | |
|---|------|--|
| 1 | 10. | Getting ripped off (Lake Berryessa Marina) |
| 1 | 16. | Loud, rowdy teenagers |
| 1 | 88. | Loud, obnoxious drunks at Markley Cove shoreline |
| 1 | 94. | Punk campers |
| 3 | 96. | Oak Shores rap concert |
| 1 | 103. | Too many young people drinking alcohol |
| 1 | 111. | People at Rancho Monticello resort |

Water hazards

- | | | |
|---|-----|-----------------------------------|
| 3 | 45. | Hazardous, unmarked areas |
| 1 | 69. | Hazard buoys have no lights |
| 2 | 70. | Lots of hazards, not enough buoys |
| 1 | 83. | Draw down of lake in late summer |

Other "least liked" attributes

- | | | |
|---|------|------------------------------|
| 5 | 4. | Long drive |
| 1 | 24. | Markley Cove |
| 3 | 36. | Going home |
| 5 | 42. | Curvy roads; difficult drive |
| 2 | 46. | Putah Creek resort |
| 1 | 53. | Not enough women |
| 1 | 114. | Bicyclists on road |
| 1 | 121. | Monopoly of resorts |

Question 13a: Have you noticed any positive or negative changes at Lake Berryessa in the last five years?

- 220/325 (68 percent) noticed at least one change
- 172/220 (78 percent) noticed at least one **positive** change
- 227 responses were given

Water level is up/more constant

118 1. More water; full of water

More/improved facilities or services

7	4.	Floating restrooms
3	6.	New/improved facilities at Steele Park resort
1	7.	Camping (available)
6	8.	Lake has been kept up well
2	11.	Oak Shore Park day-use area
1	12.	Marina improvement (Lake Berryessa Marina)
7	13.	Cleaner lake
4	14.	More recreation areas/day-use areas
1	16.	Ramp at Markley Cove is better
4	18.	Markley Cove has improved (facilities)
1	20.	Clean bathrooms at Capell Cove ramp
1	21.	Nicer launch facilities (Rancho Monticello resort)
4	22.	Better facilities all over (resorts)
1	23.	Campgrounds well kept (Rancho Monticello resort)
1	25.	Improvements made at Putah Creek resort
1	29.	Can use ramp at Capell Cove
1	30.	Whole lake has been upgraded
1	32.	More port-a-potties at Spanish Flat resort
1	33.	Roads improved at Spanish Flat resort
1	37.	Better management at Spanish Flat resort
1	38.	Clean floating restrooms
3	39.	Marinas upgraded
1	40.	More trash cans
1	43.	Free launch ramp
1	44.	More accessible
1	46.	Marinas are cleaner
2	47.	Facilities at Pleasure Cove resort
1	49.	Docks improved at Pleasure Cove resort

More regulation/patrol; Improved policies

5	5.	More patrolling
1	9.	Not as much pollution
2	17.	Less drunks
4	19.	More patrolling by sheriff
4	26.	Well-marked hazard areas
1	34.	More dispersed use
1	36.	Lake has mellowed out, no more gangs
1	41.	Better clientele
1	48.	More 5-mph buoys

Water quality good/improved

12	3.	Cleaner water
1	10.	Better water clarity
2	24.	Water quality maintained
3	31.	Not much debris/runoff in water
1	45.	Cleaner shoreline

Other positive changes

1	2.	Stocking of bass by Reapers Club
1	15.	Empty on weekdays
1	27.	Not as crowded
4	28.	Warmer water
1	35.	Boating is better
2	42.	Better fishing

Question 13a: Have you noticed any positive or negative changes at Lake Berryessa in the last five years?

- 220/325 (68 percent) noticed at least one change
- 82/220 (37 percent) noticed at least one **negative** change
- 109 responses were given

Policies/Regulations/Fees; Law Enforcement

11	4.	Higher launch ramp fees
1	8.	Steele Park resort is high priced
1	9.	Inconsistent fee structure
1	12.	Boat ramp problems
1	16.	Expensive day use fees
1	17.	No more day passes for slalom run (only yearly)

- | | | |
|---|-----|--|
| 1 | 20. | Bureau of Reclamation restricting shoreline development |
| 1 | 23. | Too many houseboats at Markley Cove resort |
| 1 | 24. | Coves that are 5 mph zoned |
| 1 | 28. | Lack of lake promotion |
| 1 | 29. | Increased rent at Spanish Flat resort |
| 1 | 31. | Overdeveloped |
| 1 | 32. | No enforcement of regulations in dam/Markley Cove area |
| 1 | 34. | People at night between Markley Cove and Dam shooting guns |
| 1 | 36. | No fireworks allowed on the 4 th of July |
| 1 | 37. | 5-mph zone not well marked around USBR headquarters |
| 1 | 39. | Higher prices for camping |
| 1 | 41. | Rules not enforced (Pleasure Cove resort) |
| 1 | 42. | No traffic monitor at Pleasure Cove ramp |
| 1 | 43. | More people jumping off Pope Creek Bridge |
| 2 | 45. | Oak Shores rap concert |
| 1 | 46. | No more houseboat rentals |

More boats/boat traffic/people

- | | | |
|----|-----|--|
| 16 | 2. | More people; crowded |
| 2 | 3. | More boats |
| 5 | 11. | More crowded |
| 1 | 22. | Waiting in line at Capell Cove launch ramp |
| 1 | 38. | Crowded boat ramps |
| 1 | 44. | Lake is more popular |

More undesirable boats/activities

- | | | |
|----|-----|---------------|
| 23 | 5. | More jet skis |
| 1 | 19. | Faster pwc |

More unsafe boating/inexperienced boaters

- | | | |
|---|-----|---|
| 2 | 7. | People not as courteous |
| 1 | 13. | Uneducated jet skiers |
| 1 | 27. | Jet skiers have no respect for people fishing |
| 2 | 30. | People more reckless |
| 4 | 33. | More inexperienced boaters |
| 2 | 35. | Lots of alcohol drinkers on water |

Water quality decline

- | | | |
|---|-----|--|
| 1 | 6. | Water is dirtier |
| 3 | 18. | Too much litter in lake (beer bottles) |
| 1 | 21. | More algae |
| 1 | 26. | Fuel in water |

Facility Decline; Insufficient facilities and services

- | | | |
|---|-----|---|
| 1 | 14. | Not enough public ramps |
| 1 | 25. | Not as much parking (Markley Cove resort) |
| 1 | 40. | Facilities not as nice (Pleasure Cove resort) |

Other negative changes

- | | | |
|---|-----|--|
| 2 | 1. | No beaches |
| 1 | 10. | More kids coming up to drink (alcohol) |
| 2 | 15. | Less fish |

Question 13b: Have these changes affected your enjoyment or use of Lake Berryessa?

- 124/220 (56 percent) mentioned at least one effect of a change they had noticed
- 154 responses were given

Positive Effects

Lake use more enjoyable/safer; Boat more

- | | | |
|----|-----|-----------------------------------|
| 9 | 1. | Will be back; will come more |
| 2 | 2. | Feel safer |
| 6 | 3. | Made visit better |
| 4 | 6. | Made it easier for everyone |
| 1 | 7. | People are happier |
| 3 | 8. | Family comes more often |
| 4 | 9. | More places to ski; better skiing |
| 1 | 12. | Makes me want to come more |
| 1 | 14. | Can get into coves |
| 7 | 15. | More room on the lake |
| 1 | 16. | More security |
| 17 | 18. | Better/increased enjoyment |
| 1 | 19. | High water is great |
| 3 | 20. | More places to go |

- | | | |
|---|-----|--|
| 1 | 21. | More convenience |
| 1 | 22. | We're closer to the campgrounds (Rancho M.) |
| 1 | 23. | Less hazards |
| 1 | 25. | More room for more boats |
| 5 | 26. | Easier to dock/launch |
| 8 | 27. | Much nicer |
| 1 | 30. | Stayed overnight for the first time (Putah Creek resort) |
| 2 | 31. | More water, more fun |
| 4 | 32. | Increased use |
| 4 | 38. | High water better for launching |
| 1 | 42. | More relaxed now |
| 1 | 51. | Less crowded in coves |
| 1 | 53. | More water, not as dangerous |
| 1 | 54. | Don't have to walk as far |
| 2 | 55. | More positive experience |
| 1 | 57. | More shoreline to work with |
| 2 | 59. | Can use Capell Cope ramp – no fee |
| 1 | 65. | Don't worry as much when I pull skiers |
| 1 | 66. | More beach area |

Better Lake Resource Conditions

- | | | |
|---|-----|------------------------|
| 2 | 17. | Lake is cleaner |
| 1 | 24. | Lake feels cleaner |
| 5 | 29. | Area is prettier |
| 3 | 34. | Cleaner water |
| 1 | 43. | Improved water clarity |
| 2 | 62. | Less debris in water |

Fishing improved

- | | | |
|---|-----|--------------------|
| 2 | 33. | Better fishing |
| 1 | 41. | More spots to fish |
| 1 | 67. | Better for fishing |

Negative effects

Lake use less enjoyable/less safe

- | | | |
|---|-----|--|
| 1 | 5. | More noise |
| 1 | 28. | Mess up motor/prop |
| 2 | 35. | Jet skis make me nervous |
| 1 | 37. | I don't like jet skis; they're dangerous, rude, loud and obnoxious |

- | | | |
|---|-----|--------------------------------|
| 3 | 39. | Not as safe with pwc's |
| 1 | 44. | Jet skiers run my fish away |
| 1 | 45. | Jet skiers give me no respect |
| 1 | 46. | Too many people and pwc |
| 1 | 47. | Water is choppier |
| 1 | 49. | Shoreline access is limited |
| 1 | 52. | More people come |
| 1 | 56. | Costs more |
| 2 | 60. | When crowded, difficult to ski |
| 2 | 64. | Getting more dangerous |

Avoid busy days/times/areas

- | | | |
|---|-----|-------------------------------------|
| 1 | 4. | Come earlier to ski and beat crowds |
| 5 | 10. | Come during the week only |
| 3 | 11. | Come earlier and leave earlier |
| 2 | 13. | Launch boat earlier |
| 1 | 63. | Avoid jet ski areas |

Caused change in activities; use lake less

- | | | |
|---|-----|--|
| 1 | 36. | Sold trailer at Markley Cove resort |
| 1 | 40. | We stay in one spot on the lake only |
| 1 | 48. | Can't shower or use bathrooms at Spanish Flat resort |
| 1 | 50. | Like the water but don't like the people |
| 1 | 58. | Not as safe (won't come as often) |
| 1 | 61. | Will quit coming, can go to Oregon for ½ the price |

Question 13c: Would the subdivision or development of lands adjacent to the lake affect your enjoyment or use of Lake Berryessa?

- 151/304 (50 percent) mentioned at least one effect
- 189 responses were given

Negative effects to natural resource conditions

- | | | |
|----|-----|--|
| 2 | 4. | Sewage problem |
| 3 | 5. | Will hurt everything; will ruin it |
| 4 | 11. | Housing will ruin the lake |
| 3 | 12. | Will affect the wildlife |
| 1 | 16. | Will affect the views |
| 1 | 17. | I want hills without houses |
| 23 | 23. | Ruin beauty of surrounding area; aesthetic appeal; scenery |

- | | | |
|---|-----|--|
| 1 | 27. | Would negatively affect fish spawning |
| 1 | 28. | Decline in water quality due to erosion |
| 2 | 29. | More litter |
| 4 | 30. | I like it pristine; leave it natural |
| 2 | 32. | Want to see trees not houses |
| 1 | 35. | Keep it as sparse as possible; temporary visitors only |
| 1 | 37. | Ruin the environment |
| 2 | 38. | I like the terrain the way it is |
| 1 | 44. | More fuel on the lake surface |
| 1 | 46. | Reduced shoreline |
| 2 | 52. | Will be destroyed like Lake Tahoe |
| 2 | 54. | More pollution |
| 1 | 58. | I like the lake to be clear |
| 1 | 63. | Take away from peace and tranquillity |

More boats/traffic/people

- | | | |
|----|-----|-----------------------|
| 2 | 6. | Enough people already |
| 4 | 10. | Too many people |
| 36 | 13. | More people/crowds |
| 3 | 24. | More cars on the road |
| 2 | 41. | Bring more jet skis |
| 4 | 49. | More boats |

Against development/further development

- | | | |
|---|-----|---|
| 2 | 2. | Wouldn't like it |
| 1 | 7. | I am against development |
| 1 | 19. | Development leads to excess, let government run |
| 8 | 20. | People come here to get away from development |
| 8 | 21. | No more building, keep it the same |
| 3 | 36. | Wouldn't want to see houses or commercial development on lake |
| 1 | 40. | Enough houses, like coves the way they are |
| 1 | 43. | Would be better as long as it's away from the lake |
| 2 | 48. | Enough resorts already |
| 1 | 51. | If too clustered with houses, I like it open |
| 2 | 53. | Already too much development, need to restrict |
| 1 | 60. | Lake is already too crowded and developed |

Negative effects to recreation experience

- | | | |
|---|-----|---|
| 1 | 8. | Wouldn't go as much |
| 1 | 18. | Homeowners will think they own the lake |

- | | | |
|---|-----|---|
| 4 | 22. | Remain accessible; lake access; if public access is limited |
| 1 | 25. | Private restrictions/controls |
| 1 | 33. | Will detract from my experience |
| 1 | 42. | Would affect shoreline camping |
| 2 | 47. | Won't come |
| 1 | 50. | Ruin my enjoyment |
| 1 | 55. | More accidents on the water |
| 1 | 56. | I like it quiet |
| 1 | 59. | More problems |
| 1 | 62. | Would make it exclusive use only like Lake Tahoe |

Undecided; buffered statement

- | | | |
|---|-----|---|
| 4 | 1. | As long as there isn't pollution |
| 2 | 3. | Not if it's done correctly |
| 1 | 9. | As long as you keep it (the lake) open |
| 1 | 14. | If not too crowded with houses and people |
| 2 | 15. | If lake gets too crowded |
| 9 | 39. | It depends |
| 1 | 45. | Unless 5 mph zones everywhere |

Positive effects of development

- | | | |
|---|-----|--|
| 2 | 31. | Would be easier to come and stay |
| 7 | 34. | I would buy a house |
| 1 | 57. | Would enhance my enjoyment |
| 1 | 61. | It would spread people out; more choices |

Question 14: Have you had any problems or conflicts with other visitors while on Lake Berryessa?

- 73/324 (23 percent) mentioned at least one problem or conflict
- 88 responses were given

Discourteous behavior; Other boater conflicts

- | | | |
|---|-----|-----------------------------------|
| 1 | 2. | Rude boaters |
| 5 | 3. | Other campers arguing |
| 1 | 4. | Getting ripped off |
| 1 | 5. | Bigger boats swamping small boats |
| 1 | 6. | Rowdy guys |
| 2 | 12. | Skiers not showing courtesy |
| 2 | 15. | Rude water skiers |

12	16.	Problems at launch ramp (no boater etiquette)
1	19.	Small aluminum boat stolen several years ago
1	21.	Water skiers wouldn't let us ski the slalom course
1	24.	Drunks with guns at Pleasure Cove resort campground
1	28.	Loud music from rap festival campers
1	29.	Harassed by the sheriff
1	32.	Rap concert (people not notified, gives the lake a bad name)
1	35.	People littering

Unsafe/reckless/illegal boating behavior; Inexperienced boaters

2	7.	Reckless jet skiers and water skiers
6	8.	Drunk boaters
3	10.	People speeding
6	13.	Boaters coming too close
3	14.	Water skiers coming too close and fast
4	18.	Too many idiots on the water
2	20.	Getting cut off by other boaters
1	23.	Boaters passing too closely and cutting fishing line
3	26.	Speeding in 5 mph zones
2	31.	People swimming at launch ramp

Problems with Personal Watercraft

5	1.	Jet skiers don't follow right-of-way
1	9.	Drunk boaters
3	11.	Jet skis
7	17.	Jet skiers coming too close
1	22.	Boaters are against jet skiers and vice-versa
3	30.	Jet skiers speeding in 5-mph zones

Other problems/conflicts

2	25.	People in high performance boats (jet boats)
1	33.	Gets too crowded
1	34.	Trailer too close to our trailer

Where did that problem occur?

- 70/73 (96 percent) gave a problem location
- 76 responses were given

Resort/marina locations

2	4.	Campsites at Lake Berryessa Marina
2	9.	Lake Berryessa Marina
6	13.	Pleasure Cove resort
3	15.	Putah Creek Resort campground
1	16.	Putah Creek Resort gas ramp
2	17.	Rancho Monticello Resort campground area
1	24.	Resorts

Narrows

7	5.	Markley Cove
3	7.	Skiers Cove
2	12.	Pleasure Cove area
3	14.	Narrows
1	21.	Haines Cove

West side of lake

1	3.	Big/Small Island coves (5-mph areas)
3	6.	Putah Creek Bridge
5	10.	Putah Creek
1	18.	Pope Creek Bridge
2	19.	Oak Shores Park

Spanish Flat area

4	8.	Capell Cove
2	11.	Spanish Flat
3	22.	Steele Park area

Non-specific locations

4	1.	Back in the coves
15	2.	All over/everywhere
2	20.	5 mph zones
1	23.	Main body

Question 15: Are there changes you would like to see on Lake Berryessa?

- 240/324 (74 percent) mentioned at least one change they would like to see
- 376 responses were given

Changes to management policies/regulations

- | | | |
|----|------|--|
| 4 | 5. | Improve beaches |
| 3 | 7. | Keep water level high |
| 2 | 12. | More fish |
| 5 | 17. | Stock more fish |
| 2 | 21. | No rowdy kids |
| 15 | 23. | Control jet skis |
| 3 | 27. | Make it illegal to have booze in boat |
| 3 | 39. | Another slalom ski course |
| 10 | 40. | Get rid of jet skis |
| 1 | 44. | Arrow hunts for carp |
| 3 | 49. | Fireworks show on 4 th of July |
| 1 | 52. | More shoreline usage |
| 2 | 58. | Bigger marinas |
| 3 | 68. | Don't outlaw/ban jet skis |
| 1 | 80. | More accessibility to water |
| 1 | 82. | More trout |
| 3 | 101. | Less jet skis |
| 1 | 105. | Would like to see more done with the lake; more activities |
| 2 | 107. | Don't ban two-stroke engines |
| 3 | 118. | Ban all two-stroke engines |
| 1 | 120. | No more resorts – maxed out already |
| 2 | 122. | More development of lake |
| 1 | 124. | Ban rap concerts or organize them! |
| 1 | 126. | More ski clubs |
| 1 | 131. | More lake concessions |
| 1 | 135. | Appropriate concessions for this world class area |
| 1 | 136. | Keep big boats off the lake |
| 1 | 141. | More boat events (e.g., jet ski races) |
| 3 | 147. | Raise legal age for jet ski operation |
| 1 | 151. | More dry/wet storage places for boats |
| 1 | 154. | Keep it as pristine as possible |
| 1 | 155. | Leave trailer people alone at Pleasure Cove resort |
| 1 | 156. | Make it a fishing-only lake |
| 1 | 158. | Clean up or close down Putah Creek resort |
| 1 | 160. | Houseboat rentals |

Improvement/additions to public ramps/launch facilities/public access

- | | | |
|---|-----|--|
| 7 | 1. | More free public ramps and more parking |
| 1 | 18. | Public use ramp for overnight boating/camping |
| 5 | 33. | More free boat access (between Markley Cove resort |

- and Dam)
- 17 37. More free public ramps
 - 2 38. Improve Capell Cove public ramp
 - 1 41. Boat ramp on East Side of lake
 - 3 42. Bigger, wider ramp at Capell Cove
 - 2 43. Courtesy dock at Capell Cove
 - 9 47. More launch ramps
 - 2 65. Free boat launch on north end of lake
 - 1 71. Bigger public ramp
 - 1 72. Little convenience store at Capell Cove ramp
 - 7 74. More parking at Capell Cove ramp
 - 2 76. Add sinks to Capell Cove bathrooms
 - 1 79. More launch ramps closer to Winters area
 - 3 123. Traffic monitor at Capell Cove launch ramp
 - 1 157. Fix landslide at Capell Cove ramp
 - 1 161. More picnic spots at Capell Cove ramp

Improvements/additions to resorts and marinas

- 1 25. Boat ramp too slow at Markley Cove resort
- 2 32. Bigger ramp at Markley Cove resort
- 1 34. Cleats at Markley Cove ramp
- 1 35. Design launch ramp differently at Markley Cove resort
- 1 46. Weekend reservations for camping instead of weekly reservations
- 2 48. More parking at Rancho Monticello resort launch ramp
- 1 53. Better docks at ramps at Markley Cove resort
- 7 54. Cheaper launch rates
- 2 62. Bigger campground at Putah Creek resort; improve campground
- 2 63. Improve docks/ramp at Putah Creek resort
- 1 64. Remove rocks at Putah Creek launch ramp
- 1 69. New owner at Putah Creek resort
- 3 83. More parking at Spanish Flat resort launch ramp
- 1 86. Ability to call for reservations at Spanish Flat campground
- 1 90. Another launch ramp at Putah Creek resort
- 3 94. Cheaper gas prices at resorts/marinas
- 2 95. RV hookups at Lake Berryessa Marina
- 1 96. Better restrooms at Pleasure Cove resort
- 1 97. Quiet time enforcement at Pleasure Cove campground
- 2 100. Better restrooms at Spanish Flat resort
- 1 103. Expansion of facilities at Spanish Flat resort

- 2 114. Someone to direct boat traffic at Markley Cove ramp
- 2 117. More parking at Putah Creek ramp
- 1 127. Resort stores to stay open longer
- 1 128. Better parking at Lake Berryessa Marina (car and trailer pull-ins)
- 2 129. More parking at Pleasure Cove ramp
- 2 130. Bigger campgrounds
- 1 138. Better trailer park management at Pleasure Cove resort
- 1 139. Upgrade/upkeep to resorts using their profits
- 1 143. Better RV camping (full hookups)
- 1 150. Boat ramp monitor at Steele Park ramp
- 1 152. Boat wash area
- 1 153. Lower camping fees at Rancho Monticello resort

Limit/zone/disperse/restrict use

- 17 2. Designate a jet ski only area
- 2 3. Implement counter clockwise rule
- 1 4. Control congestion in the Narrows
- 5 8. Less people
- 1 67. Divide lake (½ fishing, ½ ski/jet ski)
- 1 81. Less boat traffic
- 2 88. Limit number of boaters on weekends; reservation system
- 2 116. Dispersed, semi-developed lakeshore boat camping
- 1 125. More designated water ski areas
- 1 134. More 5-mph coves for fishermen

More patrol/enforcement of boating regulations

- 1 9. More security
- 10 10. More patrol
- 4 11. Enforce 5-mph rule
- 2 13. Reduce speeding
- 3 26. Check for drinking alcohol
- 1 28. More patrolling of water skiers
- 2 87. Keep better eye on jet/water skiers in 5-mph zones
- 4 99. More law enforcement patrol of lake and resorts
- 1 113. More patrol at all times not just holidays and on highways
- 1 142. Keep people from jumping off Pope Creek Bridge
- 1 145. Boat safety checks by US Coast Guard
- 1 146. Reduce speeding in Spanish Flat area
- 1 148. Control reckless golf cart driving by kids

Improvements/additions to public facilities/services

9	55.	More day use areas/picnic areas
3	61.	Plant trees near the shore/more shade
4	75.	Mark locations on the lake; directional signs
1	77.	Family docking opportunities
1	91.	Concessions at Pope Creek Bridge
1	92.	Permanent boat mooring (with lights) at Pope Creek Bridge
2	109.	More food concessions on lake
1	110.	Floating convenience stores
1	115.	Better distribution of lake information
1	137.	Marina repair shop on north end of lake
1	159.	Picnic areas with docks and ramps

Improvements/additions to floating restrooms

15	14.	More floating restrooms
1	15.	Floating restrooms to be more widely scattered
1	16.	Floating restroom between Spanish Flat and Capell Cove
1	20.	Improve floating restrooms (they're ugly)
1	93.	Floating bathrooms at Pope Creek Bridge
1	121.	More floating restrooms around Rancho Monticello
1	144.	More floating restrooms near the dam

Additional/improved camping facilities

1	19.	Floating campsites like they have at Lake Oroville
1	30.	Campgrounds not only at resorts
3	45.	More tent camping resorts
4	50.	More overnight camping spots
4	51.	Boat camping
3	89.	Better camping
3	98.	More shoreline camping
1	132.	Island camping

Boater training/education; Better boater behavior

6	6.	Educate jet skiers (license, training, etc.)
1	22.	Jet skiers to be more informed
1	24.	More educated, courteous boaters
1	78.	Need more safety from jet skis
1	85.	For boaters to follow rules and obey speed limit signs

- 3 106. Water safety classes for all boaters
- 3 111. Mandatory boater licensing

Improve water quality; pollution control

- 1 56. Less littering
- 1 57. More no litter signs
- 2 59. Floating trashcans (like at Pardee Lake)
- 1 73. Clean up debris on the lake in winter time and after the rains
- 1 84. Fuel clean up
- 1 104. Recycle containers
- 2 108. Trash cans on beaches
- 2 119. Get MTBE's out of gasoline
- 1 133. Clean up debris on the lake

Changes in no-wake zones

- 1 29. More no-wake zone areas
- 1 66. 5 mph buoys at the mouth of Putah Creek
- 1 70. 5 mph buoys closer to shore at Oak Shores Park
- 1 112. Change 5-mph buoys at Markley Cove so they're straight across
- 1 140. Smaller no-wake zone areas
- 1 149. Mark 5-mph areas better

Improvements to hazard markers

- 1 31. Mark hazard buoys correctly at Lake Berryessa Marina
- 3 60. Mark hazard areas better

Other changes desired

- 1 102. Smooth water

Are there any additional comments you would like to make concerning the management of Lake Berryessa?

- 1. Lake is clean and full, very nice
- 2. I love Lake Berryessa
- 3. Allow dogs in Steele Park
- 4. I Love Berryessa, monitor jet skiers and first time visitors, educate community on boating, continue to allow people to come up
- 5. Zone for different uses or get rid of them [jet skis]

6. Heat the lake up
7. Had a good time
8. More enforcement of jet skis on weekends/holidays; # of pwc's out of control; have more sheriffs on pwc's; golf cart enforcement; want to keep mobile home forever!
9. Just like to come and relax
10. Nice work (the survey)
11. Its windy
12. Get jet boats and drinking off the lake; more patrol by the US Coast Guard; have safety checks, and check for drinking
13. Get rid of skiers; post signs saying to be more courteous and have respect.
14. Like it (Lake Berryessa)
15. Stock more fish
16. Keep doing a good job
17. Keep up the good work; need a traffic controller at Capell on big weekends
18. More boat ramps!
19. Sea Doos are too dangerous
20. Beautiful lake
21. Don't put in a freeway; keep prices down; keep it open to the public; keep it as it is
22. Had a good day
23. Charge less
24. Hope it stays full (the lake)
25. Good lake; well maintained
26. BLM areas to be signed for accessible areas/boater access to hunting grounds
27. Beautiful area
28. Keep it clean and full
29. Thanks for the survey; good to find out who your customers are
30. Fix dock at Putah Creek
31. Keep PWC alive
32. Great lake
33. Nice people
34. Don't outlaw jet skis
35. Hope they don't build (around lake)
36. On a scale from 1 to 10 my overall experience at Lake Berryessa is an 8 or 9
37. It was great and fun!
38. Like free launch
39. Thanks for asking for our comments
40. Beautiful lake; appreciate having it for all these outdoor activities, it's a privilege
41. I would like to see more designated ski areas; designated jet ski areas, wakeboard areas, etc.; similar activities should be designated to certain areas

42. Very pleased with upgrades of the lake
43. Really like this lake!
44. Need more parking at Spanish Flat
45. Keep water clean & clear, keep out algae (not like Clear Lake); bigger wake block to block wakes in Skiers Cove
46. Had a good time
47. Good place to come
48. Resorts charge high prices!
49. Keep doing what you guys are doing; keep it clean
50. Keep jet skiers and water skiers out of Putah Creek; respect fishermen
51. Fix up Putah Creek
52. Don't ban jet skis
53. Continue to allow jet skis.
54. Good lake, continue doing what you're doing
55. Great lake, that's why we come here.
56. Take care of jet skis.
57. Great lake
58. Had a great time; the lake is beautiful.
59. More floating toilets.
60. Awesome time.
61. Like to see people care more about the lake and clean up their mess.
62. Do something about these jet skis.
63. From what I've seen, things are moving along nicely.
64. Awesome beauty.
65. It's nice.
66. Lakeshore camping!!
67. Keep up the good work!
68. Really like it here.
69. Ban jet skis, bring back fireworks.
70. Had fun; a good time.
71. More education for all boaters; get MTBEs out of fuel.
72. Great lake.
73. Had a great time.
74. Lake Berryessa is a great lake for family enjoyment!
75. More tent camping and RV hookups.
76. Add fireworks on July 4th.
77. Love the lake, more launch ramps.
78. Nice and clean!
79. Had a great time.
80. Had a great time.
81. Good that you're getting feedback (from the public).
82. Watch parties at Oak Shores!
83. Clean lake.
84. Keep water level high

APPENDIX D

1998 Lake Berryessa Resort/Marina Boater Survey Coded and Categorized Responses to Open-ended Survey Questions

Note: Throughout Appendix D, the figures on the left-hand side of the page represent the frequency of the responses listed on the right. The responses given are listed with their assigned code numbers as entered in the survey database and are listed by the response categories used in the report tables.

N = 328

Question 4a: Are there other lakes where you do the same type of boating you do on Lake Berryessa?

- 89/328 (27 percent) mentioned at least one other location where they boat
- 149 responses were given

Other rivers and lakes (alphabetized list of locations)

2	25.	Anderson Lake
1	33.	Bass Lake
3	36.	Bucks Lake
6	17.	Bullards Bar
3	9.	Camp Far West
19	10.	Clear Lake
2	6.	Collins Lake
8	7.	Delta
2	20.	Donner Lake
4	23.	Eagle Lake
3	11.	East Park Reservoir
1	21.	Echo Lake
7	12.	Folsom Lake
4	14.	Hogan Lake
1	28.	Indian Valley Reservoir
1	19.	June Lake
1	38.	Lake Almanor
1	18.	Lake Britton
4	15.	Lake Camanche
5	3.	Lake Don Pedro
1	43.	Lake Havasu
1	31.	Lake Mendocino

2	37.	Lake Nacimiento
5	16.	Lake Oroville
1	26.	Lake Powell
1	13.	Lake San Antonio
15	2.	Lake Shasta
9	4.	Lake Sonoma
15	8.	Lake Tahoe
1	32.	Mammoth Pools Reservoir
2	29.	McClure Lake
1	5.	Mosquito Lake, Ohio
2	27.	New Melones Lake
1	42.	Ocean
2	39.	Rollins Lake
2	1.	Sacramento River
2	41.	San Francisco Bay
2	34.	San Pablo Reservoir
1	30.	Santa Clara County reservoirs
2	22.	Stampede Reservoir
1	24.	Sly Park
1	35.	Twin Lakes
1	40.	Whiskeytown Reservoir

Question 4c: Why did you choose to visit Lake Berryessa instead of one of those other places?

- 287/328 (88 percent) gave a reason for coming to Lake Berryessa
- 391 responses were given

Close; Convenient; Familiar

9	2.	Location
109	5.	Closer to home
107	6.	Purchased a mobile home; own a trailer
7	8.	Live at Lake Berryessa
27	9.	Boat stored at lake
9	10.	Been going to Lake Berryessa since I was young
1	19.	I own Rancho Monticello resort
7	21.	Own a houseboat at Lake Berryessa

High Water Quality; Other natural features

17	3.	Size of lake
20	4.	Clean water; water quality; clean lake
1	13.	Not as much wind

- 1 20. High lake level
- 8 24. Warm lake
- 4 29. Beautiful setting
- 4 30. Warm, sunny weather
- 1 32. Lots of nice coves
- 1 40. A very preserved area

Like Lake Berryessa better; Favorite lake

- 17 7. We like it best; like Lake Berryessa
- 1 11. Other lakes not as clean and comfortable
- 1 16. Prettiest lake within 2 hours drive from South Bay area
- 3 33. Very nice lake

Facilities/services available

- 6 1. Marina, lake, and facilities are clean and well kept
- 3 15. Camping facilities
- 2 17. Steele Park motel and cottages
- 2 22. Great resort
- 1 28. Good lake management and resort management
- 1 36. Easy access
- 1 38. Good sheriff patrol

Less crowded; Quiet; Peaceful

- 3 14. Less congestion
- 2 27. Peacefulness of lake during the week
- 1 34. Nice people
- 1 41. Tranquillity

Friends; Family; Social Opportunities

- 1 18. Perfect family lake . . . before jet skis
- 3 26. Friends we've made here
- 1 31. Enjoy boating and fishing with friends and family
- 2 37. Good place for entire family

Good for chosen activity

- 1 23. Good water sports available
- 1 25. Big slalom course
- 1 39. Safety vs. the river

Good Fishing

3 35. Good fishing

Question 10a: Do you have a favorite place (or places) to go on Lake Berryessa?

- 280/311 (90 percent) had a favorite location
- 435 responses were given

Western Shore (From USBR headquarters to Putah Creek Resort)

15	1.	Lake Berryessa Marina
6	4.	Putah Creek Resort
9	10.	Rancho Monticello area
19	12.	Big Island
9	15.	Rancho Monticello Resort
4	19.	Cove on the south side of Big Island
2	24.	Between Putah Creek and Big Island
19	25.	5 mph area by Big/Small Islands
14	26.	Big/Small Islands
1	28.	Everything from Goat Island north
1	31.	Cove just past Lake Berryessa Marina
1	37.	East of Lake Berryessa Marina in the middle of the lake
13	38.	Smittle Creek coves
2	39.	Oak Shores coves
1	43.	Dead oak tree across from Putah Creek launch ramp
2	46.	Coves on the west shore
3	50.	Goat Island
2	54.	Rattlesnake Cove
1	57.	Potters Cove

Narrows

26	6.	Dam
8	7.	Little Portuguese Canyon
29	8.	Narrows
12	9.	Portuguese Canyon
18	20.	Markley Cove
8	21.	Pleasure Cove area
1	30.	Coves by dam
1	35.	Coves around the Narrows
7	40.	Haines Cove
1	44.	Narrows by Portuguese Flat

2 47. Under power lines between Dam and Pleasure Cove

Twin Bridges (Pope Creek and Putah Creek)

16 13. Putah Creek Bridge
7 17. Boy Scout Camp area
17 32. Pope Creek Bridge

Backwater Creeks (Pope and Putah)

10 3. Pope Creek
28 5. Putah Creek

Spanish Flat area

18 11. Steele Park area
4 16. Spanish Flat area
7 34. Area between Spanish Flat and USBR headquarters
3 41. Capell Cove area

Northern Shore

4 2. Northwest end
20 22. North end
4 33. Northeast end of lake
3 48. Coves on the north end

Skiers Cove

2 27. Northeast end of Skiers Cove
18 36. Skiers Cove
1 55. Monticello Ski Club floating dock

Eastern Shore

9 23. East side
1 29. Vineyard
1 49. Oil Well Canyon
1 52. Gosling Canyon Cove

Non-specific areas

8 14. The whole lake

1	18.	All resort marinas
2	42.	Small coves
5	45.	All coves
4	51.	Middle of the lake
2	53.	Anywhere away from jet skis and motorboats
2	56.	Calm waters

Question 10b: Why is that/are those your favorite place(s)?

- 265/280 (95 percent) gave at least one reason for their favorite locations
- 503 responses were given

Good conditions for recreation activities

1	4.	Best wake boarding/water skiing
1	6.	Like to drift
25	8.	Like to swim; good swimming
17	15.	Good skiing
5	17.	Pleasure cruising and swimming
2	18.	Pleasure cruising and access to restaurants
18	20.	Smooth water for water skiing
36	23.	Calm water; smooth water
3	39.	No big waves from other boats
2	42.	Less boats in water ski area
5	43.	Easy to anchor
1	44.	Deep water for jet skiing
4	48.	Slalom course
2	51.	More room for sailing
4	52.	Best water conditions
1	56.	Cove for sunbathing
6	59.	Safe swimming for kids
1	72.	Safe coves for swimming and water skiing
3	73.	Fun
1	76.	Nice boat ride
2	77.	Good place to tube

Solitude; Quiet; Fewer boats

15	5.	Not so crowded
11	7.	Like to relax
48	10.	Peace and quiet
16	27.	5 mph areas
10	29.	Secluded; private
12	33.	Few boats

10	38.	No jet skis
3	45.	Inlet coves protected from boats, skiers, and jet skiers
1	64.	No skiers
3	68.	No high speed boats
2	71.	Safe; less threatening
1	78.	Less traffic
1	79.	Less crazy boaters

Close to home; Convenient; Familiar

2	12.	We live there in the summer
22	13.	We live there; have a place there
2	22.	Easy access to lake
1	26.	Easy access to shore
1	30.	Close to main body
16	31.	Close by
8	32.	Have berth there
1	40.	Close to marinas

Good fishing

43	11.	Good fishing
1	46.	I'm forced to fish at night
2	47.	Troll the shoreline

Scenery; Other natural resource features

2	9.	Easy to find shade
15	14.	Nice scenery
1	16.	Beautiful lake
9	41.	Protected from wind
1	49.	Wildlife sightings for grandchildren
1	55.	Flat shoreline with grass
4	61.	Beautiful wildlife
1	65.	Enjoy sun, water, and view
3	67.	Lots of room
1	69.	Pope Creek is beautiful at sundown
1	75.	Nice coves

Good facilities/services

5	1.	Nice management
2	3.	Good RV sites
2	19.	Has a motel

1	21.	Grassy areas with dock
5	24.	Good food
2	54.	Good camping facilities
6	58.	Good areas to picnic
7	60.	Nice resort; good facilities
2	62.	Good ice cream
1	66.	Steele Park concessions
3	74.	Floating restrooms

See friends/family; Social opportunities

5	25.	Nice people; friendly people
8	34.	See people; social
2	35.	Meet friends there
1	36.	Meet new friends
10	37.	People watch
2	50.	Tie up with other friends' boats
1	53.	Family and friends at this location
2	57.	Party area

Good beaches

12	28.	Nice beaches; sandy beaches
2	70.	Clean along shoreline

Water quality; Other water attributes

9	2.	Clean; well taken care of
2	63.	Clear water

Question 11a: Are there any parts of Lake Berryessa you deliberately avoid?

- 169/283 (60 percent) mentioned at least one location they avoid
- 192 responses were given

Twin Bridges (Pope Creek and Putah Creek)

41	2.	Pope Creek Bridge
13	5.	Putah Creek Bridge
18	6.	Bridges
1	10.	Camp Berryessa Boy Scout Camp
2	20.	Putah Creek north
1	23.	Putah Creek Bridge on weekends

Western shore

- | | | |
|----|-----|---|
| 3 | 13. | Putah Creek Resort jet ski rental area |
| 4 | 14. | Just outside 5-mph zone by Rancho Monticello Resort |
| 15 | 15. | Oak Shores Park area |
| 1 | 16. | Right side of Big Island |
| 1 | 26. | Putah Creek Resort |
| 1 | 28. | Anyplace south of Lake Berryessa Marina |
| 2 | 29. | In front of Lake Berryessa Marina |
| 1 | 32. | 5 mph area between Big/Small Island |
| 1 | 37. | Smittle Creek area |
| 1 | 40. | Near the islands (Big & Small) |

Narrows

- | | | |
|----|-----|----------------------|
| 1 | 1. | South end of lake |
| 1 | 3. | Coves in the Narrows |
| 11 | 4. | Narrows |
| 2 | 25. | Markley Cove |

Spanish Flat area

- | | | |
|----|-----|-------------------------------|
| 12 | 8. | Steele Park/Spanish Flat area |
| 2 | 19. | Capell Cove |
| 1 | 38. | Spanish Flat |

Main Basin; Open water; Middle of lake

- | | | |
|----|----|---------------------------|
| 11 | 9. | Main body; middle of lake |
|----|----|---------------------------|

Northern shore

- | | | |
|---|-----|---------------|
| 2 | 17. | North side |
| 1 | 39. | Harris Canyon |

Eastern shore

- | | | |
|---|-----|-----------|
| 3 | 18. | East side |
|---|-----|-----------|

Non-specific areas

- | | | |
|----|-----|----------------------------------|
| 11 | 7. | Wherever jet skis congregate |
| 2 | 12. | Coves and channels |
| 2 | 21. | Anyplace that is not zoned 5 mph |
| 2 | 22. | Near campgrounds |

4	24.	Area in front of resorts
2	27.	Public use areas
2	30.	Wherever water skiers are located
2	31.	Large open areas
1	33.	Shallow spots
1	34.	Shoreline adjacent to roadways
3	35.	The whole lake on weekends
1	36.	Small coves

11b: Why do you avoid that/those parts of the lake?

- 167/169 (99 percent) gave reasons for avoiding locations
- 249 responses were given

Too many boats; too much traffic

25	2.	More crowded
11	6.	Too many people
41	7.	Too many boats; too much traffic
11	13.	Too much activity

Undesirable behavior; unsafe boating

7	3.	Too many crazy people
3	4.	Wild jet skiers
11	9.	Risk to personal safety
3	12.	Booze and drugs
1	14.	Boaters, jet skiers and water skiers are rude and discourteous
1	15.	Difficult to maneuver around partiers
6	16.	Reckless boaters and jet skiers
1	17.	Jet skiers jump our wake while kids ski
4	18.	Speeding boats
16	20.	Lots of drinking
3	21.	Not conducive to "family" atmosphere
1	30.	Too many accidents there
7	32.	Jet skis are dangerous; no concept of safety
2	33.	Bad reputation
3	34.	Inexperienced, novice boaters
4	35.	Pwc don't know or disregard boater etiquette
3	39.	Do not obey safe boating rules
1	42.	Less safe than slalom course to ski
1	44.	Dangerous boaters
1	45.	Unsupervised

Incompatible Boat Types or Activities

8	5.	Too many pwc
3	22.	Lots of young people congregate there
4	23.	The type of people there
7	25.	Jet skis
1	26.	Not conducive to trolling for fish
1	27.	Bass fishermen
2	28.	Rap concert
1	29.	Not our type of recreation
4	31.	More noisy
2	36.	Hot rod boats
10	37.	Rap concert-disrespectful people
3	40.	Noisy, loud fast boats
1	46.	Too many kids swimming in water

Undesirable water conditions

4	10.	Windy
13	11.	Too rough; choppy
4	19.	Rough due to jet skis and boats
6	24.	Shallow water
2	38.	Air and water pollution

Other attributes of avoided locations

3	1.	Farther away
1	8.	Bridge would hit sailboat mast
1	41.	Trash
1	43.	Mud

Question 12a: What do you like best about Lake Berryessa?

- 313/328 (95 percent) mentioned at least one feature they like the best
- 625 responses were given

Scenery; Wildlife; Other natural features

46	7.	Large lake; size of lake
45	11.	Beauty; scenery; wildlife
36	16.	Weather
3	27.	Lots of private beaches (secluded)
1	35.	No bugs

1	40.	Coves/fingers provide interest and protection for skiing
10	48.	Beautiful mountain lake
1	57.	Rural/country setting
3	59.	Calm quiet coves
2	61.	Miles and miles of shoreline
1	74.	Shallow areas for small children
1	76.	Depth of lake
1	79.	Clean shoreline

Water quality; Calm water; Other water attributes

33	3.	Water quality
68	8.	Clean water
5	10.	Calm water
36	26.	Water temperature; warm water
1	37.	Clean water for fishing and swimming
1	63.	Water is cool on hot summer days
3	73.	Water level is higher

Close; Convenient; Familiar

70	5.	Close to home
3	9.	Easy access
19	21.	Location
10	22.	Proximity to Bay area
7	32.	My little home away from home
2	36.	Know the lake
5	55.	Being able to have a trailer
1	70.	Keep our houseboat at Markley Cove

Quiet; Relaxing; Peaceful; Low-density recreation

17	1.	Relaxing atmosphere during the week
13	15.	Not too crowded
2	19.	Not many boats
15	28.	Relaxation; stress-free environment
1	33.	Quiet time during the winter months
5	49.	Quiet 5-mph areas
3	50.	Getting away from it all
1	52.	Fishing in winter
1	60.	Can usually find a place devoid of skiers
1	80.	Quiet at night

Good fishing

41	12.	Great fishing
2	66.	Lots of big catfish
2	67.	Trout
1	68.	Fishing during the week with respectful fishermen

General enjoyment; Good for chosen activity

6	2.	Boating
9	4.	Skiing enjoyment; water-skiing
5	13.	Great swimming
3	14.	Everything
2	29.	Good skiing water
2	38.	Being outside
1	41.	Easy navigation
2	42.	Early morning skiing
2	43.	Variety of boating experiences
1	53.	Provides the type of recreation we desire
2	58.	Water sports
2	62.	Great weekend getaway
1	65.	The long season
2	71.	Safe family environment
2	78.	Very pleasant lake
1	81.	Lots of good sailing
1	82.	Year-round access to lake

Good facilities/services

2	6.	Most of the marinas are okay
4	20.	Clean facilities
2	23.	Lake Berryessa Marina Resort
3	24.	Nice resorts
1	25.	Clean, attractive day-use area
2	31.	Floating restrooms
1	39.	Well-protected marinas
5	46.	Well patrolled
2	47.	Good resort management
1	56.	Markley Cove Resort staff and boaters
3	64.	Well maintained
1	69.	Camping facilities
2	77.	Reasonable rates
1	83.	Family atmosphere at Rancho Monticello Resort
1	84.	Markley Cove Resort

Family and friends; Social opportunities

6	17.	Family meeting place
9	18.	The people; friendly people
6	30.	My friends here
1	34.	People watching
2	44.	Socializing in our resort
1	45.	Ski club
2	54.	Friendly atmosphere

Other features

1	51.	Normal weekends
1	72.	Lake is not commercialized
1	75.	Limited public access

Question 12b: What do you like least about Lake Berryessa?

- 274/328 (84 percent) mentioned at least one feature they like the least
- 383 responses were given

Incompatible boat types or activities

46	2.	Jet skis
5	3.	Speeding boats
12	26.	Noisy boats
5	28.	Noisy jet skis
1	32.	Loud on weekends
12	44.	Too many jet skis
1	60.	Loud music from other boats
1	95.	Jet skiers are too young

More unsafe/inexperienced/discourteous boaters

7	4.	People who use alcohol while boating
9	5.	Inexperienced boaters; careless boaters
12	7.	Wild jet skiers
10	15.	Jet skis not following rules and regulations; not courteous
1	31.	Boaters/jet skiers coming too close to people in the water
7	34.	Jet skis come too close to boats
6	50.	Boaters don't know the rules of boating

- | | | |
|---|-----|--------------------------------|
| 5 | 63. | Rude boaters |
| 2 | 65. | Crazy boat operators; reckless |
| 1 | 66. | Boats/pwc cut in front of you |
| 1 | 88. | Pwc jumping your wake |

Undesirable natural features or water conditions

- | | | |
|----|-----|---|
| 8 | 6. | Long drive |
| 3 | 10. | Windy road |
| 1 | 11. | Long winters |
| 11 | 12. | Afternoon winds |
| 3 | 13. | Rough water; choppy |
| 2 | 16. | Trailers |
| 7 | 20. | Summer heat |
| 1 | 22. | Lack of shade |
| 2 | 38. | Snakes |
| 1 | 40. | No good water for skiing |
| 1 | 45. | Worry about flooding when water is high |
| 7 | 46. | No beaches |
| 1 | 52. | Difficult to walk on muddy shoreline |
| 1 | 53. | Remoteness for emergency services |
| 3 | 55. | Fluctuation in water level |
| 2 | 62. | Low lake conditions |
| 1 | 69. | Yellow-jackets |
| 1 | 74. | Sometimes too hot |
| 1 | 90. | Rocks away from the shoreline |

Increased boat traffic; More crowded

- | | | |
|----|-----|---------------------------------|
| 20 | 14. | Crowds; boat traffic |
| 25 | 18. | Weekends; too much boat traffic |
| 6 | 19. | Holiday traffic |
| 2 | 56. | Holiday weekends |

Policy/Regulations/Rules; Law enforcement

- | | | |
|---|-----|---|
| 2 | 25. | Lack of traffic control |
| 1 | 35. | Too many CA Highway Patrol (CHP) |
| 2 | 36. | Not being able to have a dock |
| 6 | 37. | High fees that resorts charge long-term users and no improvements |
| 1 | 39. | Too many 5 mph coves |
| 4 | 48. | Lack of enforcement of boating laws (weekends especially) |

- | | | |
|---|------|---|
| 6 | 51. | Not enough patrol on lake |
| 1 | 58. | Nothing done to enforce laws against "low-lifes" |
| 1 | 72. | Not enough 5 mph markers in all coves |
| 1 | 73. | Camping aboard boat overnight not permitted |
| 2 | 76. | Sheriff gets too worked up and makes poor judgment |
| 1 | 79. | Should be fish planting two times a year |
| 3 | 80. | Price gouging by Rancho Monticello resort owners |
| 1 | 81. | Too much space allocated to permanent sites |
| 1 | 89. | Private dock fees |
| 1 | 91. | Excessive rules for docks |
| 1 | 92. | Resort management |
| 1 | 97. | Getting too expensive for retirees |
| 1 | 98. | The way Bureau of Reclamation handled the rap concert |
| 4 | 102. | Rising prices at resort |
| 1 | 103. | Good ski areas being taken over by private ski clubs |

Undesirable behavior/events

- | | | |
|----|-----|--|
| 17 | 8. | Rap concert in July |
| 1 | 27. | Weekend day users who don't clean up their beach |
| 2 | 42. | Weekend day users destroy things and litter |
| 2 | 43. | Terrible neighbors - weekend partiers |
| 2 | 47. | Resort owners are condescending |
| 2 | 57. | "low-lifes" using facilities more |
| 1 | 68. | Sometimes too much "white trash" |
| 2 | 71. | When day users leave garbage along highway |
| 1 | 75. | Some mobile homeowners think they own the lake |
| 1 | 77. | No privacy or peace on lake in 1998 |
| 2 | 84. | Unruly campers |
| 1 | 87. | Inconsiderate day users |

Insufficient facilities/services

- | | | |
|---|-----|---|
| 2 | 17. | Trailers |
| 2 | 23. | Lack of picnic areas |
| 1 | 24. | Not enough floating restrooms |
| 2 | 29. | Not enough rooms for rent |
| 1 | 30. | Lack of restrooms on lake |
| 1 | 33. | Family-run resorts are corrupt |
| 2 | 41. | Trashy marinas/resorts |
| 2 | 49. | Lack of shore activities/amenities |
| 3 | 54. | Not enough nice restaurants on lake |
| 1 | 59. | Docks have no electricity or water for houseboats |

1	67.	Other resort facilities
1	78.	Spanish Flat Resort
1	82.	Lack of parking at resorts
1	83.	Lack of common-use areas at resorts
1	85.	Hard to get nice campsites away from loud, drunk campers
1	86.	Boat berths hard to get
1	94.	Launching on a small ramp at Markley Cove Resort
1	99.	Inaccessible

Decreased natural resource quality

1	64.	Overfilled trash cans on shoreline
1	93.	Oil and gas slicks on lake-surface
1	96.	Illegal dumping of holding-tank sewage into lake
1	100.	Chunks of moss in water around docks/coves
1	101.	Bacteria in lake that causes sinus infection

Other "least liked" attributes

2	1.	Not owning a permanent trailer
12	9.	Nothing (don't dislike anything about the lake)
1	21.	Can't use cell phone
2	70.	Packing up and going home

Question 13a: Have you noticed any positive or negative changes on Lake Berryessa in the last five years?

- 220/249 (88 percent) noticed at least one change
- 164/220 (75 percent) noticed at least one **positive** change
- 194 responses were given

Water level up/More constant

81	5.	Lake full of water
----	----	--------------------

More/improved facilities or services

11	2.	Resort quality is higher; upgrading marinas
8	4.	Markley Cove continually making improvements
3	6.	Nicer day-use areas on the lake
7	7.	Better facilities
6	10.	Floating restrooms on lake
1	13.	Cove has been cleaned up

- | | | |
|---|-----|---|
| 1 | 14. | Upgrade of trailer sites at Rancho Monticello Resort |
| 1 | 15. | Rancho Monticello trailer owners are friendly & take pride in sites |
| 1 | 16. | Improvements at Lake Berryessa Marina |
| 4 | 17. | Roads kept in good condition |
| 1 | 19. | New docks at Markley Cove |
| 2 | 24. | Improvements at Steele Park resort |
| 1 | 28. | Development of Oak Shores day-use park |
| 1 | 32. | Day areas are more full |
| 1 | 39. | Shorelines are cleaner |
| 1 | 41. | More outhouses |
| 1 | 43. | More services |

More regulation/patrol; Improved policies

- | | | |
|----|-----|--|
| 2 | 1. | New management |
| 2 | 3. | People quality is higher |
| 20 | 11. | Lake patrol; more sheriffs on water |
| 6 | 18. | Well run for the most part; well maintained |
| 2 | 22. | Better hazard markings in water |
| 1 | 27. | Have seen a few more 5-mph coves |
| 1 | 29. | Pwc are less irritating |
| 1 | 30. | Raised the age to drive and operate pwc |
| 1 | 31. | Reduction in expansion of permanent sites |
| 1 | 40. | Keeping pwc and high speed boat traffic farther from shore |
| 1 | 42. | Deputies on jet skis |
| 1 | 44. | Age minimum for golf carts |

Water quality good/improved

- | | | |
|----|-----|------------------------------|
| 11 | 8. | Cleaner |
| 4 | 21. | Water quality seems better |
| 2 | 26. | Water conditions are perfect |

Other positive changes

- | | | |
|---|-----|-------------------------------------|
| 1 | 9. | Growth |
| 1 | 12. | Seems less crowded |
| 1 | 20. | Cute houses located around the lake |
| 1 | 23. | No more drought conditions |
| 1 | 25. | Warm water in the summer |
| 1 | 38. | Lots of parking when lake is low |

Question 13a: Have you noticed any positive or negative changes on Lake Berryessa in the last five years?

- 220/249 (88 percent) noticed at least one change
- 161/220 (73 percent) noticed at least one **negative** change
- 223 responses given

More undesirable boats/activities

- | | | |
|----|-----|--|
| 51 | 1. | Too many jet skis |
| 4 | 22. | Loud race boats |
| 4 | 26. | Noisy jet skis |
| 1 | 61. | Hate all those tacky trailers at resorts |

More undesirable behavior/events

- | | | |
|----|-----|--|
| 35 | 4. | Rap concert at Oak Shores Park |
| 2 | 21. | Too many campers |
| 3 | 29. | More rowdy people, drunks at campsites |
| 1 | 40. | Keep the Oakland and Winters gangs out |
| 2 | 47. | Misuse of public areas by day users |
| 1 | 52. | Mobile-home owners think they own part of the lake |

More unsafe boating/inexperienced boaters

- | | | |
|---|-----|--|
| 3 | 3. | Too many inexperienced boaters |
| 1 | 6. | Alcohol-related incidents |
| 2 | 7. | Crazy pwc operators |
| 4 | 8. | Underage pwc operators |
| 3 | 12. | Attitude of jet ski owners |
| 3 | 14. | Careless boaters |
| 1 | 15. | Boaters/jet skiers coming too close to people in the water |
| 1 | 28. | First-time boaters don't know the rules |
| 4 | 34. | More drinking/drugs |
| 7 | 38. | Dangerous jet skis |
| 4 | 42. | Boaters driving too fast |
| 1 | 43. | Loud music from boats |
| 1 | 45. | People don't obey 5-mph signs |
| 1 | 57. | Seems to be more accidents |

Policies/Regulations/Fees; Law enforcement

- | | | |
|---|-----|---|
| 3 | 10. | Uncontrolled boats and jet skis |
| 1 | 11. | Lake was dangerous and low during drought |

- | | | |
|----|-----|--|
| 1 | 13. | Bureau of Reclamation allowing flooding in winter months |
| 10 | 16. | Increased costs at resorts |
| 1 | 18. | Private docks revoked |
| 1 | 19. | Increased day-use outside of resorts |
| 1 | 23. | People speeding on roads (including employees) |
| 1 | 25. | Dogs running loose |
| 1 | 31. | Bureau of Reclamation won't allow us to replace our stairs to lake |
| 1 | 33. | No Bureau of Reclamation support on weekends |
| 1 | 37. | New Bureau of Reclamation manager not a good public image |
| 1 | 44. | 5 mph no wake zones out too far |
| 2 | 46. | Too many restrictions for resort trailer owners |
| 1 | 48. | Not enough speeding enforcement |
| 1 | 49. | Log boom across Steele Canyon |
| 1 | 51. | Let too much water out to Lake Solano and Lake Davis |
| 1 | 53. | Management not responding to complaints |
| 1 | 55. | The new Styrofoam regulation for docks is dumb |
| 4 | 60. | Not enough lake patrol |
| 1 | 67. | Poor attitude from sheriff |
| 1 | 68. | The management at Lake Berryessa Marina |

More boats/boat traffic/people

- | | | |
|---|-----|--------------------------------------|
| 9 | 2. | More people |
| 3 | 5. | Weekend congestion |
| 3 | 24. | Overcrowded launch ramps on weekends |
| 5 | 39. | Too many boats |

Facility decline/Insufficient facilities and services

- | | | |
|---|-----|--|
| 1 | 17. | Sewage treatment plant at Rancho Monticello is old and stinks |
| 3 | 20. | Minimum improvements at Rancho Monticello; greedy management |
| 1 | 27. | Private docks and buoys make it difficult to get to shore |
| 1 | 32. | Only one slalom course |
| 2 | 35. | Litter at turnouts, on banks |
| 1 | 41. | Trout fishing not as good |
| 2 | 50. | Quality of services (resorts/roadside businesses) has declined |
| 2 | 54. | Highway 121 needs repair |
| 1 | 58. | No parking when lake is high |

- 1 62. No areas for racing jet skis
- 2 64. Some marinas are letting things go
- 1 65. Putah Creek Resort has gone downhill
- 1 66. Need more buoys and courtesy docks at Putah Creek Resort
- 1 69. Two electrical fires at Rancho Monticello due to old systems

Water quality decline

- 1 30. Lost 1/3 of our hill due to erosion
- 2 36. Litter floating in water
- 1 59. Pollution/smoke from jet skis
- 1 63. Dirty water

Other negative changes

- 1 9. Lake full of water
- 1 56. Lake went down

Question 13b: If you noticed changes, have these changes affected your enjoyment or use of Lake Berryessa?

- 137/191 (72 percent) noticed at least one effect of a change they had noticed
- 196 responses were given

Positive Effects

Lake use more enjoyable/safer; Boat more

- 2 1. Greater sheriff presence
- 3 2. Improvement in getting to slips
- 5 3. More water to use now
- 4 4. Easier water access
- 2 5. Better conditions
- 2 7. Fishing and boating more enjoyable
- 2 8. Better swimming and fishing
- 3 9. Improved conditions make it more enjoyable
- 3 10. Boaters are more aware and less likely to break the law
- 3 11. More accessible areas
- 1 14. Open water good for jet skiers
- 2 15. We go to the lake more often
- 12 18. More enjoyable

- | | | |
|----|-----|------------------------------------|
| 12 | 19. | Safer boating |
| 1 | 22. | More launches to use |
| 4 | 23. | I still enjoy the lake |
| 1 | 30. | Able to swim in the water |
| 2 | 31. | More coves to ski in |
| 1 | 32. | Better fishing, beaches, and coves |
| 1 | 35. | Deputies on jet skis are great |

Facilities and services improved

- | | | |
|---|-----|--|
| 1 | 12. | Owners take pride in their sites |
| 2 | 13. | Marina at Markley Cove is a better place to keep your boat |
| 1 | 16. | Nicer general store at Markley Cove |
| 1 | 17. | I now enjoy a berth at Markley Cove |
| 1 | 21. | Marina owner has a better attitude due to high water |
| 1 | 24. | More water = more people = better businesses |
| 1 | 26. | Nicer facilities |
| 1 | 27. | Better quality services available throughout the lake |
| 1 | 29. | More services available |

Better lake resource conditions

- | | | |
|---|-----|---|
| 4 | 6. | Cleaner the better |
| 1 | 20. | Preservation of lake resources |
| 1 | 25. | Trees close to water when lake is full and provides shade |
| 1 | 33. | Lake is more beautiful |
| 1 | 34. | Bureau of Reclamation making positive effort to keep lake clean |

Other positive effects of changes

- | | | |
|---|-----|----------------------------|
| 1 | 28. | Go to the lake on weekdays |
|---|-----|----------------------------|

Negative Effects

Lake use less enjoyable/less safe

- | | | |
|----|----|---|
| 7 | 1. | Too many jet skis |
| 10 | 3. | Rap concert left a mess and had no respect for anything or anyone |
| 2 | 5. | Causes choppy waters |
| 4 | 6. | Pwc not obeying 5-mph rule, cutting too close to boats |

- | | | |
|----|-----|--|
| 5 | 7. | More traffic on water |
| 11 | 8. | Less safety; dangerous situations |
| 1 | 10. | Fear of skiing due to jet skis |
| 1 | 11. | Smell is continuous from sewage plant |
| 2 | 12. | Cannot have own dock |
| 7 | 13. | Have to watch more closely; be aware |
| 7 | 20. | Dangerous pwc; ignore rules |
| 1 | 22. | Pwc too fast in coves |
| 1 | 23. | Resort has not accommodated the elderly and their access to docks |
| 3 | 25. | Now more people |
| 1 | 27. | Secret fees and dues at Rancho M. are unjust and unnecessary |
| 2 | 28. | Noisy pwc |
| 1 | 29. | Trash |
| 1 | 30. | No shade around lake when lake is down |
| 2 | 31. | Not as enjoyable |
| 1 | 32. | Boaters don't know safety rules |
| 1 | 33. | Resorts charge high prices for public to enjoy government property |
| 2 | 34. | More noisy |
| 1 | 35. | Boats are washing the shoreline away |
| 1 | 38. | More inexperienced boat operators |
| 1 | 40. | Frustrated before even getting in water |
| 1 | 43. | Jet skis pollute lake with oil and noise |

Avoid busy days/times/areas

- | | | |
|---|-----|--|
| 2 | 2. | Stay away on holiday weekends (too many people) |
| 7 | 4. | Avoid lake on weekends |
| 4 | 16. | Will avoid rap concert weekends |
| 2 | 26. | Have to avoid fishing in certain parts of the lake |
| 1 | 42. | Only go out early morning or late afternoons |
| 1 | 44. | Can't ski mid-day |

Caused change in activities/use lake less

- | | | |
|---|-----|--|
| 1 | 9. | Difficult to fish in winter |
| 1 | 14. | Feel less likely to leave your area for fear of theft |
| 1 | 15. | No parking for customers and trailers on weekends |
| 2 | 17. | We are afraid to go out when other rowdy people are around |
| 2 | 18. | North end access shut down because of rap concert |
| 1 | 21. | Having trouble at our trailer (too many people) |

1	24.	Quality and number of services have declined
1	36.	Campers at resort bars keep me from having dinner there
1	37.	Afraid to swim in dirty water
1	39.	Won't be able to afford mobile home rent
1	45.	Don't go boating as much
1	46.	Always worry about electrical fires
1	47.	Have considered selling mobile home

Other negative effects of changes

1	19.	Would campaign to remove Bureau of Reclamation manager
1	41.	Bureau of Reclamation has no concern for area residents (rap day)

Question 13c: Would the subdivision or development of lands adjacent to the lake affect your enjoyment or use of Lake Berryessa?

- 159/289 (55 percent) mentioned at least one effect
- 204 responses were given

More boats/traffic/people

55	1.	Crowds; more people; too many people
25	4.	Increased traffic on roads and lake
6	6.	Increased congestion
1	14.	Already too many weekenders
9	16.	More boats and jet skis
1	22.	More people = less enjoyment
1	45.	Would crowd the 5 mph no wake zone areas

Negative effects to natural resource conditions

26	5.	Would spoil open lands; take away from natural beauty
1	7.	The lure of wilderness and beauty... gone
2	8.	Big money will take all of the beaches
3	13.	I enjoy the beauty of the surrounding area
5	15.	Increased pressure on lake
6	26.	Pollution
1	27.	Lead to eventual destruction of all that is good about the lake
1	30.	If allowed to go too far, will lose the outdoors
1	31.	Encroach on wildlife habitat

- 1 44. I am a developer.... Keep it rural
- 1 46. Having the whole East side natural is too nice to change

Against development/further development

- 1 2. No permanent housing developments
- 6 20. I come to the lake to get away from development
- 1 21. Who knows what would be put there
- 3 28. No more building, no more traffic – leave beauty
- 3 34. No development (enough now)
- 1 35. No more trailer parks
- 1 36. No more free areas
- 3 37. Enjoy things the way they are now
- 1 42. Keep it as it is for future generations

Undecided; buffered statements

- 10 11. Depends on type and density
- 2 17. Only if it negatively affects water quality
- 1 19. If development is for public access would be more enjoyable
- 1 23. Development should be controlled (with E.I.S.) but allowed
- 1 25. If there is no water pollution
- 1 39. If it were near our resort

Positive effects of development

- 1 3. May buy land
- 4 9. I would like to have a place
- 1 18. I would like it better
- 1 24. Might bring in more business
- 1 40. Would make parking more available
- 1 43. Please develop more private development
- 1 47. We need more and better run facilities
- 2 48. Would help keep the services up

Negative effects to recreation experience

- 1 10. Marinas would probably close
- 1 12. Limits land use for picnic grounds
- 1 29. Too many boats would be hazardous
- 1 32. The quality of the experience at the lake would

		change
2	33.	Development would preclude public use of land
1	38.	More unsafe pwc
1	41.	Lake would become more commercial
1	49.	More noise, less solitude
1	50.	More new rules

Question 14a: Have you had any problems or conflicts with other visitors while on Lake Berryessa?

- 114/298 (38 percent) mentioned at least one problem or conflict
- 146 responses were given

Discourteous behavior/other boater conflicts

1	1.	Caught someone stealing our anchor
1	2.	Day visitors seem to care less about the quality of the lake
29	4.	July rap concert
2	6.	Cannot keep unauthorized people off of our dock
2	9.	Discriminate towards me because of my nationality
1	11.	On holiday weekends people park in our dock spot
1	12.	Young men yelling profanities
2	15.	Loud boats disturb the peace and quiet
2	16.	Campers not monitored in resorts
1	17.	Day-use people leave garbage on the lakeshore & play loud music
1	22.	Rude water skiers
4	23.	Too many young kids drinking liquor and getting rowdy
1	27.	Ski club argued they own a section of the lake for private use
10	28.	Traffic jams on highway due to July rap concert
1	29.	People drinking and driving in golf carts
1	31.	Campgrounds packed with low-life people
1	34.	Dumping trash
2	35.	Campground users stealing our golf carts
1	36.	Campground sites too close, noisy, and people fight
1	39.	Boat was burglarized twice and vandalized
1	43.	Ran off the road three times last year
3	44.	Sometimes young adults are too loud at night
1	46.	People take spot I had reserved
1	47.	\$30,000 fishing boat stolen from outside mobile home
1	52.	Trespassers on houseboats swimming from shore to docks

1 53. Visitors yelling at us for parking close to their trailers

Unsafe/reckless/illegal boating behavior; inexperienced boaters

4 3. Boaters going too fast for safety
9 7. Ignorance of rules and regulations
6 8. Alcohol-related incidents
3 10. Boaters lack of common courtesy
2 14. Boaters/jet skiers coming too close to people in the water
1 18. Cut-off while pulling skier by a drunken boater who was speeding
1 19. Large boat cut me off, I lost control and damaged my vessel
4 21. People not obeying 5-mph zones
3 25. Inexperienced boaters at launch ramps
1 26. Water skiers like to "zoom me" when I'm sailing
1 30. Kids drink, fight, and jump on boats
3 33. Boats coming too close to our boat
1 37. Boats parking at our dock and not moving
1 38. Almost run in to by a water skier
1 41. Boaters try to run over pwc
1 42. Skiers come too close to boat while I'm trolling
1 45. Not enough attention to fire safety
1 48. Inexperienced boaters
2 49. Drunk boaters

Problems with Personal Watercraft

5 5. Soaked by pwc while trolling; pwc come too close to fishing boats
4 13. Jet skiers following too close/coming too close
7 20. Jet skiers are discourteous and dangerous
3 24. Jet skis do not obey 5-mph zones
2 32. Jet skiers polluting the water
3 40. Pwc out of control
2 50. Young pwc owners don't follow the new pwc rules

Other problems/conflicts

1 51. Local conflicts should be handled locally (rap concert)

Question 14b: Where did that problem occur?

- 58/114 (51 percent) gave a problem location
- 59 responses were given

West side of lake

- | | | |
|----|-----|--------------------------|
| 34 | 1. | Oak Shores Park |
| 4 | 3. | Rancho Monticello Resort |
| 2 | 10. | Lake Berryessa Marina |

Narrows

- | | | |
|---|-----|---|
| 1 | 7. | Where houseboats are kept at Markley Cove |
| 1 | 8. | Along the shore across from Markley Cove Resort |
| 1 | 12. | Narrows |
| 2 | 14. | Markley Cove area |

Spanish Flat area

- | | | |
|---|-----|-------------------------|
| 1 | 6. | Skiers Cove |
| 1 | 11. | Capell Creek ski course |

Non-specific locations

- | | | |
|---|-----|---------------------------------|
| 4 | 2. | 5 mph areas |
| 3 | 4. | Campsites |
| 3 | 5. | Launch ramps |
| 1 | 9. | Coves |
| 1 | 13. | Jet ski rental areas at resorts |

Question 15: Are there changes you would like to see on Lake Berryessa?

- 208/246 (85 percent) mentioned at least one change they would like to see
- 324 responses were given

Changes to management policies/regulations

- | | | |
|----|-----|--|
| 18 | 4. | No more jet skis (pwc) |
| 12 | 6. | No more events (rap concert) that bring lots of people |
| 7 | 11. | Stop or control rap concert |
| 12 | 14. | Regulate the use of pwc |
| 2 | 17. | Require mufflers on hot rod boats |
| 3 | 23. | Noise reduction from pwc and boat engines without mufflers |
| 2 | 29. | More control over boats |

- 1 32. Houseboat rentals
- 1 33. More organized events
- 1 36. Keep cars from parking on the road at picnic areas
- 1 38. Increase management staff
- 2 39. Larger fines for boating misconduct
- 1 40. Lake-wide tenant association for negotiating with resorts and BOR
- 1 41. More interaction and communication for governing agencies
- 3 42. No noisy pwc
- 3 44. Allow mobile home owners to have their own docks
- 7 47. Stricter drinking laws
- 4 50. Stock fish much more heavily
- 1 51. Spill more water during wet years to avoid high water level
- 2 53. Keep enough water in lake to survive the inevitable dry years
- 2 58. Eventual elimination of all 2-stroke cycle engines
- 1 59. Let resorts improve their sites as they wish
- 3 61. Keep the lake small the way it is
- 2 62. No more development
- 1 70. Controlled development where improvements can be controlled
- 2 71. Limit pwc to cleaner and quieter models
- 6 72. Eliminate noisy boats
- 1 79. Control loud music from boats
- 1 84. No alcohol on lake
- 1 85. Get rid of trailer homes and allow upscale development
- 2 89. Maintain status quo; leave it alone
- 1 94. Have CA Fish and Game plant catfish
- 1 98. 4th of July fireworks show
- 1 101. Plant Kokanee salmon
- 1 102. Plant more trout
- 1 111. Regulate jet ski rentals – too dangerous
- 2 117. Keep water level up – good water management
- 3 120. Make resort managers adhere strictly to BOR mandate
- 1 123. Private ownership availability of lake-front property
- 1 124. Restrict downstream flow to a minimum
- 1 127. More development
- 1 133. That BOR have offices and security available on weekends
- 1 134. Overnight shore camping
- 1 135. Oversight of BOR staff – grand facility but don't check

- resorts
- 1 137. Let kids 16 and younger drive golf carts
- 1 138. Be allowed to have larger decks
- 1 139. Age limit on jet skis

More patrol/enforcement of boating regulations

- 19 12. Increased sheriff presence
- 13 13. More aggressive enforcement of rules
- 5 19. More lake patrol on weekends
- 6 21. Enforce 5-mph rule in no wake zones
- 4 28. Less speeding
- 1 30. Security during holiday events and rap concerts
- 5 48. Better policing of boaters and jet skis
- 3 56. More security at campsites at night
- 1 88. Additional fire protection
- 4 90. Better security at resorts
- 1 95. Better control over pwc in 5-mph areas
- 2 103. Increased sheriff patrol in coves and marinas
- 1 104. Require day users on banks to pick up their trash
- 1 114. Enforce 200-yard rule from jet skis to other boats
- 2 118. Better sheriff patrol at campgrounds (drunk campers)

Improvements/additions to resorts and marinas

- 1 1. More RV sites
- 1 5. Wheelchair accessible docks at marina
- 1 7. Ramp monitors to control traffic
- 1 15. For Putah Creek Resort to put money back into the facilities
- 1 25. Better restaurants
- 1 49. Upscale facilities to purchase on the water condos
- 3 54. More marinas
- 1 55. More places to purchase gas
- 1 57. More luxurious services on shore would attract a better clientele
- 6 63. Resort rental prices getting out of control
- 1 67. More selection of boat repair facilities
- 3 75. Cheaper rental rates for trailers, campers at resorts
- 1 76. Reduced cost to seniors for camping
- 1 77. Use resort money to plant more trout
- 1 78. For Markley Cove resort to have same amenities as others
- 1 92. BOR to offer incentives & encourage long-term users to

- 4 97. upgrade
- 4 97. Better management at Rancho Monticello and other resorts
- 1 99. More places to rent a home or cottage for a few days
- 2 105. Increased parking at all resorts
- 1 108. Resorts should spend money to maintain restrooms and showers
- 1 109. Food service at Markley Cove resort
- 1 116. Large grocery store with deli
- 1 119. Get rid of all non-sewer site trailers
- 1 121. Control campground noise
- 1 122. Drop moorage fees
- 1 126. Improve/change management of Putah Creek Resort
- 1 128. Markley Cove needs to improve launch ramp
- 1 129. More buoys and courtesy dock at Putah Creek Resort
- 1 130. Quiet time at night in resorts
- 1 141. More control in the rules and pricing of long-term rentals

Limit/Zone/Disperse/Restrict use

- 7 2. Designate jet ski only areas
- 1 3. Ban jet skis from Pope Creek
- 2 10. More designated water ski areas where pwc not allowed
- 10 16. Limit pwc
- 2 18. Limit number of launch ramps to decrease crowds
- 1 46. Less campers
- 1 52. Ski area for beginners in a quiet cove
- 1 86. Designated fishing areas where skiing is not allowed
- 1 93. Don't restrict boat size
- 1 100. Keep water skiers a safe distance from trolling fishing boats
- 1 112. Monitor speed and distance from fishermen to swimmers
- 1 132. Limits on size of gatherings in public areas
- 1 140. More designated fishing areas

Improvements/additions to public facilities/services

- 1 9. More road signs
- 3 20. More floating restrooms
- 2 22. More port-a-potty toilets
- 1 26. Walking/biking path on the west side of the lake

- 1 27. Plant more shade trees
- 1 34. Improve roads
- 1 64. Overnight accommodations on south end of lake
- 2 66. Closer ambulance/medical facility
- 1 68. More slalom ski courses
- 4 74. More beach areas/recreation areas
- 1 80. More parking at public launch ramp (Capell Cove)
- 1 81. More boat launches
- 1 83. Make a childrens camp at north end of lake
- 2 87. More public free launch areas and more parking
- 1 106. Provide weekend activities for teens (games, dancing, movies, etc.)
- 1 107. More campsites
- 1 110. Increase in services around the lake
- 1 131. Accurate lake map that indicates elevations
- 1 142. More shoreline access on east side

Changes in no wake zones

- 1 37. When lake is full, take out 5-mph zone behind Putah Creek Bridge
- 1 45. Open 5 mph coves for water skiing
- 2 82. All coves should be 5 mph and marked with buoys
- 1 91. All coves should be 5 mph during fish spawning
- 2 96. More 5-mph speed zones
- 3 115. More signs for 5 mph no wake zone areas

Boater training/education; Better boater behavior

- 3 35. Boater etiquette/rules signs at launch ramps
- 2 65. Require boating education for boaters
- 2 69. Have pwc operators attend a safety class
- 2 113. More respect from pwc

Improvement to hazard markers

- 2 43. Mark shallow or low points better with buoys
- 3 60. Clearly marked hazard areas

Improve water quality; pollution control

- 1 31. Less 2-stroke engines to keep water clean
- 2 73. Clean up the shoreline
- 1 136. Zero tolerance for people that pollute or litter the lake

Other changes desired

- 1 8. Lake Berryessa guidebook for new boaters
- 1 24. Let resorts know they are doing a good job
- 1 125. Closer cell phone site

Are there any additional comments you would like to make concerning the management of Lake Berryessa?

- 1. The management is very nice, friendly and flexible to help you always. We have a berth at [Lake Berryessa] marina and love it there.
- 2. Restrict use of jet skis -- noisy environmental hazard (fuel); dangerous operators. 2. Restrict Pope Creek to skier water; is calmer for wakeboarding.
- 3. Continue survey annually and post results on the web.
- 3. The managers at Markley Cove are doing more to upgrade the facilities than any other harbor. I have boated from [Markley Cove] over the past 20 years.
- 4. Great crew at Markley Cove!!
- 5. We love it here.
- 6. No more rap concerts
- 7. I have stopped in at the Bureau of Reclamation office, when there is someone there, they have always been very friendly and helpful, so have the CHP and Coast Guard, all of which I am glad to see.
- 8. I would like to see more law enforcement involved on the particular weekend when the large group of "rap artists" and their followers come to the lake and cause nothing but problems. They polluted not only the lake itself, but also the roads getting to lake.
- 9. Try not to make questionnaire so long next time.
- 10. More aggressive enforcement of existing laws, particularly alcohol consumption in and about watercraft; mandatory age limit for operating pwc's.
- 11. Discrimination towards us. I had to move because neighbors were harassing and being very rude! Kindness - no matter who they are - should always be first!!
- 12. Employees at Putah Creek do not appear to be very motivated, tough to get help sometimes. I suspicion they are getting free rent for working.
- 13. Steele Park resort is very well managed. Some of the other resorts seem a little shabby.
- 14. I have greatly enjoyed my last 23 years at the lake and do not care to go anywhere else! The lake offers something for everyone-day-use, camping, trailers, restaurants, motels-great skiing (early in the morning)-great resorts and a clean lake.
- 15. Resort management does not enforce Bureau's rules. Fences being built, taking over fire road to place 2nd trailer on site.

16. The best.
17. Not at this time. It appears Lake Berryessa is managed quite well.
18. Private docks at the "pines" would be a great idea. A biking/walking path (doublewide) would help get bicyclists off the highway where it is very narrow and sometimes very dangerous to try to get around them.
19. My experience at the lake has been important in my life and in raising children and grandchildren. Now it is my delight to see my grandson enjoy as I have since 1959.
20. Management of crowds at Oak Shores. It has become extremely rowdy and with parking on highway, it's hard to come and go, especially if it were an emergency.
21. We live on 89 acres just 10 min. from the lake on Highway 128, so our main reason to go there is because it is close and we feel safe at our resort.
22. Release more water in winter to keep the lake from flooding. It was difficult to enjoy the lake this past winter to fish due to the flooding.
23. Where in the hell was the Bureau of Reclamation the day the Rap groups took over the lake?
24. There is no cap on the rent. Each year they increase. The Bureau should have input on rate increases.
25. I love the lake, I hope the gov. or you do not do anything to change the lake!
26. I enjoy the lake and facilities. Good job! This is my first year renting a slip for the summer. I'm glad I did!
27. Please find a way to manage the free public areas and roads!
28. No organized concerts. No development.
29. What's behind this survey really? Are you planning to develop the land around Lake Berryessa? Your honesty to the public would be appreciated.
30. We like it and found most people that work the lake to be friendly and helpful.
31. Keep the undesirable type people out.
32. Open up the 5-mph area behind the 2nd bridge (Putah Creek).
33. I feel the overall mgmt. of the lake is good. I own a place at Rancho M. I would rather own at Steele Park or another less crowded and rowdy place. Rancho is not well run. The whites do not keep the garbage/park clean. Put pressure on Rancho to clean up!
34. Again, need to stock fish heavily each year. Need fish population to be raised to levels as in Lake Shasta!
35. I think Lake Berryessa would be much more enjoyable for families if jet skis were banned or kept at one end of the lake.
36. Our mobile home is on the shoreline at Rancho M. In our area there is no public access to mobile home owners not on shoreline. I believe it would be helpful if resorts provided and maintained public access areas for these owners.

37. The management at the marina doesn't make improvements for trailer families renting from them. Seems all moneys available are for day users to make more money. Roads, etc. are in bad shape. Bathroom facilities need much improvement.
38. More buoys close to shore to remind boaters to slow down. Use your influence to get Coast Guard to approve only very bright ski vests. The ones used today are hard to see in the water. Whatever happened to orange vests and ropes?
39. Just keep up the good work. It's a wonderful lake to go to and relax. We really look forward to going to the lake each year.
40. This is a wonderful resource and deserves the attention you are giving it. Thank you!
41. Do not outlaw 2-strokes or personal watercraft. It is not the solution. Get rid of MTBE's in the gas first, and then look at other alternatives.
42. Overall we have been pleased with management.
43. I would like the Bureau to be more involved with conflicts between the resort managers and their clients. They sometimes make you feel that you are lucky to be allowed to stay at the resort. Rancho Monticello!
44. Please think about removing jet skis from the lake permanently.
45. The overall management seems to be excellent.
46. John and Linda at Markley Cove are the most friendly and concerned owners on the Lake. Thank you, Don Wallace
47. If you people had not stopped the work at Putah Creek we would have a nice yard on the lake instead of rocks, weeds & a dangerous drop-off at the end of our stairs that were temporarily removed for the construction of the wall.
48. Keep the good work up.
49. The cost of having a place at the lake is getting out of hand in my mind. Soon, if it keeps up, only the wealthy will enjoy the lake.
50. A job well done! Keep up the good work.
51. Permanent sites have made a major contribution to the economy of the lake and should be retained. I would like that acknowledgment from the Bureau. I appreciate your interest in providing this survey.
52. Privatize all facilities! As the private sector responds faster and always better to public needs. Taxes out of my life.
53. Get rid of jet skis and require at least one person per boat to be Coast Guard trained or USPS trained. Get more officers out there enforcing current rules and laws.
54. I am more than happy with the lake. Of course I don't care to be there on weekends.
55. Especially during summer months, Berryessa needs closer/more available medical services. Depending on a helicopter in an emergency can be life threatening. Napa County Sheriff, boat patrols, often appear overzealous and rather discriminate in enforcement.

56. Increase sheriff's patrol and issue citations for violations--overcrowded boats, reckless boat operation, etc.
57. Noise of jet skis is getting out of hand.
58. I would like to see the resorts have a 100-year+ lease without any problems from the Bureau. I have a rented spot at Rancho Monticello and have been there since 1960. I love everything about Lake Berryessa--daughter raised there and two grandchildren.
59. We immensely enjoy going to the lake as often as we can.
60. I would like to see designated areas for pwc--or have the operators attend a safety class.
61. Would like to be told the reason for this study--what is going on--what is being considered--your turn to reply
62. Just continue to keep the lake in the fine condition that it is in now.
63. Its about time to start enforcing noise laws on boats. Need more zero tolerance on drinking and driving boats and cars in area. Maybe restrictions at Oak Shores.
64. Years ago we were able to ski around the Big island. Now it is a 5-mph zone. I would like to see the 5-mph zone removed so we can ski there again. Then we won't have to go to the extreme north or south to ski on the weekends. Control or cancel rap concert.
65. Why raise flood plain to 450 feet in 2008 and evict long time resort residents. This is stupid! I have moved my trailer in 1982, 86, 96, and 97 with no problems. Now I get thrown out!!
66. Better resort management. Better resort attention to permanent and weekend residents. Lower monthly rent factors on resorts.
67. The people of Berryessa marina do a great job. The Bureau of Reclamation is also doing a good job on upkeep. Keep up the good work. More control of the young crowds camping in the resorts is needed. Berryessa marina is on top of this but not other resorts.
68. Keep the liberals from closing down the lake to 2-strokes and PWC's; somebody needs to step up to the plate and take MTBE's out of our gas, not 2-strokes out of the water!
69. We don't know the management well enough to make any comment.
70. You're doing a good job! I hope all the trash around Oak Shores gets cleaned up from July 11 & 12.
71. Why are some of the trailer resorts much nicer and more finished than the others?
72. No more rappers at Lake Berryessa. Letters, faxes, e-mail sent to all state and federal representatives and senators including the head of the Bureau of Reclamation.
73. I would hope funding for the sheriff's patrol is continued. More trails and parking to access shoreline for fishing, etc. Faster clean up of debris after winter storms.

74. We don't need additional development. Existing development could be upgraded. Jet skis can be a nuisance but most are OK. Boaters should be licensed in order to drive.
75. I like the 5 years on the lake; I have not had major problems. Just a few minor problems, I think, need to be addressed. I hope it continues.
76. By seeing the small amount of boats that use the old skiers cove (near airplane island), we think it should be reopened for skiing with self-policing boat/skier regulation signs at each entrance. Otherwise there is no good skiing near the middle of lake.
77. I was appalled by the way the concert was handled at Oak Shores. It took us 1 hr. to go 2 miles. People were all over, walking in the middle of the street; cars stopped blocking the road, parked wherever they wanted. Nothing was organized. No control.
78. So far as we know everything seems fine. All the people living or working there are very nice and helpful. PS. We are 80 years young!
79. I would like to know how these rap groups can advertise on MTV and radio for the last 3 years and invade Oakshores Park. My children and grandchildren were caught in the traffic and felt threatened. If nothing else, a few lawsuits would put an end to it.
80. Overall good!
81. What management?
82. How is it managed? I saw some police boats, I assume the lake is stocked with fish but I feel that the 7 marinas are cheesy operations and need upscaling.
83. I just bought a dock at Rancho M. and have heard that the Bureau wants to take them over. Are they going to buy them from each owner? I just paid \$1200 for my dock. I can't see them just take our docks away. An answer would be greatly welcome. #071
84. We are very fortunate to have one of the most beautiful lakes in the state of California and it can be kept that way so long as we don't let people abuse its' natural beauty or to overpopulate the facilities with rap concerts.
85. Keep up the good management.
86. Thank you for your interest. Keep up the good work.
87. Doing nice job on the lake. Only complaint is rap day. This year was worse than last year. What are we to expect next year?
88. The one complaint I notified you about was handled expeditiously. For that I thank you.
89. The BOR needs to actively support long-term site users. The long-term site users are the backbone of revenue generation for the resorts and therefore, the federal governments' fees, which support day use picnic areas, and "free" launch ramps, etc. for others.
90. Relax overnight prohibition so that cruising is a complete experience. (Boats are self-contained; the sanitation reason is absurd).

91. Lake Berryessa is one of the most beautiful lakes in the state. I hope the Bureau keeps up the good work! Would hate to see a ban on two-stroke engines and pwc at Lake Berryessa.
92. Keep up the great work. You people do a great job. Lake Berryessa is a beautiful lake. Lake Tahoe use to be my favorite. Also we had a home there, but too crowded now and too far away from San Francisco.
93. We as several family members enjoy Lake Berryessa for more than just boating. We fish, walk, watch skies change, generally enjoy the beauty of the area year-round!
94. Way too many pwc run by kids!!
95. Keep up the good work!
96. Lake Berryessa Marina requires a \$4 parking fee for tenants when you stay overnight on your boat. This is wrong. This policy is simply price-gouging. If you have administrative oversight of the marinas, then please stop this ridiculous policy!
97. Rents are getting a tad out of hand. The last rap fiasco was frightening as well as disruptive to me and my family (which involves a 6 & 7 year old). I hope this doesn't repeat itself.
98. The permits for use of the picnic area on the west shoreline should be closely monitored before giving them and policed better if issued.
99. A weekend First Aid station centrally located between the resorts would be of great value.
100. As I am a homeowner at Berryessa Pines, I would like to be more informed about plans and prospects that could affect us. There are always rumors floating around about future plans that could affect us.
101. We would like to commend the Bureau for their activities such as the "Cast for Kids" in June, which we were involved with. Very rewarding experience.
102. Get some kind of control of the numbers and types of boats allowed. Maybe a license would be a good idea for boaters just like driving a car. It was a zoo up there last time. I couldn't wait to get home to smell the fresh air of San Francisco.
103. It would be a shame to have any part of the lake developed. I would also like to have better control brought over the resort management.
104. Doing a very good job.
105. Please manage these large groups on day uses. It took 1.5 hours to drive 7 miles on public road congested by an inconsiderate group. Ambulance and fire equipment had difficulty getting through.
106. As stated on 12b, the fishing has been real bad this year (trout). I think planting twice a year would help keep a high number of trout in the lake. Everyone I spoke to this year has been disappointed in the trout fishing.
107. Patrols and citations in 5-mph areas around shore use areas. Age requirements on pwc operators. More trashcans at day use areas and no more rap trashers!! This is not only a disgrace to nature, taxpayers, public usage and funds; it is terribly unsafe.

108. Curb resort prices.
109. Although I believe in everyone having the opportunity to enjoy the lake, it is difficult as a sailing vessel to be able to enjoy the beauty of the area with all of the motorized boats (mostly jet skis), wakes, and noise.
110. I enjoy visiting other parts of the lake and other marinas in the morning. Restaurants in the evening. I try to use the lake in the middle of the week and avoid the crowds. Markley's seems forgotten by sheriff patrols. Support resort owners.
111. More patrols around the lake!
112. In general BOR is performing admirably. Unfortunately July 7 has left me with many concerns. How would you control that group had it become more volatile? Why were they allowed to litter? Why were they not subject to the same laws my family is expected to?
113. The Bureau needs to have more strict control of mobile home parks around the lake in regards to property and lease charges. These parks have had runaway charges for rent on mobile homes.
114. In general I believe Berryessa is well managed. When it first opened facilities were lacking but day use was superior. Facilities are now good, however many good day use opportunities are sacrificed for permanent campsites. Inadequate parking and day-use.
115. Would like to see more patrolling of the lake to keep it safe for families.
116. Saw how Oak Shores Park was left after the get together on 7/11/98 by the day users. It was a total mess and should be banned.
117. The Bureau needs to be more proactive on resort issues. Provide crowd control limits at picnic grounds and stop parking on roads.
118. In general, the Bureau has done a good job managing lake resources. I would like to see existing resorts expanded and maybe one or two additional resorts built on the lake.
119. Weekends when large groups are expected and need to be better managed. Law relating to boating safety needs to be consistently enforced.
120. There needs to be more restrictions on resort owners-the charges implied to people are getting ridiculous. Charging to keep your boat at a place you already pay rent on, etc.
121. Thanks for putting floating toilets on the lake.
122. Overall, as large as the lake is, it is managed very well.
123. The Bureau has stopped reviewing each resort's management of facilities. The increases in rent & other charges have far exceeded any cost of living increases. Thus the cost is going up so much it's hard for families to continue to pay. Thanks for survey.
124. Management needs to insist that resorts maintain the overall condition of the resort in compliance with the terms of their lease, including the approval charges allowed.

125. The resorts perform a valuable function by providing a balance of long and short-term sites. Need to continue supporting these types of contracts to reduce government expenditures.
126. I would like to see increased fines for speeding inside 5-mph areas and for littering the lake. Stop the Oak Shores mess on July 11. (I wish I knew how)
127. As stated earlier, I'm struggling to be able to afford this pleasure. Between the boat, dock, and home site it is expensive. I believe the resort owners are making more money than they should, using a gov't owned, tax supported lake and surrounding land.
128. The roads in and out of the lake area should always be kept open for local traffic and emergencies.
129. Access to private docks could be maintained better for elderly people. The mooring fee only pays for the right to have a dock on the lake. We are responsible for the maintenance.
130. My experience has been positive for the most part.
131. You as management should not allow this rap session to ever take place. Start now so it doesn't happen next year.
132. People need to be instructed on how to drive a boat at the marina before putting a new boat in the water and then drinking beer and driving the boat.
133. I believe there is a serious problem with noise and the amount of pwc on the lake.
134. The concessionaires seem to raise rates at will. No rent control. Inadequate service for fees rendered but in favor of concessionaires. Control unwanted public access.
135. With the rise and fall of the water level, dock access at marinas is sometimes hazardous and not well maintained.
136. Make the resort managers stop breaking the rules and double booking RV sites and camping also allowing resort tenants to have 2 trailers on 1 site. This all adds up to more people per resort than should be.
137. I feel they do little to control the noise the campers have on others trying to enjoy the park. Especially on Road 4 where campers are jammed into the area next to permanent campers.
138. I had \$5000 worth of damage to my boat last year because of striking an unmarked water hazard (rock) 75 yards from shore! The markers must be placed and moved according to the water level; that means they're adjusted during the season.
139. The lake has been allowed to get too low, making launching very hazardous. It also exposes much dangerous debris on the shoreline, such as broken glass, beer cans, Styrofoam, and other trash.
140. I really like the lake, but I don't think that it could be very clean when you have cows on the opposite side of the lake wading in it.
141. I would like to see some controls on the fees and rents the park concessionaires charge for spaces for mobile homes and fees for docks, etc.

142. Being over priced, no respect, only looking out for themselves, treated poorly for a long time tenant, favoritism for who they like or don't like, lack of customer service, bad attitude (if you don't like it get out). The all mighty \$ talks!
143. Try to keep the lake as clean and full would be better for everyone. Better on water patrol (police) for 5 mph zones would sure help. Jet ski areas "calm area" sure wouldn't hurt, and may even help increase revenue.
144. Too many water polluting 2 cycle motors on lake. Some people rely on this water to drink. If they saw the oil slicks I don't think they would like it.
145. Happy with the lake and the way it is run. Only problem was July 11th took 5 hours to go 2.7 miles and the police officer said this was normal Saturday traffic.
146. It's a great lake close to home. As a former elected lawmaker don't screw up the lake with more development.
147. It would be difficult but do your best.
148. Launching is difficult at Markley Cove. We enjoy our pwc and would be unhappy if we couldn't use it at the lake. Others need to be conscious of boats and other pwc. We enjoy our berth & the conditions, cleanliness, helpfulness & courteous staff members.
149. I'm a year round houseboater on Lake Berryessa. I like all kind of water sports. I think that the naturalists are taking the two stroke motors a little too far. There wasn't a problem with these motors until the new gas came out.
150. This survey is a great step to getting an idea of what boaters want/need/think. Please mail me the actions, if any, that you will take as a result of this feedback. I really enjoy the lake. My only complaint is about Lake Solano campground. 8:30 curfew.
151. Thank for your interest in the conditions in and on the lake.
152. Sheriff's Dept. needs to patrol (actually enter) more coves--not just give a cursory glance. 5 mph not being observed, especially by pwc.
153. They could let less water out so the lake would not get so low.
154. It is a well managed facility and my only concern is the growing number of jet skis and their lack of courtesy.
155. Again, I would like to see the lake patrolled better by having an officer in specified locations. They do a great job, but are spread too thin. I know this is a money problem. Always have a patrol boat in a specified zone area especially on the weekends.
156. I feel the lake is great.
157. We feel they should control the tent area more. It sounds like there is way too many people at the campsites to which many of them are inconsiderate to others.
158. I appreciate seeing the patrols circulating on busy use days. I would support a volunteer clean up day in spring or summer to pick up debris on the shoreline. Perhaps the shoreline could be divided up by marinas.
159. Keep up the good work trying to keep the lake clean.

160. The visitor center (near park headquarters) is hardly ever open to visitors.
161. "to experience excitement"; we have enough excitement just trying to get up the highway during rap day. We do not need that much excitement, or that kind.
162. I think it would be nice if the airstrip could be used. I probably would use it 2 or 3 times per year.
163. The resorts need more gas pumps for the boating & the public. The BOR needs to take a more active & aggressive role with their lake management & resort management (lease enforcement).
164. Why has the yearly event at Oak Shores been allowed? I am a member of Monticello Ski Club. We have to have permits/sanitation/phones/medical when we put on an event. They don't. We enjoy our working relationship with the Bureau. We can be of assistance.
165. We are always concerned as to how our mobile home futures will be affected. I'm concerned about preserving the natural environment. I'm concerned about the young boaters, alcohol, and accidents.
166. Slow down on rent increases!
167. I believe the tenants should have a voice in the rates charged. People without boats should not be favored over people with boats. My lease is for a space for my mobile home & parking. I should not be charged extra for keeping my boats in my driveway.
168. Develop boat campsites on Eastern shore.
169. I like things the way they are.

APPENDIX E
EXIT INTERVIEW SURVEY
INSTRUMENT

LAKE BERRYESSA BOATER SURVEY
Ramp User Questionnaire

Q. NO. _____

Date _____ Time _____ Weather _____ Location _____

Interviewer _____ Respondent's Gender _____ Party Size _____

“Hello. My name is _____. We are conducting a survey of boaters so that the Bureau of Reclamation can learn more about your visits to Lake Berryessa and how your visits might be improved. Could I take a few minutes of your time to ask about your experiences on the lake today?”

1. How many years have you been boating? (**total**) _____ YEARS

2a. Have you boated on Lake Berryessa before this visit? YES NO
(If “no”, skip to 4)

b. How many years have you been boating on Lake Berryessa? _____ YEARS
(Approximate answer is ok; if 1998 is first year, answer is “0”)

3. How many days did you boat on Lake Berryessa in 1997? _____ DAYS

Can you tell me how of those days were weekend days and how many were weekdays?

WEEKEND DAYS _____

WEEKDAYS _____

4a. Do you use **other lakes** to do the same type of boating you did today?
(If yes, list them below) (If no, skip to 5)

b. About how many days did you boat on those other places in 1997? _____ DAYS

c. AND...Why did you come **here** today instead of one of those other places?

5a. Where is your permanent residence? (*Record City, State, Zip Code*)

_____ / _____ / _____

b. How far is this launch ramp from your home? _____ MILES

6a. Is this a one-day visit? YES NO

IF NO...How many days will you be visiting Lake Berryessa? _____ DAYS

b. Are you RV or tent camping? YES NO

OR...staying in a long-term site? YES NO

OR...staying in resort lodging/motel? YES NO

7. What time did you get on the water today? _____:_____ AM / PM

8a. What type of boat did you use today?

- | | |
|--|---|
| <input type="checkbox"/> Runabout/Speedboat/Ski boat | <input type="checkbox"/> House boat |
| <input type="checkbox"/> Fishing boat/Bass boat | <input type="checkbox"/> Cabin cruiser |
| <input type="checkbox"/> Pontoon boat | <input type="checkbox"/> Row boat/canoe |
| <input type="checkbox"/> Personal watercraft | <input type="checkbox"/> Sailboat/Sailboard |
| <input type="checkbox"/> Other _____ | |

b. How many horsepower is your boat? _____ HP

c. What is the length of your boat? _____ FEET

9. Here is a list of activities you may have participated in today. (*HAND BOATERS LIST*)

Can you tell me what **percent of your time** you spent on these activities today?

(*TOTAL SHOULD = 100%*)

Fishing _____ % Cruising (*Incl. PWC*) _____ %

Swimming from boat _____ % Water skiing/Sports _____ %

Relaxing/Sunning (stationary) _____ % Shoreline use (beach/picnic) _____ %

Other activities _____ % ...describe _____

10a. Do you have a **favorite** place to go on Lake Berryessa? YES NO

IF YES: NOTE LOCATION: _____

b. **Why** is that/are those your favorite place(s)? (*Please be as specific as possible*)

11a. Are there any parts of Lake Berryessa you deliberately **avoid**? YES NO

IF YES: NOTE LOCATION: _____

b. **Why** do you avoid that/those parts of the lake? *(Please be as specific as possible)*

12. What do you **like best** and **like least** about the lake? *(Probe for specific physical or social conditions; not times, days, or locations)*

BEST: _____

LEAST: _____

13a. Have you noticed any **positive or negative changes** at Lake Berryessa in the last five years? *(Or since boater has been coming to Berryessa?)* YES NO

Positive: _____

Negative: _____

b. If you noticed changes, have these changes affected your **enjoyment or use** of Lake Berryessa? In what way? YES NO

c. Would the subdivision or development of lands adjacent to the lake affect your **enjoyment or use** of Lake Berryessa? *(If yes, please explain or describe)* YES NO

14. Have you had any problems or conflicts with other visitors while on Lake Berryessa? *(If yes, describe problems as specifically as possible below)* YES NO

15. Are there changes you would **like to see** on Lake Berryessa? YES NO

16. Which of these statements best describes your **expectation** for the number of boats on the lake? (*Please check one*)

- _____ I saw ABOUT AS MANY boats as I **expected** to see during my last outing.
 _____ I saw MORE boats than I **expected** to see during my last outing.
 _____ I saw FEWER boats than I **expected** to see during my last outing.

17. Which of these statements best describes your **preference** for the number of boats on the lake? (*Please check one*)

- _____ I saw ABOUT AS MANY boats as I **wanted** to see during my last outing.
 _____ I saw MORE boats than I **wanted** to see during my last outing.
 _____ I saw FEWER boats than I **wanted** to see during my last outing.

18. How important to you are each of the following reasons for visiting Lake Berryessa?

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
To do something with the family	1	2	3	4	5
To be with friends	1	2	3	4	5
To be with people of similar values	1	2	3	4	5
To experience new and different things	1	2	3	4	5
To develop my skills and abilities	1	2	3	4	5
To experience excitement	1	2	3	4	5
To be outdoors	1	2	3	4	5
To view the scenery	1	2	3	4	5
To be close to nature	1	2	3	4	5
To think about personal values	1	2	3	4	5
To release or reduce built-up tensions	1	2	3	4	5
To get away from other people	1	2	3	4	5
To experience solitude/quiet	1	2	3	4	5

19. Do you buy or subscribe to magazines related to your interest in boating? YES NO

20. Do you help or belong to any organization(s) dealing with issues related to your boating interest? YES NO

21. Has your interest in boating influenced your chosen line of work or geographic living location? YES NO

22. Are there any additional comments you would like to make concerning Lake Berryessa?

THANK BOATER FOR THEIR PARTICIPATION IN THE SURVEY!

APPENDIX F
MAIL-BACK SURVEY INSTRUMENT

FIRST LETTER SENT WITH MAIL-BACK SURVEY

Official Bureau of Reclamation Letterhead

July 13, 1998

Dear Lake Berryessa Boater:

In order to provide high quality boating opportunities on Lake Berryessa we are interested in learning more about your boating experience and your perceptions of boating conditions on the lake. Knowing how boaters like yourself use the lake and how you perceive present conditions is essential information for making good management decisions. A study to gather this information is being conducted on Lake Berryessa this summer.

We would greatly appreciate it if you could take about ten minutes of your time to help us out by completing the enclosed questionnaire relating to your use and opinions of present conditions on Lake Berryessa. If you no longer boat on Lake Berryessa, do not fill out the questionnaire but please return it to us with a note to that effect on the top.

Please place your completed questionnaire in the enclosed postage-paid envelope and return it to us as quickly as possible. Any information you provide will be **strictly confidential**. Each questionnaire has an identification number on it to allow us to keep track of questionnaires mailed out and returned. However, your name will never be placed on the questionnaire nor used in any way.

If you would like a copy of a report synopsis when this study is completed, please write your name and address on a separate piece of paper and enclose it in the return envelope along with your questionnaire.

We want to continue to provide opportunities for enjoyable boating; to do this we need to understand what is important to the experience you seek when you boat on the lake. Your help in providing this information is greatly appreciated. Please do not hesitate to call me or the study coordinator Mr. William Jackson at (707) 966-2111 if you have any questions.

Sincerely,

Eric W. Natti
Resource Manager

REMINDER POSTCARD SENT AFTER ONE WEEK

Dear Lake Berryessa Boater:

July 20, 1998

Recently you received a survey regarding your boating activity and your perceptions of boating conditions on Lake Berryessa. If you have already completed and returned the survey, we thank you for your participation.

If you have not completed and returned the survey, we urge you to take a few minutes to do so now. Your participation will help guide future planning and management on Lake Berryessa. In order to gather the most valid and useful information, we need to hear from everyone in our sample. Remember, your responses are totally anonymous.

Thank you again from the managers at Lake Berryessa for your participation in this very important effort.

SECOND LETTER SENT TWO WEEKS AFTER INITIAL MAILING

Official Bureau of Reclamation Letterhead

July 27, 1998

Dear Lake Berryessa Boater:

About two weeks ago we sent you a questionnaire about your boating experiences and perceptions of the quality of boating on Lake Berryessa. If you have already completed and returned your questionnaire, we thank you for your prompt response. If you have not completed the survey, would you please take the time to do so today?

If our results are to be as useful as possible, it is important that each questionnaire be completed and returned. Remember, all responses will be summarized and handled in strict confidentiality. Even if you no longer boat on Lake Berryessa, please return the blank questionnaire to us with a note stating that fact.

A copy of the questionnaire and a return envelope are enclosed in case you did not receive or misplaced the original materials we sent you.

Your cooperation is greatly appreciated. Please do not hesitate to call me or the study coordinator Mr. William Jackson at (707) 966-2111 if you have any questions.

Sincerely,

Eric W. Natti
Resource Manager

LAKE BERRYESSA BOATER SURVEY
Mail-back Questionnaire

Q. NO. _____

First, please tell us about your past experience on Lake Berryessa, and how much you use the lake.

1. How many **years** have you been boating? _____ YEARS

2. How many **years** have you been boating on Lake Berryessa? _____ YEARS
(If 1998 is your first year, the answer should be <1")

3a. How many **days** did you boat on Lake Berryessa in 1997? _____ DAYS
(If unsure, an approximate answer is O.K.)

b. How many of those days were **weekend days** and how many were **weekdays**?
(WEEKENDS + WEEKDAYS should = DAYS listed in 3a.)

_____ WEEKEND DAYS
_____ WEEKDAYS

4a. Are there **other lakes** where you do the same type of boating you do on Lake Berryessa?
If there are, please list them below.

b. About how many days did you boat on those **other places** in 1997? _____ DAYS

c. AND...Why do you choose to visit Lake Berryessa instead of one of those other places?

5. How far is the marina or dock where you keep your boat from your home? _____ MILES

Next, please tell us about your boating experience the last day you boated on Lake Berryessa.

6a. What was the last day you boated on Lake Berryessa? If you don't remember the day, just indicate the month and year.

MONTH _____ DAY _____ YEAR _____

b. Was that a weekday or a weekend day? (*circle one*) WEEKDAY WEEKEND DAY

c. Was that a one-day visit? YES NO

IF NO...How many days were you visiting Lake Berryessa? _____ DAYS

d. Were you RV or tent camping? YES NO
OR...staying in a long-term site? YES NO
OR...staying in resort lodging/motel? YES NO

7. What time did you **leave** and what time did you **return** to your dock or launching point the **last day** you boated? (*If you made more than one trip, indicate when you first went out and when you finished boating that day.*)

TIME LEFT DOCK: _____:_____ AM / PM (*circle AM or PM*)

TIME RETURNED TO DOCK: _____:_____ AM / PM (*circle AM or PM*)

8a. What type of boat (or boats) did you use on the lake **that day**? (*Check more than one boat if applicable.*)

_____ Runabout/Speedboat _____ House boat _____ Personal watercraft
_____ Ski boat _____ Cabin cruiser _____ Rowboat/Canoe
_____ Fishing boat/Bass boat _____ Pontoon boat _____ Sailboat
_____ Other (please describe): _____

b. If the boat (or boats) is/are motorized, indicate the total horsepower. _____ HP (boat 1)
_____ HP (boat 2)

c. Indicate the length of the boat (or boats). _____ FEET (boat 1)
_____ FEET (boat 2)

9. What percent of your time did you spend on the following activities while recreating on Lake Berryessa **the last time out**? (*Consider time spent getting to or moving between fishing locations as Fishing.*) (TOTAL SHOULD = 100%)

Fishing _____ % Pleasure cruising _____ %
Swimming from boat _____ % Water skiing/Water sports _____ %
Relaxing/Sunning in boat _____ % Shoreline use (beach/picnic) _____ %
Other activities _____ % ...please describe _____

Finally, please tell us about your perceptions of boating conditions on Lake

Berryessa.

10. Do you have a **favorite** place (or places) to go on Lake Berryessa? If you do, please name it or, if you can't name it, describe that location in writing or indicate on adjoining map.

Why is that/are those your favorite place(s)? *(Please be specific as possible with your explanation.)*

11. Are there any parts of Lake Berryessa you deliberately **avoid**? If there are, please name them or, if you can't name them, describe the locations in writing or indicate on map.

Why do you avoid that/those parts of the lake? *(Please be specific as possible with your explanation.)*

12a. What do you **like best** about Lake Berryessa?

b. What do you **like least** about Lake Berryessa?

13a. Have you noticed any **positive or negative changes** on Lake Berryessa in the last **five** years? If you have, please describe the changes below. If not, skip to question 14.

Positive: _____

Negative: _____

b. If you noticed changes, have these changes affected your **enjoyment or use** of Lake Berryessa? Please describe any effects below.

Positive: _____

Negative: _____

- c. Would the subdivision or development of lands adjacent to the lake affect your enjoyment or use of Lake Berryessa? *(If yes, please explain or describe)* YES NO

14. Have you had any problems or conflicts with other visitors while on Lake Berryessa? If yes, please describe the problems below. *(Please be specific with your description.)*

15. Are there changes you would like to see on Lake Berryessa? (If there are, please describe below)

16. Which of these statements best describes your **expectation** for the number of boats on the lake? *(Please check one)*

- _____ I saw ABOUT AS MANY boats as I **expected** to see during my last outing.
_____ I saw MORE boats than I **expected** to see during my last outing.
_____ I saw FEWER boats than I **expected** to see during my last outing.

17. Which of these statements best describes your **preference** for the number of boats on the lake? *(Please check one)*

- _____ I saw ABOUT AS MANY boats as I **wanted** to see during my last outing.
_____ I saw MORE boats than I **wanted** to see during my last outing.
_____ I saw FEWER boats than I **wanted** to see during my last outing.

18. Do you buy or subscribe to magazines related to your interest in boating? YES NO

19. Do you help or belong to any organization(s) dealing with issues related to your boating interest? YES NO

20. Has your interest in boating influenced your chosen line of work or

geographic living location?

YES NO

21. How important to you are each of the following reasons for visiting Lake Berryessa?

	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important
To do something with the family	1	2	3	4	5
To be with friends	1	2	3	4	5
To be with people of similar values	1	2	3	4	5
To experience new and different things	1	2	3	4	5
To develop my skills and abilities	1	2	3	4	5
To experience excitement	1	2	3	4	5
To be outdoors	1	2	3	4	5
To view the scenery	1	2	3	4	5
To be close to nature	1	2	3	4	5
To think about personal values 1	2	3	4	5	
To release or reduce built-up tensions	1	2	3	4	5
To get away from other people 1	2	3	4	5	
To experience solitude/quiet	1	2	3	4	5

22. Are there any additional comments you would like to make concerning the management of Lake Berryessa? Please use the space below and the bottom of the page if needed.

THANK YOU FOR YOUR PARTICIPATION IN THE SURVEY!

PLEASE INSERT THE COMPLETED QUESTIONNAIRE IN THE ENCLOSED POSTAGE-PAID ENVELOPE AND MAIL IT BACK TO US.