Ragatz Realty Inc.

LAKE BERRYESSA

AN UNTAPPED RESORT DEVELOPMENT OPPORTUNITY

NAPA COUNTY, CALIFORNIA

Prepared for

NAPA COUNTY EXECUTIVE OFFICE

May 2017

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INTRODUCTION

LAKE BERRYESSA
AN UNTAPPED RESORT DEVELOPMENT OPPORTUNITY
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PART ONE
INTRODUCTION

Purpose

This document represents Phase I of a two-phase assignment. Its primary purpose is to describe attributes of Lake Berryessa in northeastern Napa County. As such, it will provide critical background and educational information for Phase II. The purpose of Phase II is to attract appropriate entities who will develop and operate five available concession areas at the Lake.

Lake Berryessa is one of the largest and most attractive freshwater lakes in California. It has 165 miles of shoreline. It is 26 miles long and three miles wide. It contains 20,700 surface acres. It is within 100 miles of over 10 million people. During its peak years of activity, it annually attracted more than one million visitors. It now represents one of the most untapped opportunities in the country for new resort development and local economic impacts.

The history of Lake Berryessa is long and complicated. It was created in 1957 with construction of the Monticello Dam. Purposes of the project were to control flooding, provide drinking and irrigation water, and generate hydroelectric power. These benefits were to be realized primarily by nearby Solano County and the environs, although both the dam and the Lake are in Napa County.

In 1958, it was decided that Lake Berryessa could be a prime destination for outdoor recreational activities of all types, especially boating and camping. In an arrangement with the National Park Service and the Bureau of Reclamation (BOR), Napa County entered into an agreement to manage development of the recreational opportunities. The land around the Lake, however, has always been owned by BOR.

In 1959, a General Development Plan was created by these three public entities. It provided for seven concession areas in strategic locations on the west side of the Lake. These seven areas were developed, and quickly became popular boating and camping destinations for families throughout northern California and beyond.

In 1975, BOR decided to take back control of the seven concession areas from Napa County due to alleged mismanagement. Control has remained with BOR ever since.

Recreational use of Lake Berryessa continued to grow, peaking at over 1.8 million annual visitors in 1996, and annually averaging well over one million. However, such popularity led to overuse and inappropriate use. The concession areas were not properly monitored and regulated, and BOR decided in 2009 that leases on five areas were not to be renewed. The five areas were closed by BOR, and most remnants removed.

During the next several years, numerous studies were completed by BOR, involving thousands of pages of documents and significant time and resources. BOR also briefly contracted with a new concessionaire, but without long-term results.

In 2015, six years after the closings, BOR felt ready to issue an RFP for redevelopment of the five concession areas. Three proposals were received, but none were accepted. Finally in 2016, Napa County began new conversations with BOR, and is now considering entering into a Managing Partner Agreement for the five areas, and to supervise their future development and operations, consistent with BOR’s Visitor Service Plan.

Almost a decade has gone by since BOR closed the five areas. During this time, Napa County has missed out on significant economic opportunities, and families throughout northern California and beyond have missed out on outdoor recreational opportunities. It is now time to redevelop the five sites. The purpose of this document is to assist in finding the most appropriate concessionaires possible. The five areas include:

- Putah Canyon (formerly Putah Creek)
- Monticello Shores (formerly Rancho Monticello)
- Berryessa Point (formerly Berryessa Marina)

- Spanish Flat (always referred to as Spanish Flat)
- Steele Canyon (formerly Steele Park)

At the end of this part of the report is a more detailed history of Lake Berryessa.

Organization

This document has six parts, including this first one (Part One). Part Two provides a detailed description of Lake Berryessa, the surrounding environs and the five concession areas. Included are sections on location, physical attributes, existing facilities and services, and attractions, amenities and activities. It is intended to educate readers on why the Lake is a prime destination for all types of outdoor recreation activities and other visitor-serving attractions, and not just boating, camping and fishing.

Part Three describes the Primary Market Area (PMA) for Lake Berryessa. Contents demonstrate the uniqueness of Lake Berryessa, e.g., within 100 miles of over 10 million people with high participation rates in outdoor recreation, limited competition from other large freshwater lakes, and so forth. There are sections on the PMA's demographics, freshwater lakes, marinas, pleasure boat registrations, campgrounds, RV registrations, participation rates and the tourism industry in Napa County.

Part Four describes results of an important consumer survey conducted specifically for Lake Berryessa. The survey generated over 3,211 responses. Questions concerned past and future use of the Lake, most desirable services, amenities, activities and accommodations, etc.

Part Five contains snapshots of various types of attractions and amenities that could be included in the five concession areas and environs. In order to maximize its potential, Lake Berryessa should be positioned as more than just a pretty place for boating, camping and fishing.

The document concludes with Part Six, containing a summary of the first five parts, along with a series of conclusions and recommendations.

As noted at the outset, this document and its six parts comprise Phase I of the overall assignment. It provides background and educational information to be used in Phase II which will involve actual solicitation of appropriate concessionaires for the five areas.

Brief History

The following paragraphs material is excerpted from BOR's "Lake Berryessa Prospectus," 2009.

> In 1948, construction of Lake Berryessa was authorized as part of Reclamation's Solano Project. The Solano Project was initiated to control flooding and to supply water for agricultural, municipal, and industrial uses. The primary project facility was Monticello Dam, constructed on Putah Creek in 1957.
>
> In 1958, before public recreational use of the reservoir was officially sanctioned, Napa County entered into a management agreement with the Bureau of Reclamation to administer the recreational development of federally owned lands at Lake Berryessa.
>
> In October 1959 the National Park Service issued a 'Public Use Plan' (PUP) that they had been assigned and accomplished, in behalf of Reclamation, outlining a future for development of Concession Contractor facilities and programs at Lake Berryessa for support of public recreation use. The PUP called for the development by Concession Contractors and Reclamation of traditional short-term 'park like' facilities. The focus was on camping and marina development with associated retail and food/beverage sales. There was no mention or apparent consideration of developing exclusive long-term trailer villages. The 1958 agreement assigning recreational development of Lake Berryessa to Napa County included a preliminary General Development Plan, subsequently incorporated into the PUP.
>
> The seven existing concession operations were all authorized to begin operations in 1958 and 1959. These are the same contracts, with one exception, that are now expiring in 2008/2009. The exception is Pleasure Cove that saw the original contract terminated in 2004 and is currently operating under a contract that will expire in 2038. The seven contracts were originally authorized for a maximum of 30 years but in 1980 Congress passed Public Law 96-375 that among other things provided two 10 year extension options for the seven concession contracts at Lake Berryessa. Those options were both authorized resulting in the upcoming expirations after 50 years of operation.
>
> In the early 1960's the Concession Contractors began requesting of Napa County authorization to begin developing trailer installations to be operated in a manner similar to the continuing operations. Napa County approved such developments and Reclamation concurred with no apparent address of the development direction prescribed in the PUP. There are no apparent historic records that indicate exactly how many trailer sites were authorized at each of the seven locations but eventually there were over 1600 such sites developed. At the same time that the trailer facilities were being developed some of the short-term facilities; camping, lodging, marinas, and retail also developed.
>
> The development of the long-term trailer installations were immediately popular and became the core economic base for the concession operations at Lake

Berryessa. The trailer installations, for the most part, were developed on the prime lakeshore areas within the Concession Contractor land assignments. Short-term facilities serving the traditional recreating public have always been a part of the mix at the Lake Berryessa concession operations and they were developed adjacent to the long-term trailer areas. With the exception of marina facilities and some lodging the short-term facilities at Lake Berryessa never became popular destinations areas for area visitors with the exception of holiday weekends. Short-term public use facilities have been very popular and commercially successful over the years in other areas, i.e. Lake Shasta, New Melones, Lake Oroville, Folsom Lake, and numerous others located significantly farther away from the population centers of their users than the operations at Lake Berryessa.

In 1972 an audit by the General Accounting Office of the United States determined the following:

> *"The Bureau's failure to control adequately the development of public recreational facilities at Lake Berryessa has resulted in a situation where access to and use of the lake by the general public has been severely restricted because of (1) extensive development by Concession Contractors of mobile home parks along the shoreline and (2) failure to provide public recreational facilities in accordance with the Public Use Plan."*

In 1975 Napa County relinquished their control and management of all recreation oversight at Lake Berryessa and returned that responsibility to Reclamation where it has remained since. It has proven unfeasible to restructure the concession operations and the associated *'long- term/short-term focus'* during the life of the existing concession agreements/contracts. Several attempts were made by Reclamation to upgrade the opportunities for short-term users with some success for day users in the development of Oak Shores and Capell Cove.

The recent planning and EIS work including thousands of public comments made it clear that the weak business profile for the short-term concession recreation facilities at Lake Berryessa was attributable to the proximity of the large trailer villages and the focus on their operations and not due to lack of public demand in the area for appealing short-term facilities. The atmosphere and associated experience for traditional short term users at Lake Berryessa has not been as positive as that perceived by members of the public willing to travel the greater distance to numerous other public land areas featuring water based recreation.

The present opportunity to restructure the concession contracts upon expiration of the existing operations in 2008/2009 has been the target of Reclamation throughout the last nine years of planning and public comment resulting in the recent completion of an Environmental Impact Statement, the associated Visitor Services Plan and the recent Record Of Decision for Lake Berryessa that establishes the operational focus for development and operation of short-term visitor use concession facilities.

In the nearly 50 years since the current contracts were established, the concession contractors had focused for the most part on the establishment and management of large, long-term trailer villages. Previously apportioned among six concession areas were over 1,200 trailers. This type of use and these specific installations that provided approximately 50 percent of the total revenue for the previous concession contractors has been terminated and must be removed no later than the last day of the subject concession. The future business models for Lake Berryessa will not include private exclusive use. The elimination of this use type and the availability of acreage within the concession areas that is no longer committed to trailers will make available some of the best shoreline areas (in the areas open for development and assigned for concession use) for new development of short-term commercial recreation and support facilities.

Reclamation also intends to begin a major effort at improving government support facilities at Lake Berryessa including a more extensive trail system to eventually encircle the lake, including sections that pass through each concession area.

Businesses nearby on the access routes to Lake Berryessa tend to appear not very financially healthy, with the exception of storage yards and dry storage for boats and trailers. Several businesses have been shut down for years.

Reclamation strongly believes that the business malaise that exists both adjacent to and within many of the existing short-term facilities at Lake Berryessa is a symptom of facilities poorly maintained and the associated affiliation with the large, exclusive-use, long-term trailer installations as a business anchor. A large percentage of the traditional recreating public does not even visit Lake Berryessa because of the general lack of physical appeal of dated facilities and the fact that the trailer villages were sited on the prime lakeshore locations in nearly every existing concession area.

With new, better-sited facilities and business models that focus on the short-term user, the visitor profile will change significantly and be more representative of those Bay Area, Sacramento, and Northern California users who are already using numerous other reservoir areas around the north State located a significantly greater distance from population centers. Given the often-superior natural beauty and lake vistas in combination with new and improved facilities, Lake Berryessa should draw hundreds of thousands of new visitors and compete very successfully with areas such as New Melones, Don Pedro, the Sacramento/San Joaquin Delta, Shasta Lake, Trinity Lake, Lake Oroville, and others that are currently financially successful and draw heavily from populations much nearer and more convenient to Lake Berryessa. Proximity to Napa Valley attractions also provides a potential nexus that will eventually benefit new business models at Lake Berryessa.

The referred-to “Prospectus” in 2009 resulted in the selection of one master-concessionaire. Due to inadequate performance, the contract with this concessionaire was terminated in 2015. In July 2015, another Prospectus was prepared and a Request for

Proposal for new concessionaires was distributed. This process generated three applications, all of which were rejected by BOR due to being "non-responsive," i.e., "…the bids did not comply with all requirements of the Prospectus, which may include price, quantity, quality or guaranty."

PART TWO

LAKE BERRYESSA

AND THE FIVE CONCESSION AREAS

PART TWO
LAKE BERRYESSA
AND THE FIVE CONCESSION AREAS

I. LAKE BERRYESSA

Introduction

This part of the overall document has two sections. The first section provides detail on overall Lake Berryessa itself, including location, physical characteristics, existing amenities, activities and attractions (both in the surrounding area and at the Lake itself) and past uses. The second section describes the five concession areas, including their physical characteristics, history and potential uses.

Location

Lake Berryessa is in northeastern Napa County, as shown on the two following maps (both provided by BOR). The first map is more micro in scale, and shows the Lake in the red box. It also shows its location relative to various nearby cities and features of the San Francisco Bay Area and the Sacramento area. The second map shows a 100-mile radius around the Lake, and is referred to in the map as the "market area." (The market area used in the map is more expansive than the "Primary Market Area" described in Part Three of this report at-hand.) This second map also outlines Napa County.

Approximate distances to surrounding cities include: 65 miles east to Sacramento (via State Highway 128 to Winters and beyond to US Interstate 80); 84 miles south to San Francisco (via State Highways 128 and 121 to US Interstate 80); and 109 miles south to San Jose (via State Highways 128 and 121 to US Interstates 780 and 580).

Figure 1.1
Lake Berryessa Location Map

SHASTA
HUMBOLDT
TRINITY
Susanville
LASSEN
TEHAMA
PLUMAS
Chico
BUTTE
COASTAL RANGE
GLENN
SIERRA
MENDOCINO
NEVADA
YUBA
Ukiah
LAKE
COLUSA
Yuba City
SUTTER
PLACER
Roseville
EL DORADO
YOLO
NAPA
Lake Berryessa
Sacramento
SONOMA
SACRAMENTO
Elk Grove
AMADOR
Santa Rosa
Vacaville
CALIFORN
Napa
SOLANO
Fairfield
CALAVERAS
SAN JOAQUIN
MARIN
Vallejo
Concord
Antioch
Stockton
CONTRA COSTA
TUOLUMNE
San Francisco
San Leandro
Livermore
Tracy
Modesto
ALAMEDA
STANISLAUS
San Mateo
Fremont
SAN MATEO
Pioneer Seamount
San Jose
SANTA CLARA
Guide Seamount
SANTA CRUZ
Santa Cruz
SAN BENITO
MONTEREY
Salinas
Service Layer Credits: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC
N
Market Area Outer Boundary
County Boundary
0
15
30
60
Miles

The southern portion of Lake Berryessa is about 30 miles from the City of Napa (via State Highway 121). Napa Valley itself is about 25 miles to the west. The map on the following page shows the primary circulation pattern around the Lake, and how the highway system connects to points beyond.

Geography

Lake Berryessa is nestled between the so-called Blue Ridge and Cedar Roughs in the Vaca Mountains. The surrounding lands are fairly steep, and for the most part undevelopable with any significant density. Most likely, they will remain in permanent open space. They provide a complementary wide array of outdoor recreational opportunities, e.g., hiking, mountain biking, primitive camping, bird watching, photography, picnicking, etc. The landscape is composed of grassy hills with oak and manzanita, and very scenic.

Shown below are average monthly temperatures and rainfall in recent years.

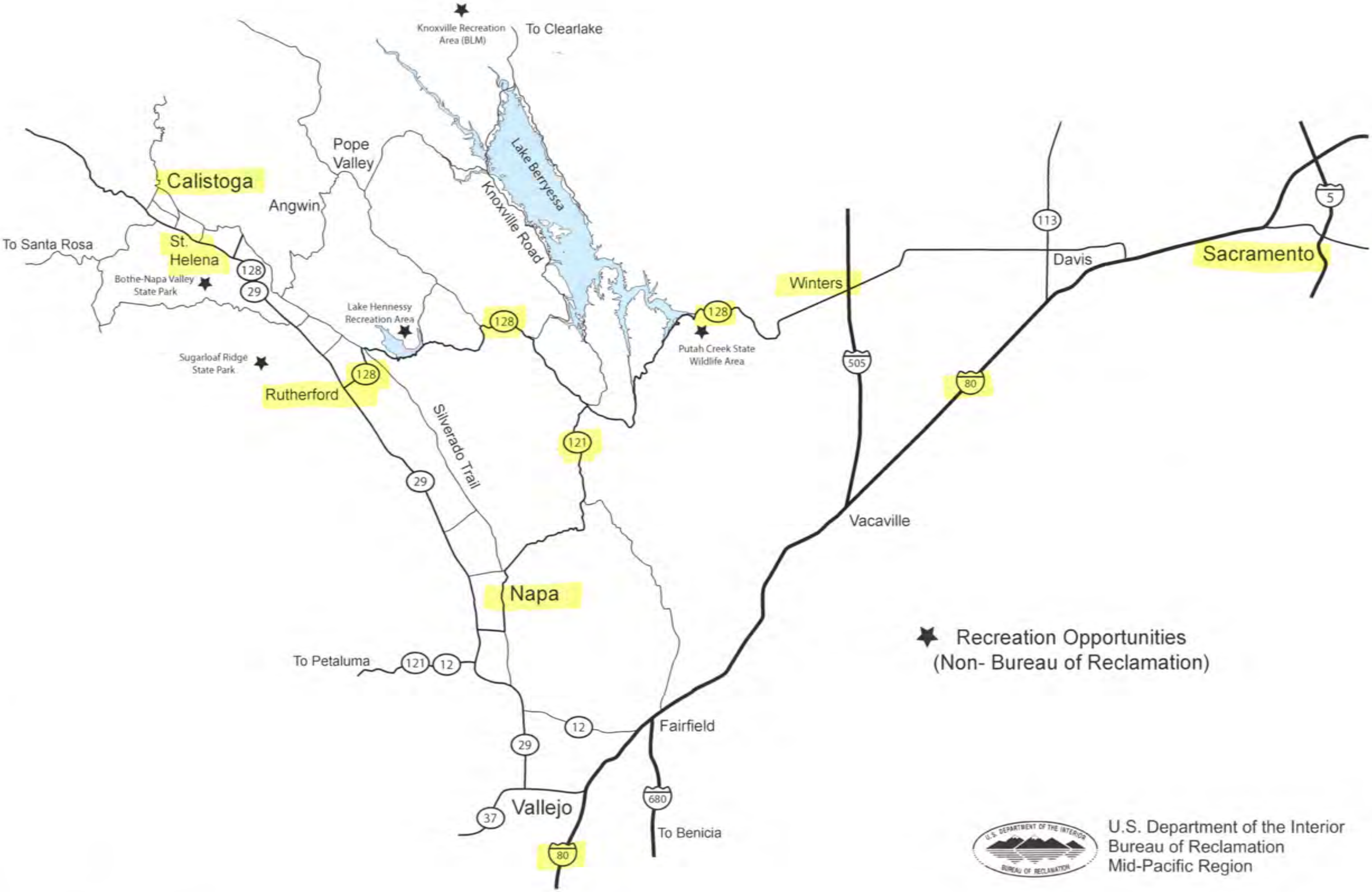
	inches of	average temperatures	
month	rainfall	low	high
January	4.18	41	55
February	3.27	45	62
March	3.15	47	67
April	1.17	50	74
May	0.60	54	82
June	0.18	58	89
July	0.05	61	94
August	0.05	61	93
September	0.37	59	89
October	1.00	54	79
November	2.59	46	64
December	2.76	40	65
total/average	19.37	51	76

For the most part, Lake Berryessa has an attractive year-round Mediterranean climate. Rainfall is concentrated from November through March, with an average of 3.19 inches per month. These five months generate over 80 percent of the annual rainfall. January alone generates over 20 percent.

Temperatures are mild, although the average high is 91 degrees in June through September and 94 degrees and in July and August – the prime boating season.

RECLAMATION
Managing Water in the West

Lake Berryessa Vicinity Map



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

Qualitative Description

The six following pages contain visual materials describing Lake Berryessa. The first three pages are a brief flyer, as prepared by the most recent master concessionaire ("Lake Berryessa: Discover the Beautiful Backroads of Napa," by Pensus). The next three pages are various photographs of the Lake as provided by BOR.

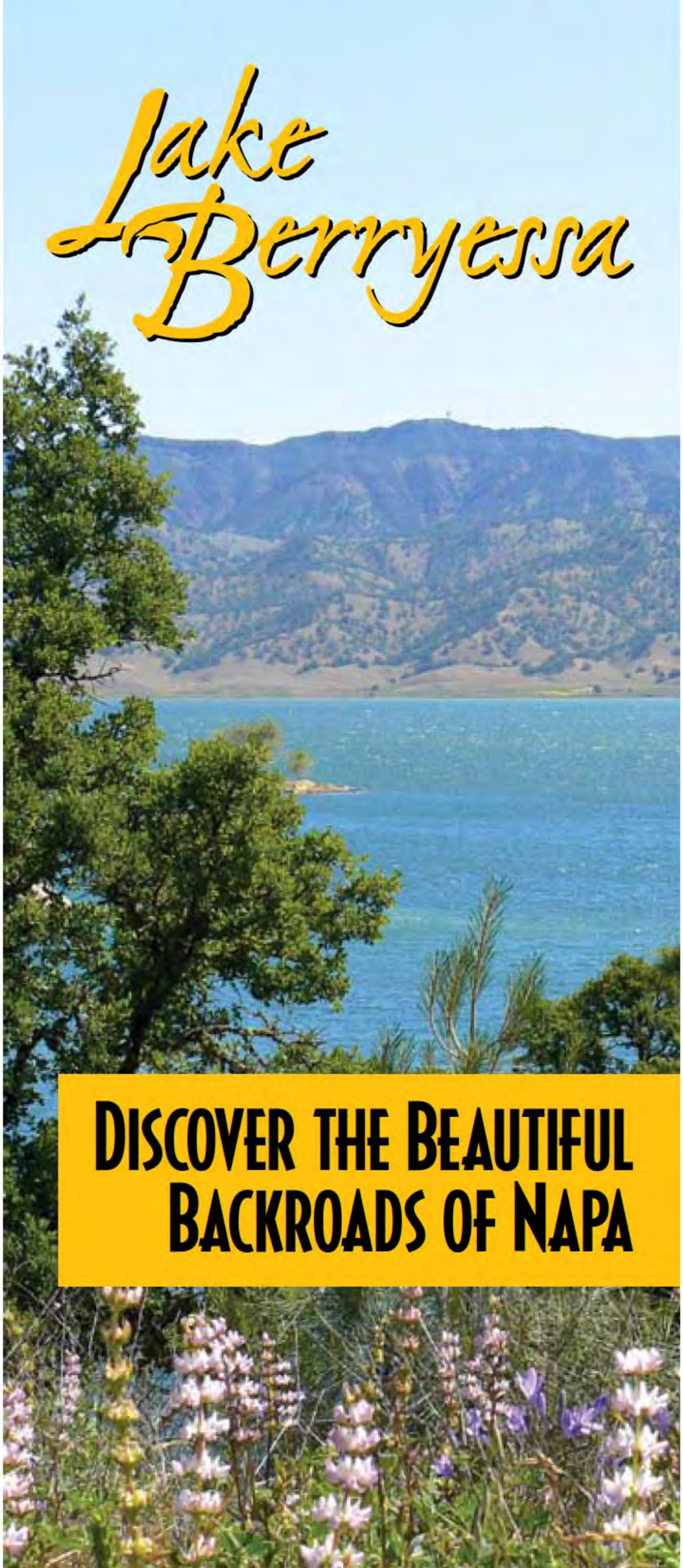
Lake Level History

Being an inland lake at a relatively low elevation, Lake Berryessa experiences significant variation in its high and low water levels. Variation is especially severe in times of drought, as shown in the following table. Once water level reaches 440 feet, the Lake begins to drain via the Glory Hole spillway. The 440 foot level is important because it represents the high water line for all development, including the five concession areas.

The lowest water levels recorded at Lake Berryessa since the mid-1990s were 373.24 feet in 1994 and 374.22 feet in 1995. It increased to 428.56 feet in 1998, and remained over 400 feet until a major, long-term drought in California caused it to drop to 395.78 feet in 2015 and 396.13 feet in 2016.

A dramatic increase was realized when it attained the 440 feet capacity in February 2017. The level increased by over 40 feet in just a matter of days following a period of heavy rainfall.

Consistency of the water level is important since it impacts visual appearance of the landscape, ease of boating access, etc. The level cannot be controlled by the five concession areas due to dependence on rainfall, and various uses of the water as required by the public sector, e.g., drinking, hydroelectric, flood control and irrigation.


Lake Berryessa
Discover the Beautiful Backroads of Napa

WATER, WILDLIFE AND WINE

Nestled between Blue Ridge and Cedar Roughs, just 16 miles northeast of the city of Napa, Lake Berryessa and the surrounding area—the ***Backroads of Napa***—offer year-round fun and recreation for all ages.

- Spectacular vistas
- Great fishing
- Award-winning wineries
- Miles of nature trails
- Quiet coves for kayaks and picnics
- Food and fun
- Warm summer water for swimming, boating, jet and water skiing

Lake Berryessa is one of the largest bodies of fresh water in California. It's approximately 26 miles long, 3 miles wide, with 165 miles of shoreline (that's more shoreline than Lake Tahoe!) Come and enjoy the waters of Lake Berryessa for boating, fishing, and swimming. Spend the day exploring the beauty of the area. Stay for a while at a lake front resort. Rent a houseboat. Taste award-winning wines. Enjoy dining at one of the local haunts.

Adventures Await You At Lake Berryessa And The Surrounding Valleys

Come for the day and enjoy a scenic drive with a stop for food and wine. Or spend a day on the water swimming and boating. Better yet, plan to stay for a while at one of the lakeside resorts or at the bed and breakfast within a vineyard and ranch. There is something to entertain everyone.

Water Sports, Boating & Fishing

The best way to appreciate the lake is from the water. Launch your own boat, or rent from one of the lakeside resorts. The water is 75° warm in the summer, and the scenery is spectacular all year. You'll find many quiet coves to enjoy swimming and relaxation. Or take to the open water for tubing and skiing.

Bring your kayak or canoe and cruise along the shore or around one of several islands. There are a dozen different points around the lake with public access from the road for paddle launch.

The fishing at Lake Berryessa is rated as some of the best in the state. Anglers enjoy fishing for both cold and warm water species including bass, catfish, bluegill, rainbow trout, kokanee and crappie. Knowledgeable fishing guides are available year round. Contact the resorts for more information, or launch your boat at Capell Cove.

Wildlife & Hiking

Hike one of the trails around the lake and go bird watching to see osprey and bald eagles as they catch "the one that got away" from the angler in the boat. Look for nesting eagles in the fall and winter months, along with geese, ducks, pelicans, loons, hawks and numerous other species throughout the year. You might also see fox, bobcat, mountain lion, or snakes. Information and maps are available at trailheads or the Bureau of Reclamation Visitors Center.

Wineries

Leave the congested Napa Valley and visit our award-winning and historic local wineries. You'll discover why they have achieved cult status among discerning wine lovers. Stop by and you'll often get to speak directly with the wine makers and learn more about the local vintage and viticulture. Plus, be sure to take in the beauty of the surrounding oak-studded hills and acres of Napa's most spectacular agricultural land and open space.

Lodging & Camping

Overnight accommodations are available at most of the privately-managed resorts around Lake Berryessa. Each is unique in what is offered, but you'll find cabins, camping for RV's and tents, boat and jet ski rentals, bait and fishing licenses, marina services and gasoline, plus scenic views all around. If you prefer, there's a bed and breakfast tucked in the hills.

Food & Dining

Many of the resorts offer food service and convenience stores, but be sure to stop by one of the local restaurants for good food and fine wines of the area. Or pick up snacks and picnic supplies at one of the local stores. Then continue to enjoy the beauty and fun of the area.

Other Points Of Interest

No matter how you access Lake Berryessa, you'll come through beautiful valleys. At the north is Pope Valley where you'll find the historic buildings of Aetna Springs, and Litto's Hubcap Ranch, California Sate Landmark No. 939. From the west you'll pass through Chiles Valley or Capell Valley. And from the southeast a must see destination is the Monticello Dam.

Public Day Use Facilities

Lake Berryessa and the nearly 10,000 acres surrounding it are administered by the Bureau of Reclamation, U.S. Department of the Interior. The BOR maintains three, free public day use facilities: Smittle Creek Park, Oak Shores Park, and Capell Cove Boat Ramp. The parks include picnic sites with BBQ grills, water fountains, restrooms, and miles of shoreline for swimming, fishing and observing nature.

To learn more about the area and for contact information visit the **Lake Berryessa Chamber of Commerce** website:

www.lakeberryessachamber.com

Goat Island

The Narrows

The Narrows

Pope Creek Bridge

Annie's Rock, above Cold Canyon

Lake Berryessa Trail

low water levels at Lake Berryessa 1994 to February 15, 2017

year	low water level (feet)	year	low water level (feet)
1994	373.24	2006	430.53
1995	374.22	2007	419.05
1996	428.56	2008	413.36
1997	427.16	2009	407.02
1998	427.08	2010	406.92
1999	420.43	2011	416.65
2000	421.47	2012	418.86
2001	420.43	2013	414.43
2002	421.47	2014	401.19
2003	429.49	2015	395.78
2004	426.71	2016	396.13
2005	430.89	2/17/17	440.00

Historical Visitor Flow

Table II-1 shows number of visitors to Lake Berryessa from 1981 to 2005, as estimated by BOR (excluding 2006 to 2010). The period of 1981 to 2005 represented the peak years of activity at the Lake. If accurate, visitor counts were impressive. The average annual number of visitors during this time was over 1.5 million during the 25 years. The low was 1,040,506 in 1981, and the high was 1,854,996 in 1996. It surpassed 1.8 million for three years, and was below 1.5 million for 11 years.

BOR calculated the visitor count by multiplying the average number of persons per vehicle (2.96) times the number of vehicles crossing automatic traffic counters. It is unknown how local-resident traffic was accounted for, as well as the same vehicles making multiple crossings of the traffic counters during the same visit. At any rate, BOR describes variations in visitor count over the 25-year period between 1981 and 2005 as follows.

> Visitation to Lake Berryessa does not climb steadily, but instead goes through a cyclical pattern of rising and falling visitation numbers. Since Reclamation began keeping visitation statistics in 1981, the greatest increase in the number of visitors over the period of a year occurred in 1982. Visitation climbed by 634,850 persons, an increase of nearly 40% over the 1981 baseline total. The trend did not continue, however, but declined over the next two years. By 1984, visitation had dropped back to the 1981 level. The next three years saw a steep and steady increase, peaking in 1987 with a total of 1,852,584 visitors.

TABLE II-1

Visitation Patterns to Lake Berryessa, 1981 to 2005

Year	Visitors*	Change From Previous Year Number	Percent
1981	1,040,506	No data	No data
1982	1,675,356	+634,850	61.0%
1983	1,345,415	-329,941	-19.7%
1984	1,046,283	-299,132	-22.2%
1985	1,318,357	+272,074	26.0%
1986	1,597,846	+279,489	21.2%
1987	1,852,584	+254,738	15.9%
1988	1,577,701	-274,884	-14.8%
1989	1,614,609	+36,908	2.3%
1990	1,426,557	-188,052	-11.6%
1991	1,495,013	+68,456	4.8%
1992	1,505,284	+10,271	0.7%
1993	1,330,911	-174,373	-11.6%
1994	1,231,162	-99,749	-7.5%
1995	1,704,581	+473,419	38.5%
1996	1,854,996	+150,415	8.8%
1997	1,788,731	-66,265	-3.6%
1998	1,818,207	+29,476	1.6%
1999	1,354,567	-463,640	-25.9%
2000	1,445,987	+91,420	6.7%
2001	1,685,362	+239,375	16.6%
2002	1,079,466	-605,896	-40.0%
2003	1,720,645	+641,179	59.4%
2004	1,645,129	-75,516	-4.4%
2005	1,613,339	-31,790	-1.9%
Total	37,768,594		
Average	1,510,745		

*Calculated by multiplying the number of vehicles tallied by automatic traffic counters by the average number of persons (2.96) per vehicle

Source: "Lake Berryessa Concession Prospectus," Bureau of Reclamation.

Visitation began declining again in 1988, and finally bottomed out in 1994 with 1,231,162 visitors. That year was the final season of a lengthy drought, which left the lake at the 63 feet below crest on Labor Day weekend. Low lake levels combined with an economic recession at that time may have discouraged visitation.

Visitor numbers rose steeply again in 1995, presumably corresponding with increased lake levels and an improved economy, and reached an all-time high in

> 1996 when 1,854,996 persons visited the reservoir. Between 1997 and 2001, visitation numbers continued to fluctuate, with the greatest percent change occurring in 1999, which had a 34% drop in visitation. While numbers steadily increased the following two years, 2002 saw the greatest decline in visitation ever recorded in a single year at Lake Berryessa, as the total plunged to 1,079,466, a drop of more than 56% from the previous year. Severe drought conditions throughout the West, a sagging national economy, and preoccupation with the possibilities of war and terrorist strikes against the U.S. crippled recreation and hospitality providers nationwide. Those factors probably were responsible for the dramatic decline of visitation numbers at Lake Berryessa.

After the closings in 2009, visitor flow severely dropped: 457,000 in 2011, 548,000 in 2012, 485,000 in 2013 and 408,000 in 2014. Most of the decline was due to less availability of recreational opportunities, while some was due to low water levels caused by an extended drought throughout California.

Seasonality of Use

As with most outdoor recreational venues, especially those emphasizing boating and camping, significant seasonal variation in use patterns occurs at Lake Berryessa. Availability of consistent information on such patterns is sporadic, especially since closing of the five concession areas in 2009.

Table II-2 shows monthly variations for 2014 for four partially operating concession areas, including Putah Canyon, Markley Cove, Steele Canyon and Spanish Flat. For the most part, these areas are not operating anywhere near the capacity they were prior to 2009. 2014 seems to represent a fairly typical year, and can be generalized to past and future years. This is in regard to relative seasonal use, however, and not absolute number of visitors, i.e., the absolute number would have been much higher prior to 2009 and is expected to be so again as the five concession areas are redeveloped.

As with most water bodies, usage of Lake Berryessa peaks in the two prime summer months of July and August. In 2014, these two months accounted for 39.1 percent of the **total** visitors. On the other hand, the five months of November through March accounted for only 10.4 percent. Other relatively low months were April, September and October (18.6 percent). The remaining 31.8 percent were in May and June.

TABLE II-2

Use of Selected Facilities, Current Concession Areas*, By Month, 2014

	Nights Rented in Tent Spaces		Launches		Day Use Vehicles		Total Estimated Visitor Use**	
Month	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	613	3.2%	83	1.1%	101	1.2%	3,284	2.1%
February	597	3.2%	49	0.6%	57	0.7%	2,856	1.8%
March	904	4.8%	87	1.1%	137	1.7%	4,708	3.0%
April	1,448	7.7%	311	4.0%	428	5.2%	9,832	6.3%
May	3,116	16.5%	935	12.1%	1,107	13.5%	22,732	14.6%
June	3,110	16.4%	1,396	18.1%	1,489	18.2%	26,752	17.2%
July	3,115	16.5%	1,833	23.8%	1,631	19.9%	30,300	19.5%
August	3,044	16.1%	1,701	22.0%	1,858	22.7%	30,380	19.6%
September	1,273	6.7%	640	8.3%	817	10.0%	12,052	7.8%
October	803	4.2%	365	4.7%	460	5.6%	7,024	4.5%
November	502	2.7%	227	2.9%	75	0.9%	3,388	2.2%
December	394	2.1%	88	1.2%	32	0.4%	2,076	1.3%
Total	18,919	100.0%	7,715	100.0%	8,190	100.0%	155,384	100.0%

*Includes Putah Canyon, Markley Cove, Steele Canyon and Spanish Flat.
**Calculated by BOR simply as four times each of the activities.

Source: Unpublished data obtained from Bureau of Reclamation.

Seasonality is most severe for the number of boat launches. The five months of November through March account for only 6.9 percent of the launches while June, July and August account for 60.8 percent. Patterns are similar for the distribution of day use vehicles in the parking lots. The pattern for rented tent spaces is a little less concentrated, but still highly skewed toward summer.

Such patterns are obviously influenced by climate, water temperature and school vacations. Most likely, significant untapped opportunities exist at Lake Berryessa to create a more year-round outdoor recreation destination, especially as less dependence is placed on boating and tent camping.

Before the Closures in 2009

It is interesting to look at the extent of services and activities found at Lake Berryessa **before** closures occurred in 2009. The following descriptions are adapted from

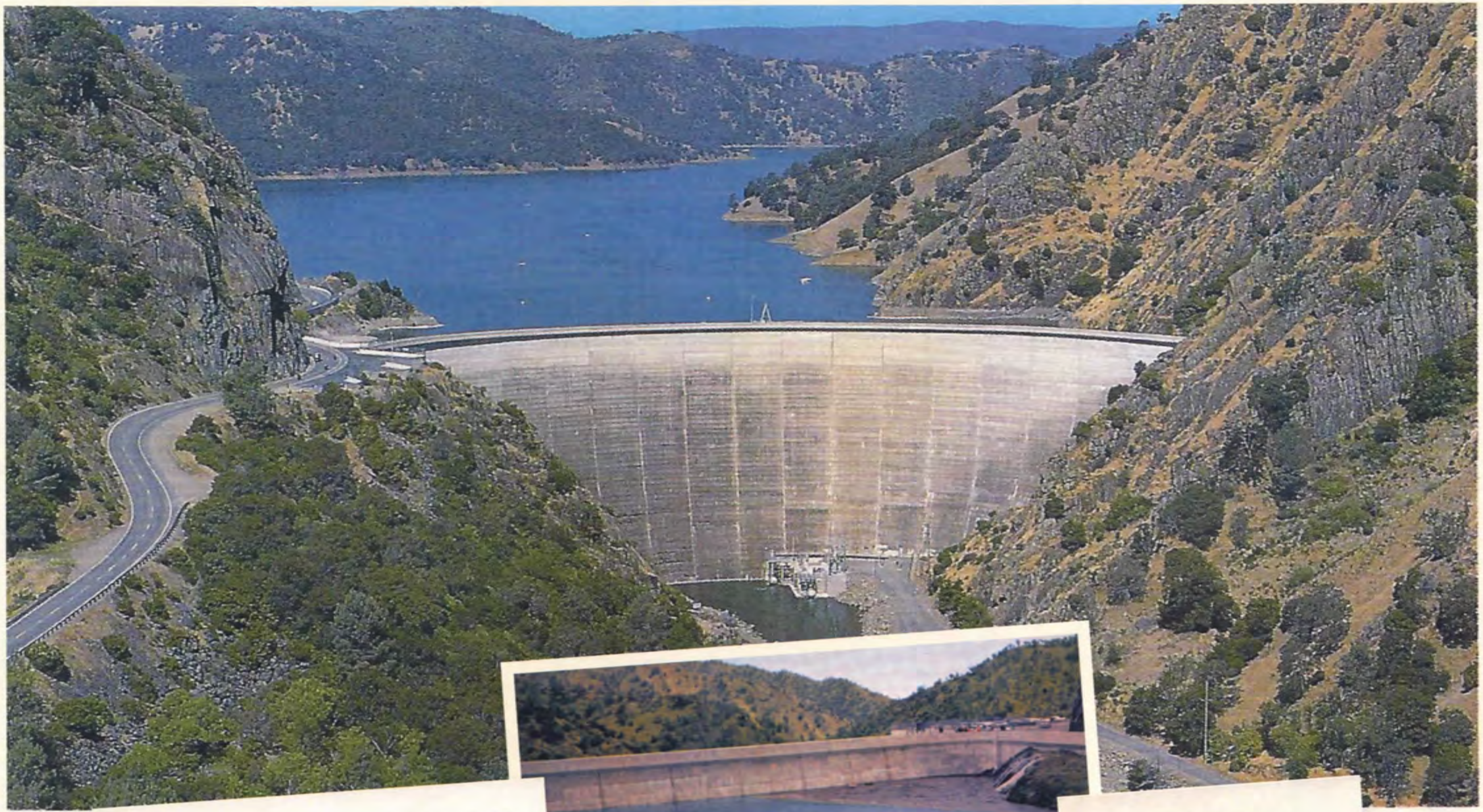
The Lake Berryessa News, as published by Peter Kilkus. Following the narrative are several vintage photographs taken at various times in the history of the Lake. They nicely portray Lake Berryessa in its past glory as an outdoor recreation destination centered around various types of boating and camping. The photographs are taken from "Vintage Postcards of Lake Berryessa: 2016 Collectors Calendar," as published by the Lake Berryessa Chamber of Commerce.

> **Putah Creek Resort** (now Putah Canyon) is located at the north end of Lake Berryessa. It stretches over fingers of oak-peppered land, giving this resort lots of accessible shoreline. Putah Creek Park has a restaurant & bar and offers 200 tent only sites and 55 RV only sites. Most sites are right on the water. The campsites have picnic tables and BBQ grills. The motel offers sleeping and kitchen units. Putah Creek Resort is the only resort that sells gasoline for automobiles.
>
> **Rancho Monticello Resort** (now Monticello Shores) is a family-oriented lake front destination for vacationers and water sport enthusiasts. The resort faces the main body of the lake, with the expansive east shore three miles directly across from the Resort. Curves in the shoreline create coves, and variances in the landscape and slopes. Essentially the resort is divided in two parts by a large rock outcropping, known as "Turtle Rock." At the southern-most end of the resort is the marina which includes a gas dock, market, café, 8-lane launch ramp, moorage, docks and a day park. There are boat slips for both short term and long term rental. The northern portion of the resort has a large area "Big Flat" with gentle slopes (less than 15%) most of which is devoted to RV, camping and open space. Events in the resort throughout the summer emphasize the warm and friendly atmosphere of Rancho Monticello Resort.
>
> **Lake Berryessa Marina Resort** (now Berryessa Point) is a magnificent setting for your next vacation! You will delight in the natural serenity of the area as you relax at one of their gorgeous waterfront sites. From tubing and wake boarding, to fishing and jet skiing, there is something for everyone at Lake Berryessa Marina Resort. Barbecue the catch of the day on one of our grills. For the ultimate in camping fun, rent a houseboat, pontoon boat, jet ski, or ski boat. They have group facilities for your next reunion, rally or company retreat. Gasoline pumps and a dump station are available for your convenience.
>
> **Spanish Flat Resort** (now Spanish Flat) offers outstanding fishing, overnight camping and picnicking, as well as boat, jet ski and kayak rentals. Their cabins are equipped with a bunk-bed, a full-size bed, microwave, coffee pot, shower, toilet, refrigerator, sink, kitchen table and chairs, heater, and air conditioning. Each cabin is on the lakefront and has a deck facing the lake. Because of the warm water, hot summers, and close proximity to the population areas of Northern California, the lake has become a favorite water ski resort. The temperatures are warm enough to make water skiing comfortable most of the summer. In addition, the state stocks the lake with fish as part of the conservation program. Fishing for bass and trout is a popular pastime.

GREETINGS FROM LAKE BERRYESSA

MISC. POSTCARDS

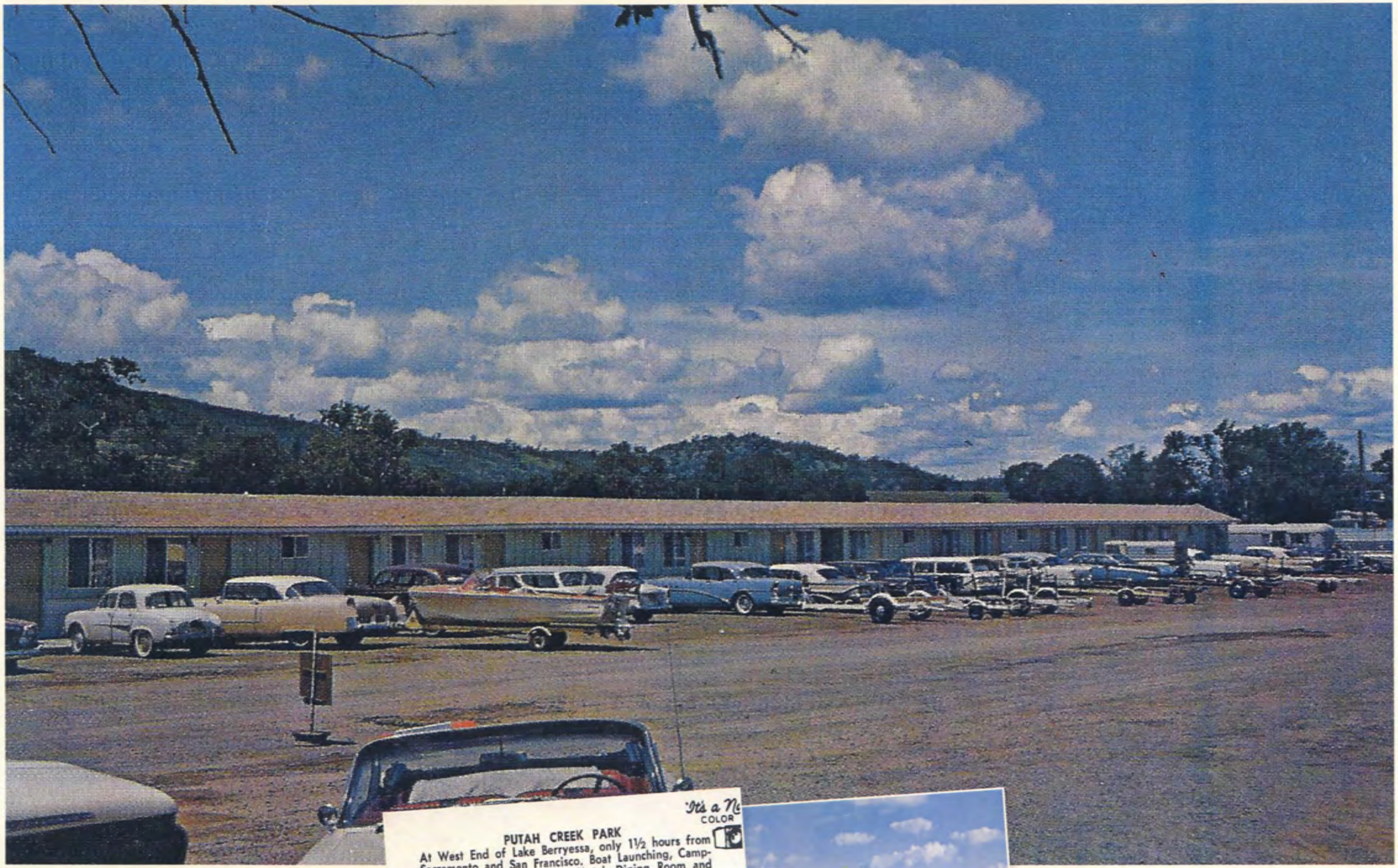
MONTICELLO DAM & GLORY HOLE



MONTICELLO DAM — GATEWAY TO LAKE BERRYESSA
Spanning Devil's Gate, 271 feet above Putah Creek, Monticello Dam is the gateway to Lake Berryessa. Completed in 1957, the dam impounds 1.6 million acre feet of water, creating one of the finest recreation lakes in northern California.

"The Gloryhole" at Monticello Dam
Lake Berryessa, Napa, California
It is the overflow spillway for the lake. It was first in use in the Spring of 1963.

PUTAH CREEK

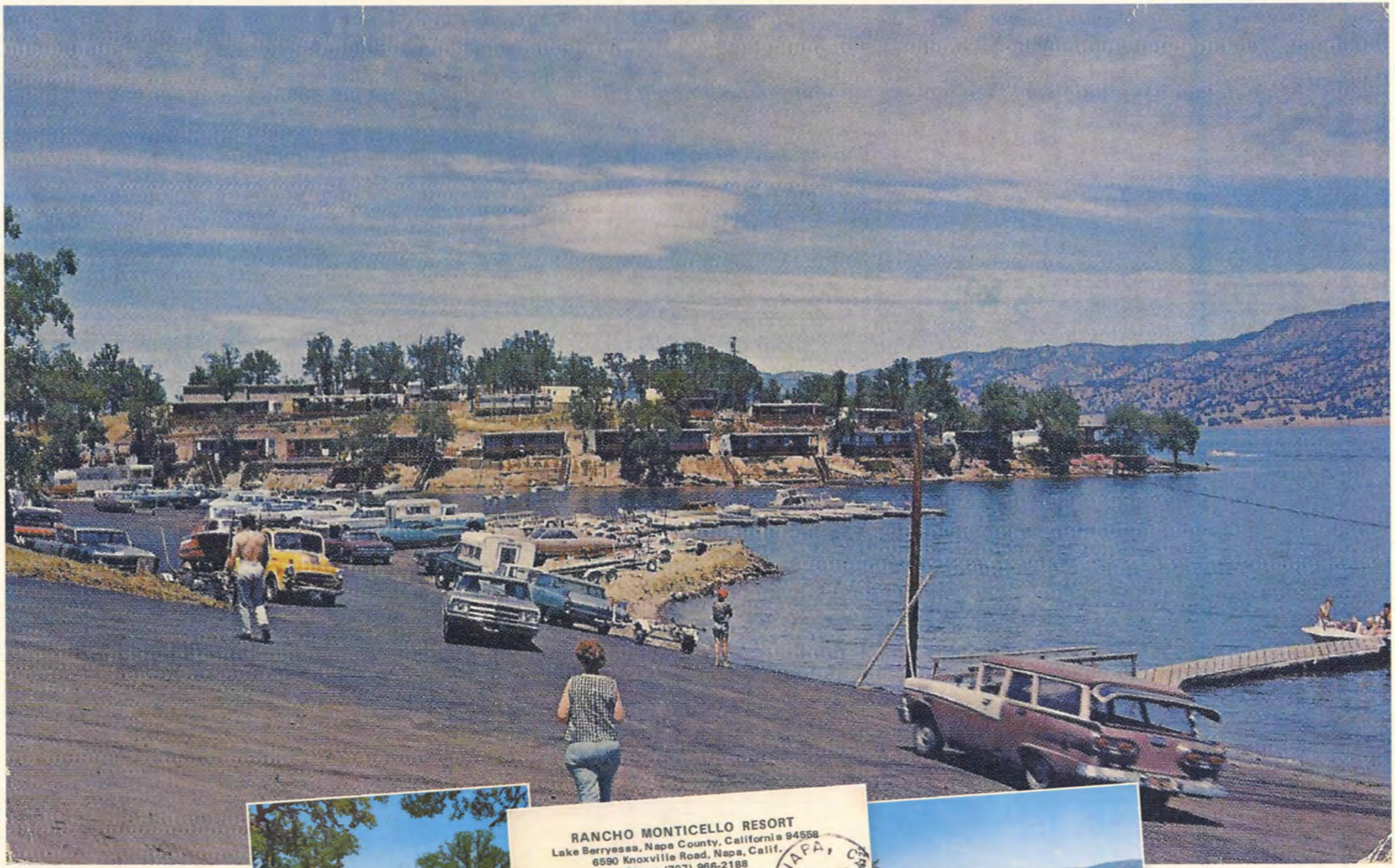


'It's a N[...]
COLOR

PUTAH CREEK PARK
At West End of Lake Berryessa, only 1½ hours from Sacramento and San Francisco. Boat Launching, Camping Facilities, Trailer Park, Motel, Dining Room and Cocktail Lounge, Boat, Ski, and fishing equipment for your holiday pleasure.
7600 Knoxville Rd., Napa, Calif.
Telephone Lake Berryessa 2132

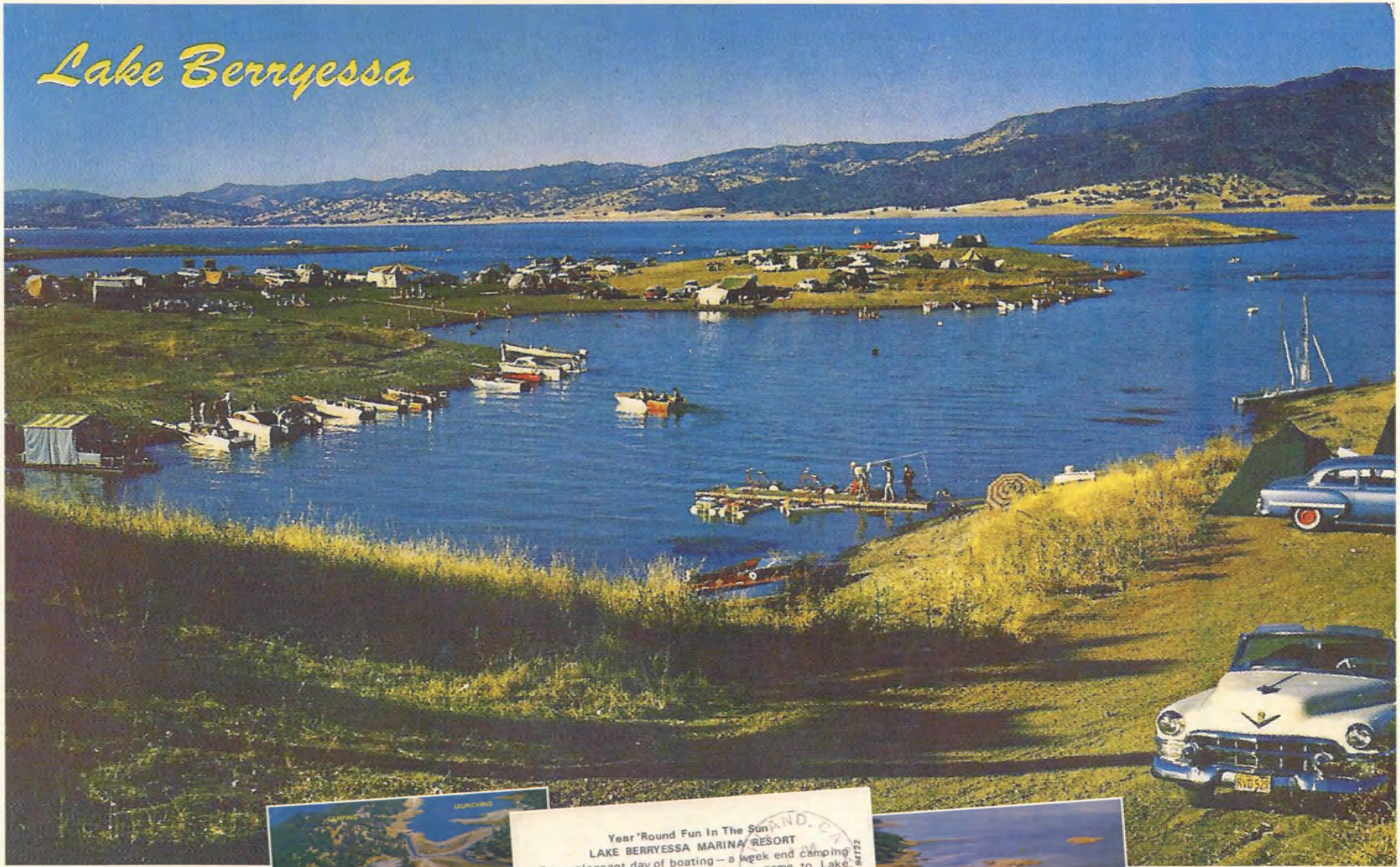
Pub. by Comm[...]

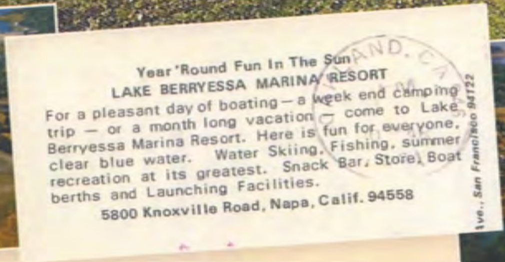
RANCHO MONTICELLO



RANCHO MONTICELLO RESORT
Lake Berryessa, Napa County, California 94558
6590 Knoxville Road, Napa, Calif.
Phone (707) 966-2188
Open Year 'round. Lake Front Camp Grounds
State Approved Mobilehome Sites — Boating — Fishing
Water Skiing — Swimming — Launching Ramp
Gas, Oil — Groceries — Cafe
Everything for a memorable vacation

BERRYESSA MARINA





Year 'Round Fun In The Sun
LAKE BERRYESSA MARINA RESORT
For a pleasant day of boating — a week end camping trip — or a month long vacation — come to Lake Berryessa Marina Resort. Here is fun for everyone, clear blue water. Water Skiing, Fishing, summer recreation at its greatest. Snack Bar, Store, Boat berths and Launching Facilities.
5800 Knoxville Road, Napa, Calif. 94558

ve., San Francisco 94122

SPANISH FLAT RESORT

SPANISH FLAT RESORT
Lake Berryessa, Napa County, California
Camping, trailer park facilities, marine service, boat berthing, boat rentals, big paved launching ramp, groceries, off-sale liquors, restaurants, fishing supplies. Excellent year 'round fishing and boating. Just a short drive from major Northern California metropolitan centers.

STEELE PARK

View from the "Quarterdeck" at Steele Park on the south shore of California's Lake Berryessa in Napa County. A year 'round resort with complete boating facilities, good fishing, great water-skiing, a luxury lakeside motel, sportsmen's cabins, camp and picnic sites. A fine restaurant and lounge — all for your pleasure!

> **Steele Park Resort** (now Steele Canyon) is a year-round resort with full accommodations for the family. Motel and cottages offer swimming pool and championship tennis courts with spectacular views of the lake's shore. Harbor Cove, the hub of activity, has a restaurant, bar, general store and full service marina, open from 7:00 a.m. 7 days a week, year round. The Boat House Restaurant & Bar offers a spectacular view of the lake along with its tantalizing good food. Steele Park Resort also rents patio boats and jet skis to explore the many coves along the lake's shore.

Overuse and Inappropriate Uses

As noted, the five concession areas were highly used resorts prior to 2009. Due to overuse and inappropriate use, leases on the five areas were not renewed and they have remained vacant since. The following three pages were prepared by Berryessa Trails and Conservation in their document "Lake Berryessa: Public Land/Private Uses." The material is included in this report at-hand simply to demonstrate the type of development that is not desired as the five areas reinvent themselves. The material is not included to condemn private use, but simply to encourage a more nature-friendly environment as well as better controlled and regulated developments. This subject will be returned to in the final chapter.

Existing Facilities and Services

Besides the five concession areas, there are 10 other existing areas that provide a number of facilities and services. Included in the 10 are actually three of the five concession areas – Putah Canyon, Spanish Flat and Steele Canyon. Services in these three areas are currently limited, as well as in the other seven. These seven are operated by BOR, and are mostly restricted to day use activities.

Lake Berryessa

Public Land . . .

Exclusive vacation sites on public land

A public recreation lake dominated by private interests*

Signs keep the public away

Private trailers left on public land . . . for decades

Exclusive vacation sites on public shoreline

Power boats and jet skis dominate the water

* All photos taken in 2004

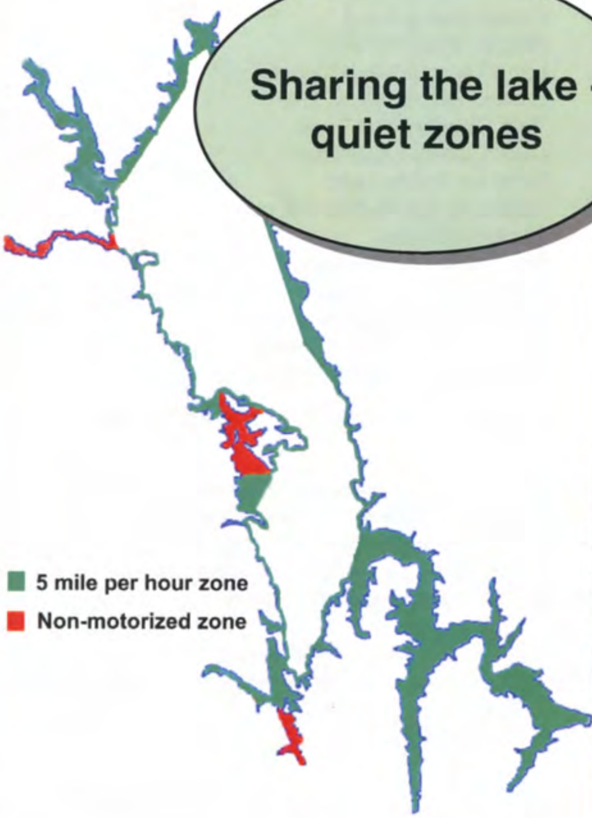
Return Lake Berryessa to the public . . .

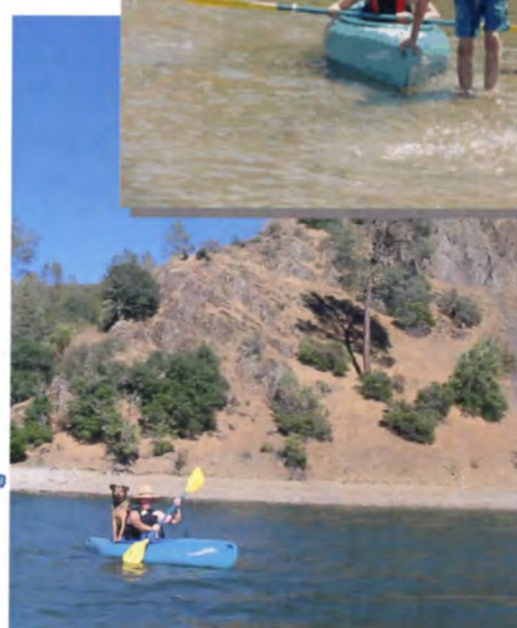
Cabins - Campgrounds
Swimming

Hiking, biking,
and equestrian trails

. . . to serve broader recreational needs

Sharing the lake - quiet zones





The 10 areas are listed below along with their primary offered services. They also are located on the following map.

facility	restrooms	fees	boat launch ramp	hand launch ramp	boat dock moorage	boat rentals	gas (boats only)	day use area	tent camping	RV camping	RV hookups/ dump station	cabins	fishing license	store/supplies/ bait
Markley Cove	X	X	X		X	X	X					X	X	X
Pleasure Cove	X	X	X		X	X	X	X	X	X	X	X	X	X
Steele Canyon	X	X	X					X	X	X				
Spanish Flat	X	X						X	X	X				
Capell Cove	X		X	X				X						
Oak Shores	X			X				X						
Smittle Creek	X			X				X						
Olive Orchard	X							X						
Eticuera	X			X				X						
Putah Canyon	X	X	X					X	X	X				

Source: Bureau of Reclamation

The remainder of this section is adapted from BOR's "Assessment of Market Conditions for Outdoor Recreation Facilities and Services at Lake Berryessa." It further describes the existing limited services at the 10 facilities.

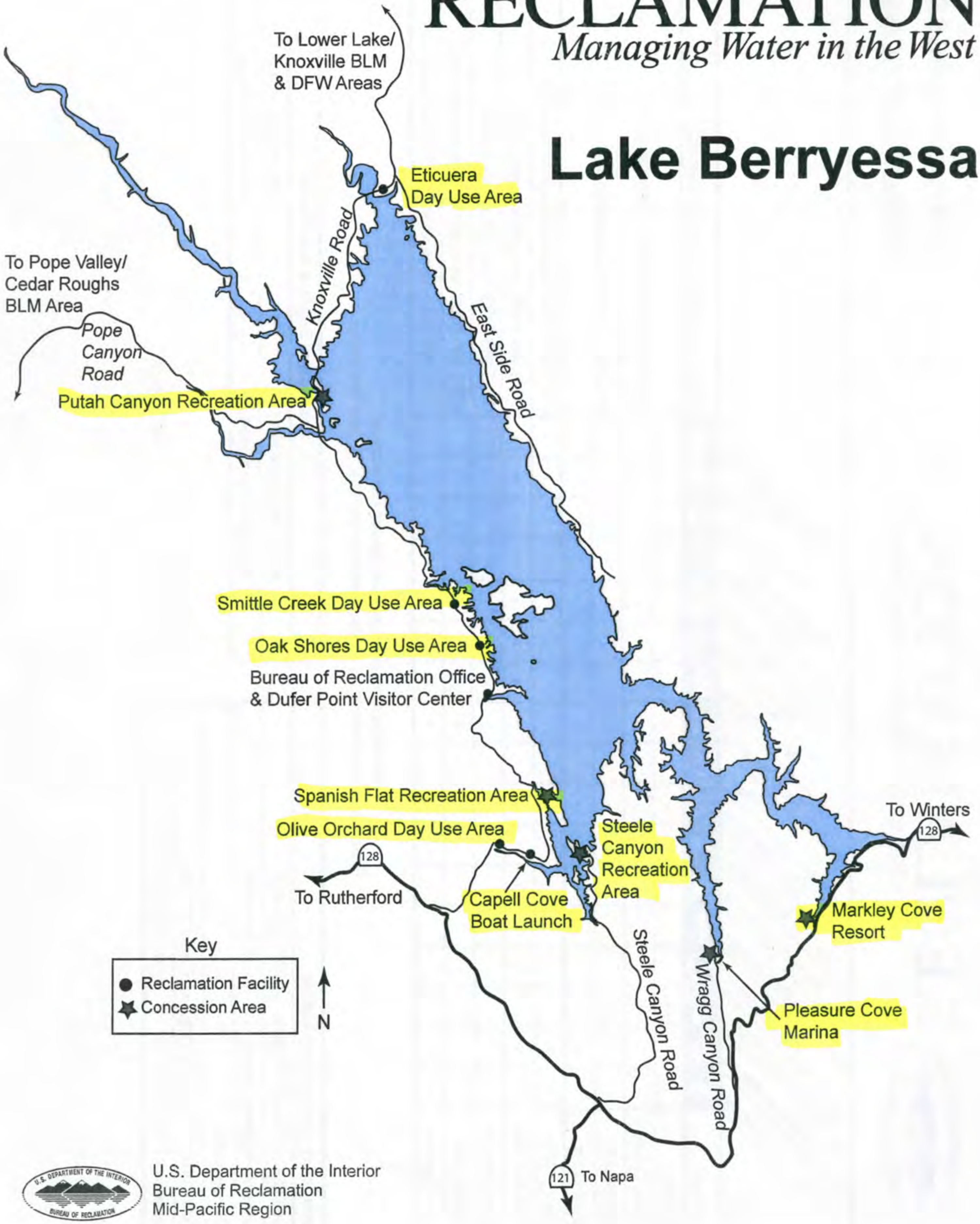
Bureau of Reclamation Facilities

BOR-managed facilities at Lake Berryessa currently include a visitor center, water education center and four day use areas (i.e., Oak Shores, Smittle Creek, Capell Cove, Olive Orchard, and Eticuera). The day use areas offer picnicking, fishing, swimming, and hiking opportunities. Additionally, Capell Cove has a boat launch ramp and Eticuera has a hand launch boat ramp. Reclamation and the California Department of Fish and Wildlife jointly manage a 2,000 acre wildlife area on the east side of the lake that provides excellent bird and wildlife viewing opportunities. There are currently three miles of developed trails at the lake; however, BOR has a trails management plan outlining the development of additional trails with varying degrees of difficulty. At the present time, Reclamation does not charge any fees for the use of facilities and lands it manages. The number of services offered at the above-mentioned recreation day use areas are:

RECLAMATION

Managing Water in the West

Lake Berryessa



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

Oak Shores

- 168 BBQ grills
- 32 individual shade shelters each with one table and one grill
- Six group use shelters each with eight tables and one grill
- 130 unsheltered tables with a grill
- 11 unsheltered tables without a grill
- Eight flush restrooms, two vault toilets

Smittle Creek

- 10 tables (seven with grills, three without)
- Seven BBQ grills
- Four flush restrooms (two in day use area, two on Smittle Creek Trail)

Olive Orchard

- Two tables each with a BBQ grill
- One vault toilet

Capell Cove

- Boat launch with two lanes
- One picnic site
- One flush restroom

Eticuera

- One hand launch ramp with one lane
- Zero picnic sites
- One vault toilet

Markley Cove Resort

Markley Cove is a concession. It is a full-service marina that offers wet slips, fueling and pump-out services as well as boat launching, boat rentals, house boating, day use and lodging. Markley Cove currently offers the following quantity of services:

- Eight covered overnight boat rental slips
- Eight cabins
- Zero picnic sites
- 381 boat slips of various sizes (38 of the slips are for private houseboats)
- Rental boats: 16 personal water crafts, 10 ski boats, seven patio boats, three fishing boats
- Convenience store
- One primary and one secondary launch ramps (used at different lake levels)
- One male and female restroom inside convenience store
- Chemical toilets outside

Pleasure Cove Marina

Pleasure Cove Recreation Area is a concession operated by Forever Resorts under a long-term concession contract with Reclamation for the period covering June 21, 2010 through December 31, 2040. Forever Resorts offers RV and tent camping, cabin rentals, day use, a general store, and a full-service marina featuring boat launching, fueling service, boat slip rentals, and houseboat, ski boat, and jet-ski rentals. Pleasure Cove currently offers the following quantity of services:

- 92 tent camping sites
- Seven overflowing tent camping sites
- 13 RV sites with electric hookup
- 12 RV sites with electric, water, and sewer hookup
- Three picnic sites
- 25 storage spaces
- Eight overnight rental slips at fuel dock
- 24 cabins
- 158 boating slips of varying sizes
- 20 of the 158 slips are for houseboats (private)
- Rental boats: six houseboats, seven personal water craft, four fishing boats, three ski boats, seven deck cruisers, one patio pontoon
- Convenience store
- One launch ramp, two lanes
- Four restroom buildings. Each has male and female restrooms
- Two of the four restroom buildings have showers

Steele Canyon

- 19 tent only sites
- 59 standard sites (RV or tent)
- Six RV sites
- 25 picnic sites
- 40 dry storage sites
- One launch ramp, six lanes
- Chemical toilets
- Accessible wheelchair toilets
- No potable water

Spanish Flat

- 10 tent only sites
- 45 standard sites (RV or tent)
- 10 picnic sites
- Chemical toilets
- Accessible wheelchair toilets
- No potable water

Putah Canyon Recreation Area

The recreation area at a minimum is open from Memorial Day weekend through mid-September and is located approximately ½ mile north of Pope Canyon Road and about 45 minutes from Winters and Napa. There are accessible wheelchair toilets but no potable water. Activities include fishing, swimming, and boating. The campground is the northern most recreation area on Knoxville Road on the west shore of Lake Berryessa. Putah Canyon currently offers the following quantity of services.

- 46 tent only sites
- 37 standard tent and RV sites
- 17 RV only sites
- 20 picnic sites
- Two launch ramps, five lanes
- Chemical toilets

Following is a summary of all the **existing** facilities and services at Lake Berryessa recreation areas.

Facility or Service	Quantity	Facility or Service	Quantity
RV sites with no hookups	23	Picnic areas	7
RV sites with electric only	13	Picnic sites	250
RV sites with electric, water & sewer	12	Number of ramp lanes	13
Standard tent or RV sites	141	Convenience stores	2
Tent camping sites	167	Flush toilets	13
Tent overflow sites	7	Vault toilets	9
Cabins/park models with no amenities	32	Restrooms with showers	2
Boat slips of various sizes	539	Fishing boat rentals	7
# of overnight boat rental spaces	8	Personal water craft rentals	23
Private houseboats	58	Ski boat rentals	13
Commercial houseboats	6	Deck cruisers	7
Dry storage spaces	65	Patio pontoons	1
Launch ramps	5		

Source: Bureau of Reclamation

Other Existing Attractions and Activities at Lake Berryessa and the Environs

Besides the Lake itself, there is a wide array of other existing attractions and activities at Lake Berryessa and the surrounding environs. This is especially true for those interested in outdoor recreation. Some of the more important ones are described in the following pages. They are in addition to the obvious activities of boating and camping.

1. Hiking and Mountain Biking Trails

There currently are many hiking and mountain biking trails at Lake Berryessa and the environs, although an untapped opportunity exists for a much more extensive network. The existing trails are described in a publication by Berryessa Trails and Conservation, “Recreation Guide to Lake Berryessa in Napa County’s Lake District During the Transition,” Summer/Fall 2009.

Smittle Creek Trail. This is a 2.6 miles easy trail along the shoreline between Smittle Creek Park and Oak Shores Park. It's a cozy hike, meaning the islands are not far offshore and it winds in and out of small coves. There are places to stop for a picnic, shoreline fishing, and a swim.

This trail provides a fairly easy hike along Lake Berryessa's shoreline from Smittle Creek Park to Coyote Knolls in Oak Shores Park. Just offshore can be seen Big Island and Small Island. Spring is the best time; winter is good too. Summer is the time to bring a swimsuit for a dip in a quiet cove. As you wind along the shore, look for the Bald Eagle nest high in a tree on Big Island. This is an active breeding nest and Bald Eagles are frequently seen along the trail. You might also spot deer in the park.

Although not formally part of the Smittle Creek Trail, another short trail begins at the northern end of the parking lot for Smittle Creek Park. Follow the trail to the restroom where the trail continues to the left. This loop trail offers great views up and across the lake.

Smittle Creek Nature Trail (.7 mi). The first .7 miles of the Smittle Creek Trail is a nature trail, with a brochure and numbered stations to stop and ponder nature. From why downed trees are not removed (that's habitat!), to the beneficial relationship between fungus and algae that produces Lace lichen (an indicator of clean air) and why Manzanita leaves rotate, the brochure for this self-guided trail will leave you enthralled. You can continue on to Oak Shores park, or make a loop back to the parking lot.

North End Trail. This especially scenic trail winds along the north shore of Lake Berryessa. The trail is an easy one with limited elevation gain and wonderful views down the full length of the lake, some 10 miles away, and to the Blue Ridge to the east. With luck, you may see White Pelicans, Golden and Bald Eagles and the more common Western Grebes and Osprey.
This trail was constructed by the Youth Conservation Corps in the late 1970's. Originally it had a series of split log bridges, which unfortunately deteriorated over time and had to be removed. The lack of bridges is no barrier to hiking the trail as they covered fairly shallow drainages which are currently dry. However, there is a plan to realign the trail to a more environmentally sustainable route, away from wetlands and eroding areas. Consequently, the trail is not currently being maintained and can become faint in places where the grass has taken over. However, one cannot get lost on a trail so close to the lakeshore.

There is a series of trailheads along the road and the trail is often used by anglers for access to the shoreline. It is also a great place to find a quiet cove for picnicking and swimming. A couple of close coves can be found by accessing the trail from the Putah Creek trailhead and walking north. If you are looking for a place to launch a kayak, the Putah Creek trailhead is closest for heading up the creek, although it is a bit of a walk down to the lakeshore. La Pointe trailhead, a couple of miles down Berryessa-Knoxville Road, also leads to some quiet coves down a rather steep hill.

The Barton Hill and Gibson Flat trailheads lead to a short loop trail. Schoolhouse Cove trailhead has short and easy access to the water and can be a good place to put in a kayak or canoe. Buckhorn and Blue Monday trailheads also lead to quiet coves. Raccoon Lagoon trailhead leads to an interesting creek canyon with the trail winding to the east along a steep creek bank. Light rains over the last few winters, however, mean the creek canyon is relatively dry right now.

Pope Canyon Trail. This scenic trail follows the original Pope Canyon Road roadbed for about one and a half miles until the roadbed disappears into the lake. The trailhead is a couple of miles west along Pope Canyon Road from the Knoxville Road intersection.

From the gate, the trail heads down and to the left and then follows the old road towards the main lake. Below the trail is first Pope Creek and further along the Pope Canyon arm of the lake. After about 3/4 of a mile, an old jeep trail cuts sharply to the right from the main roadbed and descends to a nice grassy shoreline that is good for a picnic. The trail passes through fencelines which denote the boundary between Bureau of Reclamation and Bureau of Land Management property, both of which are open to the public. At the end of the old road are large fields overlooking the water and scenic rock outcroppings. Swim and picnic here under large Oaks, being careful of rattlesnakes when walking off trail in the tall grass. Western Grebes and Osprey are often seen in this idyllic spot.

SEGMENTS OF THE BLUE RIDGE LOOP TRAIL. The full hike is a 4 mile loop hike up Cold Canyon, and then a climb up to and return along the Blue Ridge. This is a very strenuous hike. For hot weather, we prefer one of two out-and-back hikes along the loop route.

The Homestead Trail. This trail is on land that is part of the UC Davis Natural Reserve System, one of the few such reserves that allows public access. This is a moderate hike of a mile up the canyon to remnants of an old homestead, crossing over the creek a couple of times. A quarter mile in you will find a formal trailhead with a bulletin board of information and trail guide brochures.

Up to Blue Ridge. This is a strenuous switchback trail from Cold Canyon up to the top of Blue Ridge. Start early in the morning when it’s cool. Leashed dogs are allowed on the ridge trail but not on the Homestead trail, so this is an out-and-back trail for dogs. It is less than a mile to the top, but how far south along the ridge you want to hike once you get up there is up to you.

As you hike up, turn around periodically to take a look at the views. On a clear day you can see across the Central Valley through a break in the hills to the Sierra Nevada.

Past the dam on a curve you will pass two silver gates on the right – the first gate heads up to Blue Ridge, the second to the Homestead Trail. Past the second gate will be a large dirt pullout on the left for parking.

A more extensive trail system at Lake Berryessa has been proposed by BOR and others for many years. In 2012, BOR prepared its "Lake Berryessa Shoreline Trail Management Plan." The purpose was to…

> …guide the implementation of a continuous Shoreline Trail around Lake Berryessa. The Shoreline Trail is envisioned as a continuous non-motorized trail route for multiple outdoor recreational uses. The trail would create a hub around the lake with trails emanating from the hub and eventually connecting to adjacent public lands. The TMP is expected to guide the development of the Shoreline Trail for years to come. The development of a Shoreline Trail is not expected to occur as a complete and singular project in one phase. Rather, the trail will most likely be constructed in various segments over a period of years, even several decades, as funding and management agreements necessary for the trail are approved.

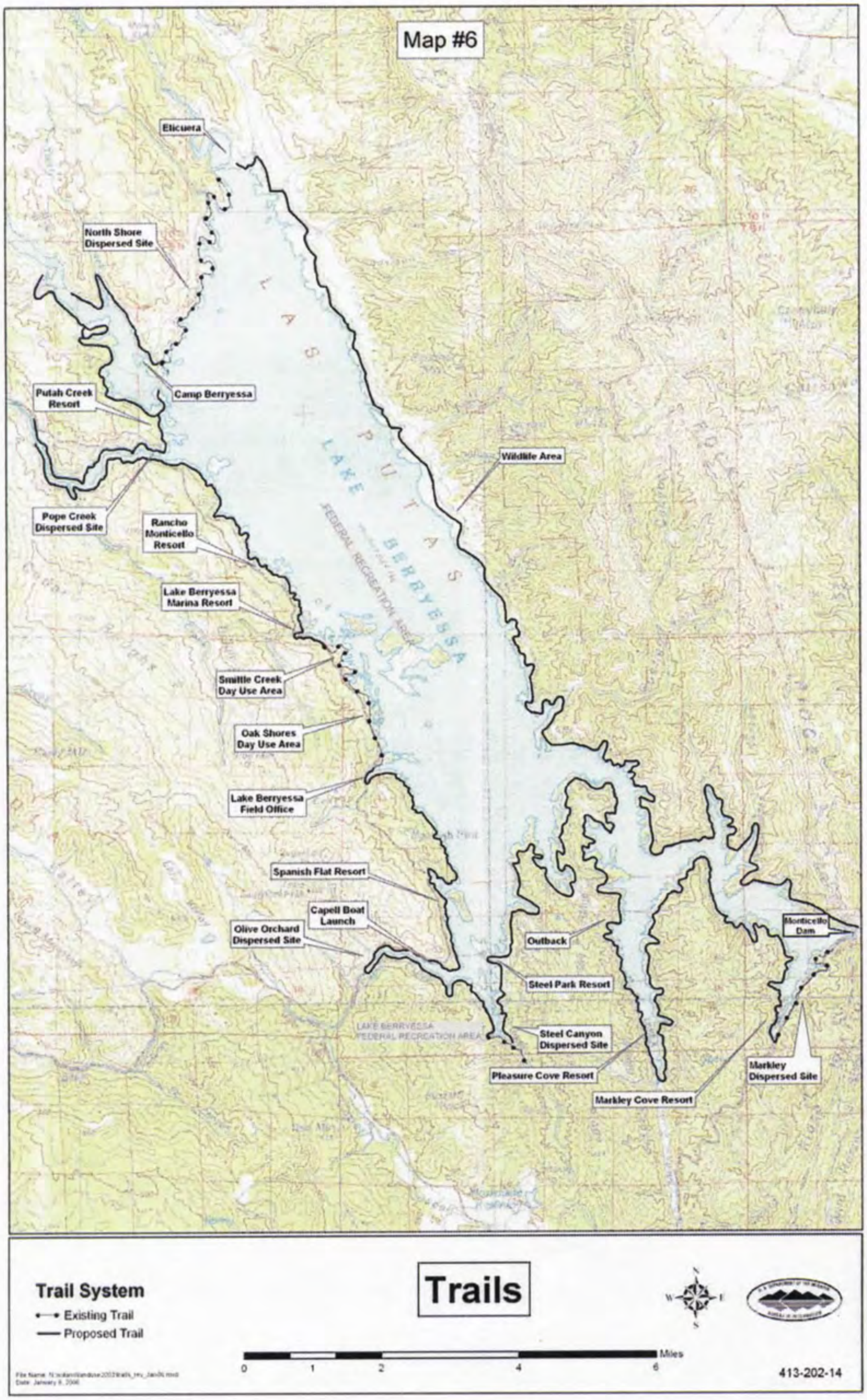
A budget for implementing the proposed trail system has never been approved. If fully implemented, it would stretch about 100 miles around the Lake, as shown on the following Trail System map from BOR. There is question as to whether it could ever be fully completed on the east side of the Lake due to topography, intervening land holdings, expense, and so forth. There also is debate as to whether parts of the trail should allow horseback riding.

New concessionaires for the five areas will be strongly encouraged to create a proper trail system, at least through their areas.

The benefits of having a trail system encircling the Lake are expanded on by Berryessa Trails and Conservation:

> When finished, the Lake Berryessa Trail will include a hiking and biking route entirely around Lake Berryessa, through many different types of habitat. Some trail segments will be right along the lakeshore, with opportunities to jump in the water when it's hot. Other segments will run through grass woodlands, high above the lake on steep hillsides. We are also hoping to construct some segments that can be used by equestrians.
>
> There will be opportunities for day hikes, backpacking, remote hikes to quiet coves, nature hikes, loop hikes, short hikes with easy terrain, hikes with a good chance of seeing a bald eagle and flocks of white pelicans, creek hikes, and of course connections to trails on other public land in the area.

Appendix C: Map No. 413-202-14 – Trails



2. Nearby Public Lands Providing Outdoor Recreation

Besides the BOR lands surrounding Lake Berryessa, there are other public land holdings in the nearby area. They provide a wealth of outdoor recreation opportunities, as described below.

a. **Berryessa Snow Mountain National Monument.** This National Monument was created by President Obama on July 10, 2015. It contains 330,780 acres in a seven-county area, including Napa County. Lake Berryessa is at the southern portion. It is jointly managed by the Mendocino National Forest and the Bureau of Land Management.

   It extends to the mountains on either side of Lake Berryessa. The Lake itself is not included due to critics' concerns over the possibility that motorized boats, watercraft and jet skis could be restricted in the future.

   It is further described as:

   > The Berryessa Snow Mountain region of Northern California is one of the most biologically diverse, yet least known regions of the state. Located less than 100 miles from the Sacramento and Bay Area metropolitan regions, the area is a dazzling outdoor wonderland rich in unique natural features and loaded with recreational opportunities.
   >
   > Visitors can find California's second-largest population of wintering bald eagles, float the thrilling rapids of wild and scenic Cache Creek, witness herds of wild Tule elk, and catch a glimpse of black bears. Opportunities for hiking, camping, botany, birding, hunting and horseback riding abound. The area stretches over 100 miles from blue oak woodlands near Putah Creek in the south to the sub-alpine habitat of Snow Mountain Wilderness in the north.

b. **Cache Creek Wilderness** is within Berryessa Snow Mountain National Monument boundaries. It contains 27,296 acres, and is about 20 miles north of Lake Berryessa. It was created in 2006 and is controlled by BLM. It is described as:

   > The Cache Creek Wilderness is centered on a 17-mile stretch of Cache Creek flowing from Clear Lake in eastern Lake County. The prominent feature within the Wilderness is Cache Creek itself, which forms a steep-sided canyon most of the way. The steep canyon walls occasionally open up to broad grassy meadows and scattered valley oaks. The Wilderness

> contains numerous trails, whitewater rafting, bird and wildlife watching, and camping opportunities.

c. **Cedar Roughs Wilderness** almost abuts the west side of Lake Berryessa. It contains 6,287 acres, was created in 2006, and is controlled by BLM. It also is in the boundaries of Berryessa Snow Mountain National Monument. It contains numerous trails, a wide variety of birds, animals and flora. Primitive camping is allowed.

d. **Knoxville Wildlife Area.** Also within the Berryessa Snow Mountain National Monument is the Knoxville Wildlife Area. It abuts, and is partially surrounded by, Cache Creek Wilderness. It contains about 21,500 acres and is managed by the State of California Department of Fish and Wildlife. It starts about two miles north of Lake Berryessa, and is in Napa, Lake, Colusa and Yolo Counties. It is described as:

> Knoxville Wildlife Area is one of the few sites in California that protects unusual serpentine habitats. Serpentine is California's state rock, and the soil derived from serpentine is chemically hostile to most plant species. However, its deposits support islands of rare and endemic plants, which have adapted to these harsh soils and provide for numerous endemic insects. These plants and insects help sustain a wide array of songbirds, mammals, amphibians, and reptiles. In addition to Knoxville's serpentine chaparral habitat, the wildlife area encompasses grasslands and cliff habitats, providing feeding areas and a safe haven for hawks, harriers, falcons, owls and other raptors. It also provides breeding grounds and feeding areas for blacktailed deer, quail and wild turkeys.

There are extensive hiking trails and campsites.

e. **Knoxville Recreation Area.** This facility is yet another component of the Berryessa Snow Mountain National Monument, and is operated by the Bureau of Land Management. It is between Lake Berryessa and Clear Lake, and accessed by the Berryessa-Knoxville Road. It contains 17,700 acres, and is especially known for its extensive off-road vehicle trails, including ATVs and motorcycles. There also is hunting, mountain biking, camping and nature study.

f. **Lake Berryessa Wildlife Area.** This area contains about 2,000 acres and runs along the entire east side of Lake Berryessa. It is owned by BOR, and managed by the State of California Department of Fish and Wildlife. There are hiking trails, but no campsites. It is a good area for flora and fauna viewing, including deer, coyote, bobcat, grey fox and numerous types of birds.

g. **Quail Ridge Natural Reserve.** Containing 1,937 acres, Quail Ridge Natural Reserve is one of 35 Natural Reserves administered by the University of California Natural Reserve System at UC Davis. It is in the southeastern section, with Steele Canyon being the closest of the five concession areas. It is a patchwork of parcels under varied ownership and public management entities.

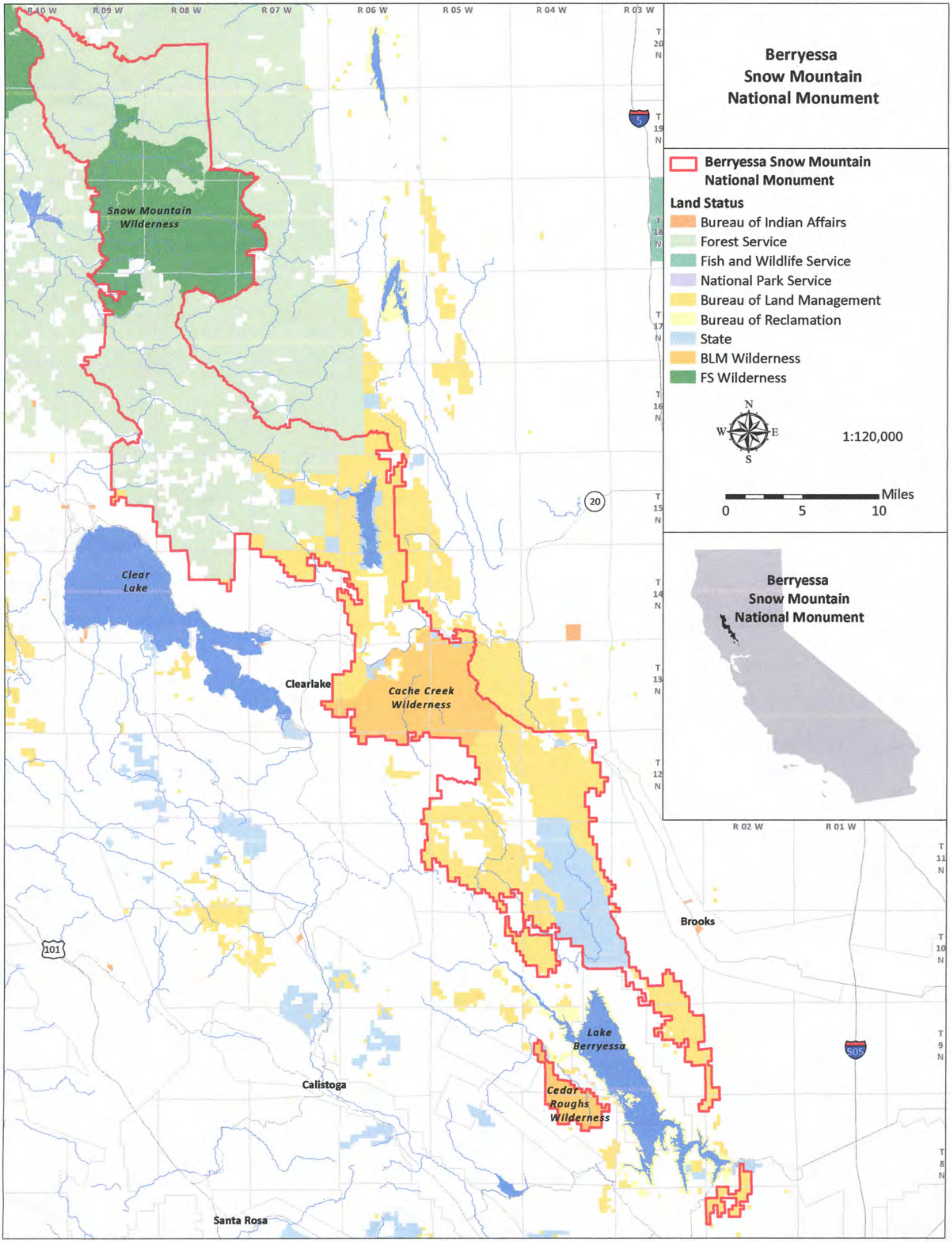
It is available for educational and research users. It is closed to the public, and open to classes and research by permission only.

On the following pages is additional information describing these surrounding or nearby public treasures, including a locational map and photographs.

3. Fishing

Fishing at Lake Berryessa has long been a popular activity, and is reputed to be among the best in the entire state. The variety of experiences is wide, e.g., shoreline fishing, fishing from canoes and kayaks, slow-boat fishing in and out of the numerous coves and inlets, as well as boat fishing in deeper parts of the Lake.

As shown in the following flyer prepared by BOR, favorite species include bass, catfish, trout, salmon, crappie and bluegill. Fishing opportunities exist for all ages and degree of expertise. Fishing tournaments, especially for bass, have long been popular at the Lake. Fishing guides and rental boats for fishing have been popular.



Berryessa Snow Mountain National Monument
Berryessa Snow Mountain National Monument
Land Status
Bureau of Indian Affairs
Forest Service
Fish and Wildlife Service
National Park Service
Bureau of Land Management
Bureau of Reclamation
State
BLM Wilderness
FS Wilderness
N
S
E
W
1:120,000
Miles
0
5
10
Berryessa Snow Mountain National Monument
Snow Mountain Wilderness
Clear Lake
Clearlake
Cache Creek Wilderness
Lake Berryessa
Cedar Roughs Wilderness
Brooks
Calistoga
Santa Rosa
R 10 W
R 09 W
R 08 W
R 07 W
R 06 W
R 05 W
R 04 W
R 03 W
R 02 W
R 01 W
5
20
101
505

Wildflowers Highway, Berryessa Snow Mountain National Monument

Berryessa Peak

Cache Creek

Cedar Roughs Wilderness

Knoxville Wildlife Area

Lake Berryessa Wildlife Area

Knoxville Recreation Area

Quail Ridge Natural Reserve

Other Fish at Berryessa

Although not generally popular among anglers, Lake Berryessa supports several other types of fish besides the common game fish. The most prevalent of these is the **carp**, a large orange-colored fish. Originally from Asia, carp are the most widespread introduced fish species in U.S. lakes and streams, and they tend to compete with native fish for food and space. Carp can often be seen circling among the weeds in nearly every shallow cove around Berryessa. Although often regarded as inedible by local anglers, carp are considered a delicacy in many cultures, and they put up a thrilling fight when hooked.

Carp (*Cyprinus carpio*)

Another fish which Berryessa supports is the native **Sacramento pikeminnow**. These large silver fish are actually giant minnows, and they often fool anglers who are pursuing the more popular trout or bass. They are typically considered inedible because of their bony meat, but, like the carp, they put up a strong fight for any angler who hooks them.

Sacramento Pikeminnow (*Ptychocheilus grandis*)

Berryessa contains a wide variety of minnows, including the **golden shiner** (*Notemigonus crysoleucas*) and the **threadfin shad** (*Dorosoma petenense*). Lake Berryessa's waters also support many other species of fresh water organisms including crayfish, clams and otters.

RECLAMATION

Managing Water in the West

Lake Berryessa

Get Hooked!

Fishing Tips and Tricks

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

Bass

Largemouth Bass
(*Micropterus salmoides*)

Fishing for bass is an exciting experience, and keeping their feeding habits in mind makes finding them much more likely.

Size:
Largemouth bass – 15 to 20 inches
Smallmouth bass – 12 to 18 inches
Spotted bass (*Micropterus punctulatus*) – 12 to 17 inches

Difficulty:
Because of the technique and skill required to catch these fish and the thrill of hooking a large one, many anglers consider bass to be the ultimate game fish of Lake Berryessa.

Where and when:
Bass spawn in the spring, when they can be found feeding in shallow areas for most of the day. In the summer, they generally spend their nights resting in deep water, but they move to shallow water to feed in the morning and evening. These areas usually have vegetation or other structures to attract minnows, flies or other small creatures which bass feed on. In addition, these shallow areas tend to be close to the deep waters where bass rest; therefore, many anglers fish for them along points or steep ridges and the shallow areas along the edge. Fishermen often say that rocky points, floating vegetation, docks or coves filled with trees are prime bass habitat.

How to catch them:
Every angler seems to have their own belief about the best bass lure. The most popular are floating plugs, spinner baits, rattling lures, plastic worms or a simple live worm or minnow.

Smallmouth Bass
(*Micropterus dolomeiu*)

Catfish

Bullhead Catfish (*Ictalurus dolomeiu*)

Catfish are the bottom feeders of Lake Berryessa. Species such as **channel catfish**, **bullhead catfish** and **white catfish** live in the lake.

Size:
2-4 lbs on average, but they can grow enormous in deeper parts of the lake, often exceeding 20 lbs

Difficulty:
Catfish are abundant and easily caught in almost every part of the lake.

Where and when:
Although catfish feed all day long, they are most active during the night. Waiting until the sun sets will lure the fish into shallow water (10-20 feet). If you do fish for them during the day, keep in mind that they will be found in deeper water (30 feet or more).

How to catch them:
To catch catfish, almost all anglers simply sink natural bait to the bottom of the lake, keep the line taut and wait for a bite. The baits most widely used include nightcrawlers, chicken livers, clams, hot dogs or anything with a strong odor. Placing a small bell or bobber at the end of a taut line will alert the angler to a fish strike.

White Catfish (*Ameiurus catus*)

Channel Catfish (*Ictalurus punctatus*)

Crappie, Bluegill, and Other Sunfish

Black Crappie (*Pomoxis nigromaculatus*)

Bluegill (*Lepomis macrochirus*)

Crappie (pronounced *crop-ie*), **bluegill**, **red-eared sunfish** (*Lepomis microlophus*) and **green sunfish** (*Lepomis cyanellus*) are popular with anglers because of the high daily limits set for them.

Size:
Crappie – 1.5 lbs maximum
Bluegill and **sunfish** – less than .5 lbs

Difficulty:
Bluegill and **sunfish** are ideal beginner fish and are easily caught. **Crappie** can be hard to find, but once you find a school of them, large catches are common.

Where and when:
Bluegill and **sunfish** are most prevalent in warm summer months and are easy to find in nearly any shallow cove, weed bed or dock area. **Crappie** are best caught in the spring under coverings such as docks, vegetation or fallen trees, but they move to deeper water during the summer.

How to catch them:
Bluegill and **sunfish** feed on native flies and minnows and are best caught with a bobber and small hook holding a piece of nightcrawler or minnow. For the more elusive **crappie**, try using a red and white mini-jig or bobber with a minnow.

Trout and Salmon

Chinook Salmon
(*Onchorhynchus tschawytscha*)

Rainbow trout, **brown trout** (*Salmo trutta*) and **brook trout** (*Salvenlinus fontinalis*) are commonly found in Lake Berryessa. Rainbow trout are native to the region and spawn in Upper Putah Creek and Capell Creek during the spring. **Chinook salmon** and **kokanee** (*Onchorhynchus nerka*) have also been introduced to the lake.

Size:
2-4 lbs on average but can reach "trophy" sizes of more than 10 lbs

Difficulty:
Open water trolling is more successful than shore fishing. Time, patience and experience are all necessary to catch these fish.

Where and when:
During the spring, trout and salmon swim at depths around 15-20 feet. In the summer, they are generally found below 40 feet.

How to catch them:
These fish are best caught by trolling – dragging a spinner or minnow on a line behind a slow-moving boat in open water – a method made easier with the help of a downrigger or fish finder. Another method is to drift a minnow, nightcrawler or salmon eggs in open water using a bobber. Shore fishing is possible during the spring months when the water is still cool. Fly fishing is rarely practiced at Lake Berryessa, but it is possible in Upper Putah Creek and is extremely popular in Lower Putah Creek. Check the current California Freshwater Sport Fishing Regulations for seasonal limits in these waterways.

Rainbow Trout
(*Onchorhynchus mykiss*)

4. Swimming

Besides potential swimming opportunities within the five concession areas themselves, others occur elsewhere around the Lake. Some are described below, as taken from Berryessa Trails and Conservation's "Lake Berryessa Recreation Map."

> Acorn Beach in Oak Shores Park has a protected swimming area roped off with buoy lines. The water is low so the swimming area is smaller than usual. You'll also find people swimming and children playing in the water all along the lake shore in Oak Shores Park, and in the coves in Smittle Creek Park. Another good way to find a cove in which to swim is to kayak over to Big or Small Island and find a quiet cove. If you want to swim laps, try next to the buoy line just outside the swimming area on Acorn Beach in Oak Shores Park. The Bureau of Reclamation has a life jacket loan program at the Water Education Station in the Foxtail area of Oak Shores Park.
>
> The North End also offers a number of coves in which to swim. Pick up a map of the North End at the Visitors Center, or at one of the trailheads.

5. Quiet Areas

Another attraction of Lake Berryessa are the so-called "quiet areas," designated for non-motor activities, e.g., kayaking, canoeing and other forms of paddling.

There are currently several such areas, as described below by Berryessa Trails and Conservation. It certainly is possible that others could be designated.

> Lake Berryessa has a wide variety of lakeshore habitat, and an extensive variety of geological variation. With islands, creeks, coves, narrows bounded by steep hillsides, and the open water of the middle of the lake, there are endless opportunities for scenic tourism from a kayak or canoe. There are long vistas down the lake, and views of the Blue Ridge to the east and Cedar Roughs Wilderness to the west. There are bald eagle and osprey, flocks of white pelicans, and many kinds of waterfowl. An early morning paddle might lead to sightings of coyote on Big Island, deer everywhere, shy foxes, and one of our favorites, a glimpse of the river otter family that makes Lake Berryessa their home.
>
> **CREEK PADDLES AND THE NARROWS**
> *ALL DISTANCES ARE ROUND TRIP*
>
> **Pope Creek (4 miles)/Putah Creek (12 miles).** The two primary creek paddles are Pope Creek and Putah Creek in the northwest part of the lake. One can usually paddle some two to three miles up Pope Creek Canyon, depending on the lake level. This is the smaller of the two creeks, and there are a number of places one can pull out for a picnic lunch. The entire creek is a 5 mph zone, so it tends to be fairly quiet. This is a very scenic paddle with large rock outcroppings and

steep canyon walls on both sides. After about a mile and a half, you will see an old road that starts at the water and climbs up the hill parallel to the creek. This is the old Pope Canyon Road from before the dam was constructed. The road is now the Pope Canyon Trail.

For Putah Creek, one can launch at Pope Creek (add 3 miles one way) or carry a kayak/canoe down to the water from the Putah Creek trailhead on the North End Trail. This is a considerably wider and longer creek, with steep canyon walls in places and mossy rock outcrops. Where the creek meets the lake is fairly wide and can be a popular boating area. This summer will likely be more quiet as it will be some 10 miles from the nearest boat launch ramp. One can usually paddle some six miles up the creek, all the way to Berryessa Estates, a residential area in the Pope Valley area, set in the hills alongside the creek. Right now, due to low water, the paddle is shorter.

Capell Creek (2 miles). Ordinarily on a weekend, the best place to launch is from Olive Orchard. However, due to the low lake level, a kayak or canoe has to be carried quite a long distance right now, and by end of summer it will be even farther. Use the Capell public boat launch ramp. If it's a weekend be sure to arrive early as the parking area can be full by early or mid-morning. The public launch ramp has 17 parking spaces for cars without trailers.

The Narrows (miles and miles). This will likely be a very popular boating spot this summer because of the boat launch ramps at Markley and Pleasure Coves. If you want to try paddling it, during the week would be best. It is challenging to put in a Markley Cove because the lakeshore is steep, but this is the most convenient place to launch. There are miles to paddle in the Narrows, and a number of interesting coves to explore, including Portuguese and Little Portuguese Coves, Haines Cove, Pleasure Cove, and just outside the Narrows and to the south, Skiers Cove.

ISLAND PADDLES

Big and Small Islands (4.5 and 2 miles). Lake Berryessa has numerous islands, the two best known are Big Island and Small Island. A favorite paddle is to launch at Oak Shores Park in the Foxtail Flat area, head out around the south of Big Island, turning north and then paddling between the islands and finally south back to the launch point. Take heed of the wind, however. The beginning of the paddle is fairly sheltered, but once you get around the south side of Big Island the narrow channel between the islands and the east shore can act like a wind tunnel, making it a challenging paddle until you reach the area between the islands. If you are feeling energetic, instead of paddling between the islands continue on until you are north of Small Island, and then return between the islands and the shoreline, back to the launch point. This can be a good paddle to look for wildlife. Bald eagle and osprey, as well as water fowl and other birds can often be seen. If you are there during the week or early in the morning, you might see coyote on the islands or a river otter family frolicking around the lakeshore.

Goat Island (1.5 miles). Nearly a mile offshore from Acorn Beach in Oak Shores Park, Goat Island makes a good paddle if you want an easily visible destination and a feel for some open water. The island is a fairly steep atoll.

Depending on lake levels, there may be no place to land, but it's a good out and back paddle. This is the destination for the annual Davis Master's Swim.

Schoolhouse and Indian Islands (3 miles). If you are into serious island paddling, there is also Schoolhouse Island, south east of where Pope Creek meets the lake, and Indian Island, north east of Pope Creek. Pope Creek is a good place to launch from if you want a fairly short paddle. If you are looking for something longer, try launching from the Putah Creek trailhead on the North End Trail.

Haines Island/Peninsula. The most challenging island to get to is Haines Island at the southern end of Haines Cove in the Narrows. It is most likely a peninsula right now. If you're staying at Pleasure Cove Marina, this can be a nice two-three mile paddle up the cove. Otherwise, you might brave the challenging put-ins in the Markley Cove area. If you are a more experienced paddler and want some open water paddling – as opposed to hugging the shoreline – you can launch at Acorn Beach in Oak Shores and head across the lake to the south east, paddling into the Narrows.

6. Bird Watching and Wildlife Viewing

Another popular activity at Lake Berryessa is bird watching and wildlife viewing. BOR has prepared the following brochure on such opportunities.

7. Private Facilities

In addition to services found in the existing concession areas and public parks, a variety of privately operated services are found on the west side of Lake Berryessa. These are outside the BOR boundary line, but near the Lake. Included are:

- Spanish Flat Village Center, near the Spanish Flat concession area, with restaurant, convenience store, museum, seniors center and realty office.
- Berryessa Corners (formerly Moskowite Corners) at intersection of Highways 128 and 121 and Steele Canyon Road, with convenience store and restaurant. Berryessa Corners is about five miles from Steele Canyon.
- Turtle Rock, at the intersection of Highway 128 and Berryessa-Knoxville Road, with convenience store, fast food restaurant and bar. Turtle Rock is about five miles from Spanish Flat.

Black-tailed Deer
(Odocoileus hemionus columbianus)

The black-tailed deer is found only along the coastal mountain region (from Queen Charlottes in British Columbia south to California). These deer prefer grassy fields at forest edges, recently burned or logged-over areas (where the bracken fern grows quickly). They are mammals that belong to the Order Artiodactyla which is characterized by a 4-chambered stomach, molars, and toes that form hooves. Most of these are herbivores that have cartilage front upper teeth.

Columbia black-tails are considered by many experts to be a sub-species of mule deer. They share many similarities but are much smaller than a mule deer and their ears are smaller too. The ranges of the two sub-species overlap in a few places.

They are called black-tailed deer because the bottom two thirds of the tail is black. Up higher, where the tail is attached, the fur is brown and under the tail is whitish. The general body color is reddish to greying-brown (with black hairs interspersed in winter) and the underside of belly, chin, neck patch are white.

The brownish color camouflages the deer in the forest and field edges where it lives.

Mountain Lion *(Felis concolor)*

About half of Callifornia is prime mountain lion country. This fact is a surprise to many residents and visitors. These large, powerful predators have always lived here, preying on deer and other wildlife, and playing an important role in the ecosystem.

Mountain lion habitat is essentially the same as that of their primary prey. Within this habitat, mountain lions tend to prefer rocky cliffs, ledges, vegetated ridgetops, or other areas that provide cover for undetected surveillance of prey. Stream courses and ridgetops are frequently used as travel corridors and hunting routes. Riparian vegetation along streams provides cover for mountain lions traveling in open areas.In rough terrain, mountain lion dens are usually located in a shallow nook on the face of a cliff or rock outcrop. In less mountainous areas, dens are located in dense thickets or under fallen logs. Little bedding is used in dens. Females may use the same den for several years.

The home range consists of a first-order home area, used primarily for resting, and a much larger area used for hunting. Home ranges are maintained by resident mountain lions but not transient mountain lions. Mountain lions are capable of covering large distances in short periods of time.

The best stalking cover for mountain lions is thick enough to remain hidden, and sparse enough for them to see their prey. Mountain lions commonly use terrain such as steep canyons, rock outcroppings, boulders, or vegetation such as dense brush to remain hidden while stalking.

Western Rattlesnake *(Crotalus viridis)*

Western rattlesnakes are an average of 40-60 inches in length, and have a triangular head and a brownish-green or tan body with dark brown bands. It is not uncommon to encounter snakes while in the outdoors. What is uncommon is for people to react calmly to the presence of a snake. Most people fear snakes because they do not understand them or their importance in the natural world. While a few species are potentially dangerous to humans, all are creatures that form vital links in their ecosystems as highly efficient predators of rodents. Common sense is the best protection against dangerous species when afield: watch where you place your hands, where you place your feet, and where you sit. Snakes are most common in rocky areas and are most likely to be found underneath the rocks, and along ledges maintaining their body temperature cooling during the day and warming at night.

If you find a snake LEAVE IT ALONE! Purchase a field guide for identification of the various species. Enjoy the outdoors by learning more about these fascinating animals.

Great Blue Heron *(Ardea herodias)*

The great blue heron is long-legged and has a very sharp beak which helps it to catch aquatic animals. It's a very large bird with a wingspan of over 5 feet. The great blue heron has a blue body, a reddish-brown neck, and sometimes white or blue splotches near its eyes. It also has black feathers that start at its forehead extend past head.

Great blue herons live near lakes, ponds and marshes. There are said to be 13 different species in North America.

The great blue heron is very clever when it comes to getting food. It stands in the shallows of a lake, stream, or pond, and waits motionless until its prey comes close enough to snatch with its beak. Its food supply consists of fish, frogs, and small mammals.

During the breeding season the great blue heron is at its most elegant, with long feathers on its back and short feathers on its neck that ruffle in the breeze. Lake Berryessa supports a breeding rookery of great blue herons.

Golden Eagle *(Aquila chrysaetos)*

The golden eagle inhabits open country from barren areas to open coniferous forests. They are primarily in hilly and mountainous regions, but also in rugged deserts, on the plains, and in tundra. The golden eagle prefers cliffs and large trees with large horizontal branches for roosting and perching.

Nesting habitat -The golden eagle nests on cliff ledges, preferably overlooking grasslands; 10 to 100 feet (3-30 m) above ground in dead or live trees; in artifical structures; or on the ground. Pairs may use the same nest year after year. In the Coast Ranges of California, the golden eagle nests almost exclusively in trees.

The golden eagle generally forages in open habitats where rabbits and small rodents are available. During the nesting season the golden eagle usually forages within 4.4 miles (7 km) of the nest. Trees, live or dead, are often used for perches if they are near open areas where prey can be easily seen.

Golden eagles are most efficient predators in open areas where winds and thermal updrafts aid flying. They are less efficient where shrub and/or tree cover increases. Abundant shrub cover provides hiding and escape cover for prey. Physical obstructions close to the ground make hunting difficult.

Canada Goose *(Branta canadensis)*

Found in North America at large, Canada geese are the most widely distributed of the wild geese. While they are mainly spring and autumn migrants that travel in V-shaped flocks, often with a fair amount of honking, they winter southward to northern Mexico and are common year-round on Lake Berryessa.

With one brood a season, most nest in northern parts of the U.S. Their nests, usually on the ground at the water's edge, are constructed of twigs, grasses, reeds, and much down. An average of 4-8 white eggs hatch in 28 days, and the young become fledglings in two to three weeks. Like other geese, Canada geese spend more time on land than ducks do. They are strict vegetarians that feed in the water or on the ground on grasses, sedges, and roots of aquatic plants. They also favor grain left in farm fields.

Western Grebe
(Aechmophorus occidentalis)

The western grebe is approximately 22-29 inches (55-73 cm) long, the longest of the grebes. The crown and back of neck are black, the back is brownish-gray, the underparts are white, the inner web of wing quills is white. The neck is long and slender. The female is slightly smaller than the male. The bill is long, greenish-yellow with a dark ridge down the center. The toes are lobed with flattened claws adapted for strong swimming and diving. There is a negligible tail.

The western grebe is a water nesting bird, living in rushy lakes and sloughs. During the winter, bays and oceans are inhabited.

This species is found primarily from southeastern Alaska eastward through south-central British Columbia, south to southern California. This species winters along the Pacific coast from southern British Columbia, Utah, Colorado, New Mexico, and western and southern Texas south to southern Baja California, northern Guerrero, Puebla, and San Luis Potosi.

The western grebe is carnivorous, eating mostly insects and fish along with some mollusks and crustaceans. They spear fish with their dagger-shaped bills.

Osprey *(Pandion haliaetus)*

Osprey occupy a wide range of habitats near water; primarily lakes, rivers, and coastal waters with adequate supplies of fish. Their nests are generally built within 6-7 miles (9.6-11.2 km) of large lakes or rivers with slow-moving water. Flattened portions of partially broken off snags, trees, rocks, dirt pinnacles, cacti, and numerous man-made structures such as utility poles and duck blinds are used for nests. The nests consist of a large interwoven pile of sticks lined with some soft material such as cedar bark or moss. The area around the nest is generally open, giving the birds clear access when landing. Ponderosa pine in the western United States, tupelo *(Nyssa sylvatica)* in the eastern United States, and mangroves *(Rhizophora spp.)* in the subtropics are all favored as nest trees for this reason.

Osprey typically nest at the extreme tip of a tree or snag with little or no overhead cover. They prefer tall snags that provide good visibility and security. Osprey also prefer to nest over water for protection against climbing predators. Islands free of mammalian predators allow safe nesting in low trees and even on the ground. Swamps also provide safe nesting.

The osprey diet consists almost entirely of fish, but they will occasionally eat frogs, snakes, ducks, crows, and small mammals. Osprey can penetrate only about 3 feet (1 m) below the water surface. Therefore, they generally catch only surface fish or those that frequent shallow flats and shorelines. Osprey are opportunists. If fish are abundant, accessible, and the right size they seldom go unconsumed. Osprey in western North America often eat suckers, carp, bullhead *(Ictalurus spp.)*, and perch *(Perca flavescens)* when nesting near warm shallow lakes or reservoirs, and eat trout when nesting near deeper, colder waters.

Gray Squirrel *(Sciurus griseus)*

The gray squirrel thrives in both urban and rural settings. Mast-bearing hardwood trees are the most important element of squirrel habitat. Mast is any hard fruit such as acorns, beechnuts, and hickory nuts. Other important tree and shrub species provide flowers, buds, fruit, cones and samaras (fruit of the maple tree) in season. Squirrel populations fluctuate with changing yields of mast. When mast is not available, other fruits and berries, flower parts, buds, bark, roots, mushrooms, and animal matter comprise the diet. Variety in tree species is essential for habitat stability. Den trees are essential to squirrels for winter shelter, escape cover, and rearing of young.

Natural den activities begin to appear in 40-50 year old trees. Although leaf nests are also used, the survival rate of young is 40% lower in leaf nests compared to cavities. Frequently squirrels will claim 2 or 3 dens at the same time. Moderate to dense ground cover near den trees is preferred for cover and concealment. On the average, about half of the den cavities identifiable from the ground are suitable for raising young. Optimal habitat has 2 to 3 suitable cavities per acre.

While gray squirrels frequently use open water when available, daily needs can be satisfied from other sources such as dew and succulent plant material. Lack of surface water is not a limiting factor in squirrel habitat. The home range of the gray squirrels varies from 1.5 to 8 acres and is usually smaller where populations are high.

Populations develop social hierarchies or "pecking orders" influenced by age and sex of the animals. Dominant animals usually have larger home ranges.

PLEASE DO NOT FEED THE SQUIRRELS as they become habituated, or become used to human food and then lose their ability to forage on their own. This causes a pest problem in park areas.

Striped Skunk *(Mephitis mephitis)*

Skunks are characterized by their black and white fur. They have small heads and eyes, pointed snouts, and short legs. Skunks are slow-moving nocturnal animals, poor climbers, and excellent diggers.

The specific species are characterized by their markings. There are four species in North America. There is the striped skunk *(Mephitis mephitis)* marked by two wide white stripes on its back that meet at its head. There is also the spotted skunk *(M. macroucra)*, hooded skunk *(Spilogale putorius)*, and hog nosed skunk (Conepatus mesoleucus).

In the wild, skunks live in semi-open country, bushlands, and in locations with a water supply within two miles. In urban areas they live beneath buildings, decks, dumps, and woodpiles.

Human Interaction Issues:

- ☒ Skunks get into the garbage
- ☒ They carry several diseases including:
  - Folease
  - Rabies
  - Tuberculosis
  - Canine and feline distemper

Raccoon *(Procyon lotor)*

Of all the furbearers in California, the raccoon is probably the best known. The blackmasked face and ringed tail have been popularized in children's books and animated cartoons until even the youngest recognizes it.

A huskily built animal, the average raccoon weighs from 10-16 pounds. The color of its coarse, shaggy fur is generally gray with a light shading of brown on the flanks. The black guard hairs give it a blackish appearance on its back and the back of its head. Its tail is round and heavily furred; and it is pale brown with black rings.

Its feet are bare on their bottoms and the long, slender "fingers" on its front feet are used with great dexterity in searching for, and grasping small objects. Its hind feet have a large surface that allows the racoon to balance easily on its hind feet while using both "hands" for feeling, or catching or holding food. A peculiar characteristic is the raccoon's habit of washing its food, if water is available.

The raccoon is a nocturnal animal, seldom moving around in daylight. Tracks in the mud and in the dust of dry trails reveal that it is quite common in areas where it is seldom seen.

The raccoon is normally associated near water, but in late summer and fall it may wander far in search of seasonal foods. It is a meat eater, yet has the most varied diet of any of the furbearers.

There are no private services north of Spanish Flat. The closest service stations, stores and food services are in Rutherford (15 miles west of Turtle Rock), Napa (16 miles south of Berryessa Corners), and Winters (25 miles east of Berryessa Corners).

The preceding place names are designated on the following map (as found in *The Lake Berryessa News*, 2016).

8. The California Highway 128 Effort

A multi-county effort is underway to brand and market State of California Highway 128 as a tourist destination. The effort is in its infancy, but if implemented would be another positive impact on visitor flow to Lake Berryessa. Highway 128 connects the Lake east to Sacramento and west to the Napa Valley. It does not touch upon the Lake, but comes within a few miles.

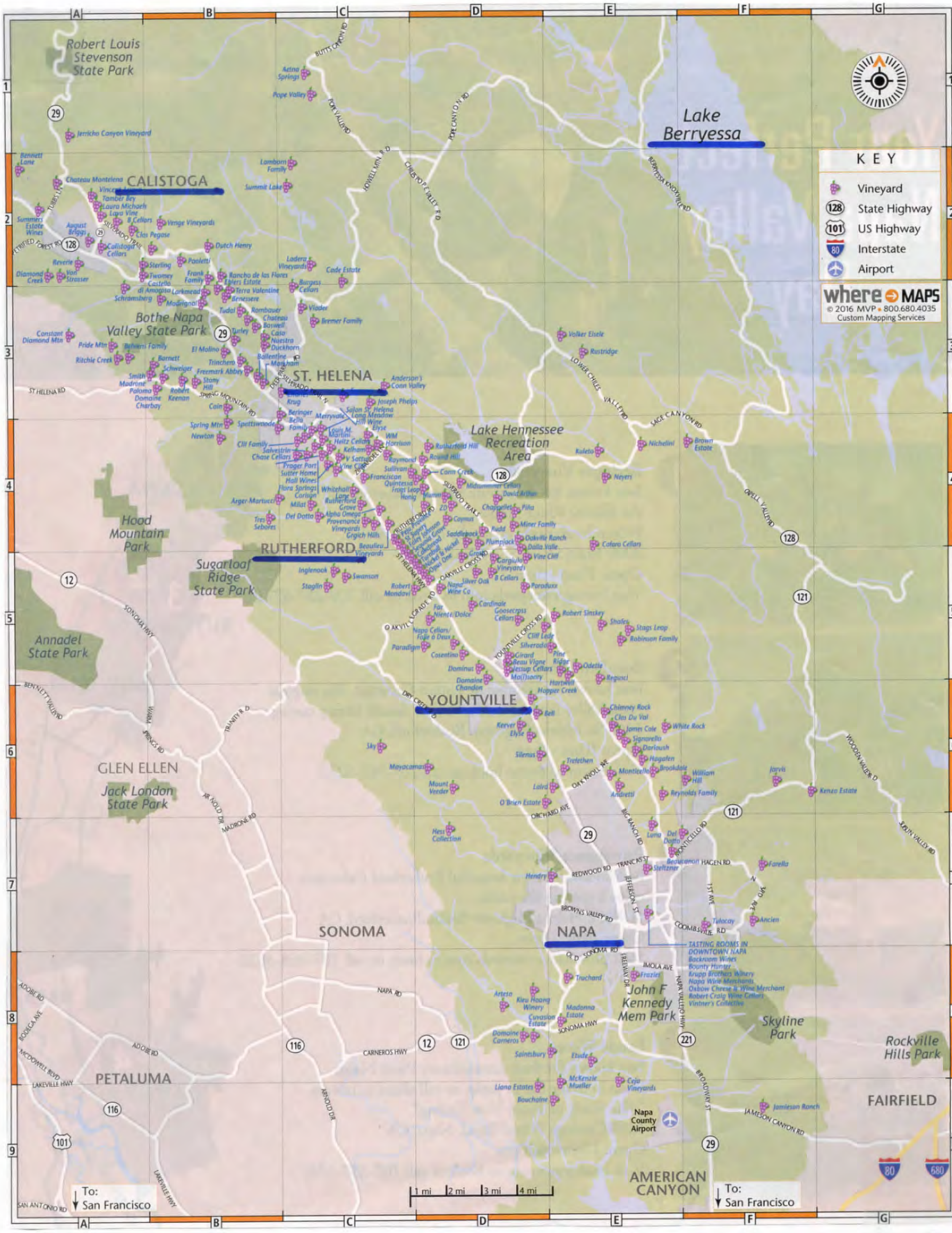
The effort is summarized in the following quote, as found in an unpublished document provided by Visit Napa Valley ("California Highway 128 Branding and Marketing").

> California Highway 128 is one of California's true scenic gems. It is a short stretch of road with connects the Sacramento Valley to the Pacific Ocean. The 120 mile highway starts in Yolo County just outside of Winters, and the road winds up through Napa, Sonoma and Mendocino Counties and ends at the intersection of California HWY 1 just outside of the community of Albion on the Mendocino coast. HWY 128 passes through some of the most diverse and rich landscapes. From rich agricultural valleys to towering redwoods, from vineyards to quaint California communities and even now a National Monument, this journey has a lifetime of unique experiences and destinations to offer.

9. Attractions of Nearby Napa Valley

As noted, Lake Berryessa is located in northeastern Napa County. There are four major incorporated cities in the County, all of which are in well-known Napa Valley itself. The four cities are shown below, with approximate populations and distances from Lake Berryessa. They also are located on the following map, along with some of the more than 500 wineries in the County.

The Greater Lake Berryessa Region



Robert Louis Stevenson State Park
Lake Berryessa
KEY
Vineyard
State Highway
US Highway
Interstate
Airport
where MAPS
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Custom Mapping Services
CALISTOGA
Bothe Napa Valley State Park
ST. HELENA
Lake Hennessee Recreation Area
Hood Mountain Park
RUTHERFORD
Sugarloaf Ridge State Park
Annadel State Park
YOUNTVILLE
GLEN ELLEN
Jack London State Park
SONOMA
NAPA
John F Kennedy Mem Park
Skyline Park
Rockville Hills Park
PETALUMA
FAIRFIELD
Napa County Airport
AMERICAN CANYON
To: San Francisco
To: San Francisco
1 mi
2 mi
3 mi
4 mi
TASTING ROOMS IN DOWNTOWN NAPA

city (north to south in the Valley)	population	miles from Lake Berryessa
Calistoga	5,200	35
St. Helena	6,000	27
Yountville	3,000	31
Napa	79,000	30

Volumes of information exist on the many tourist attractions in Napa Valley, and need not be repeated in this report at-hand. A few highlights include:

- more than 500 wineries, producing many of the most awarded wines in the world and over 1,000 different brands. Many have wine tasting facilities open to the public, and are home to the internationally famous "wine tasting tours of the Napa Valley." It is noted that one of the oldest wineries in Napa County, Nichelini Family Winery, is less than 10 miles from Lake Berryessa. It dates back to 1895 and has a popular wine tasting room and tours. It is in the nearby mountains, and not in Napa Valley itself.
- 125 restaurants, including several world-renowned
- 150 lodging facilities with more than 5,000 rooms
- natural geothermal springs and volcanic mud baths
- extensive displays of art throughout the vineyards and elsewhere
- extensive hiking, biking and walking trails
- eight golf courses
- extensive live theatre, festivals, concerts, etc.
- some of the most spectacular scenery in the country
- a wonderful year-round Mediterranean climate

Highlights of the four major cities, along with the other well-known unincorporated communities of Rutherford and Oakville are described below. Following this material is an excerpt from *The Napa Valley Guidebook*, as prepared by Visit Napa Valley – "25 Things To Do in the Napa Valley." Statistics describing the tourism industry in Napa Valley and overall Napa County are found in the last section of Part Three of this report.

Calistoga, located at the north end of the Napa Valley, is best known for its small town charm, natural hot springs and "mud baths." The central, walking friendly Lincoln Avenue offers antique shops; restaurants; bars and wine tasting rooms, and the town's many upscale resorts and inns offer signature spa treatments. Calistoga is also home to "Old Faithful of California," a geothermal geyser which erupts from the casing of a well drilled in the late 19th century; a petrified forest four miles from town; the Napa Valley Cricket Club, who play their games at the Napa County Fairgrounds; and Castello di Amorosa, a winery within a replica of a Tuscan castle.

St. Helena was settled in 1834 as part of General Vallejo's land grant. The city served as a rural agricultural center and, with the growth and development of the wine industry, St. Helena has become one of most visited cities in the Napa Valley. Its charming "Main Street," which is part of Highway 29, features an array of independent boutiques, galleries, restaurants and inns. Many historic aspects of the town have remained intact including the original vintage movie theatre, the Cameo. St. Helena is also home to The Culinary Institute of America at Greystone (CIA).

Rutherford-Oakville. In the 1860's, Oakville was a water stop on the Napa Valley Railroad. Today, it is a legendary wine-growing region and has been a Napa Valley appellation since 1993. It is home to the famous Robert Mondavi Winery, as well as Harlan, Heitz Wine Cellars and Opus One, a partnership between winemaking royalty Baron Phillip de Rothchild and Robert Mondavi. The iconic Oakville Grocery is a favorite stop to fuel up on artisanal provisions.

Yountville is named for early pioneer George Calvert Yount, who is considered responsible for establishing the first vineyard in the Napa Valley. Often referred to as the "culinary capital of the Napa Valley," Yountville boasts more Michelin stars per capita than any other destination in the U.S. The stars belong to The French Laundry, which has three, and Bouchon, with one. Yountville is also home to the Performing Arts Center at Lincoln Theater, the largest arts and entertainment venue in the Napa Valley, the Napa Valley Museum, and the historic V Marketplace, which features wine tasting; restaurants and unique shops.

Napa. Founded by Nathan Coombs in 1847, Napa is considered the Napa Valley's commercial center. Napa is home to more than 25 wine tasting rooms; numerous luxury hotels and inns; three live entertainment venues; a downtown Art Walk. A wide selection of shops, boutiques, and restaurants are in or within walking distance of the historic downtown. Oxbow Public Market features artisanal foods and local wine, and the Napa Valley Wine Train starts its journey from its Napa station. Outdoor enthusiasts may choose from four parks and numerous trails open to equestrians, mountain bikers, hikers and dog walkers, while the Napa River offers kayaking and paddle boarding. It is in the process of undergoing significant change and growth with many hotels, restaurants and entertainment venues.

Photo by Bob McClenahan

25 THINGS TO DO
IN THE NAPA VALLEY

Bounty Hunter

▲
TASTE WINE
So many wineries—where to go? Choose three or four, different in size and/or specialty, for a fun-filled day. (pgs. 62-95)

FOR MORE THAN A TASTE
Make an appointment at a winery and learn about wines, wine tasting, pairing wine with food and the history of the winery and the vineyards. Tasting the wines will bring it all together. (pgs. 62-95)

FILM AND FUN
Watch a classic film or new release at the historic and charming Cameo Cinema in St. Helena. The Napa Valley Film Festival showcases cutting-edge productions throughout the Valley in November.

DISCOVER NAPA VALLEY'S HISTORY
Create a tour of your own or contact Napa County Landmarks or the Historical Society. (pg. 140)

SEE THE VALLEY FROM TOP TO BOTTOM
Begin your morning in Calistoga with breakfast and then explore the unique downtown. In the afternoon, meander south on Silverado Trail where you'll find many wonderful wineries. (pgs. 20-21, 22-29)

CHILL OUT IN CARNEROS
Roam through the hills of the Los Carneros region where Chardonnay, Pinot Noir and Sparkling Wine reign supreme. Stop in for a visit to di Rosa, an art collection on Winery Lake. (pg. 122)

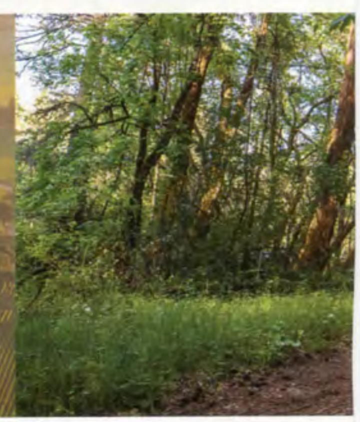
BALLOON OVER THE VALLEY ▸
In the quiet of the morning, balloons lift off into the sky and provide a breathtaking view of the Valley. (pg. 127)

▲
DINE, DINE, DINE!
Napa Valley restaurants have the most Michelin stars per capita of any wine region in the world! The warm months are delightful for dining *alfresco*, while January features Restaurant Week. (pgs. 96-117)

WANDER THROUGH FARMERS MARKETS
Find delicious locally grown foods and unique handmade crafts. Each town in the Valley has its own farmers market. Explore the Oxbow Public Market with its specialty shops, fresh foods and cafés. (pg. 127)

RIDE THE RAILS
Enjoy the rhythmn of the rails and the vineyard vistas as you wine and dine on the Napa Valley Wine Train. (pgs. 108-109)

A DRIVE ON THE GOLF COURSE
You'll have a difficult time keeping your eye on the ball with the many beautiful vineyards and hillsides in view. (pg. 132)



SHOP 'TIL YOU DROP

What's a trip without shopping? Take advantage of independent boutiques throughout the Napa Valley. Each city's downtown has a charming shopping area. And be sure to visit the Napa Premium Outlets. (pgs. 5, 8-9, 133-135)

THROW A PARTY...OR A WEDDING

Our many event planners know just how to set the stage for an unforgettable event. Give one of them a call. (pgs. 136-139)

Photo by Bob McClenahan

"Summer Afternoon" (partial) by Lee Youngman

ENJOY LIVE PERFORMANCES

Silo's, Blue Note Napa and the Uptown Theatre in Napa, along with the Performing Arts Center at Lincoln Theater in Yountville, have regularly scheduled performances. (pg. 122)

RESERVE SPA TIME

Pamper yourself with a spa treatment. There's no reason to be stressed while in the Napa Valley. (pgs. 130-131)

PICNIC WITH A VIEW

Purchase picnic fare and a bottle of wine, and set out for a spot to while away the hours. (See Delicatessens, pg. 117; Picnics, pg. 128-129)

TAKE A HIKE

Enjoy a walk through the Petrified Forest near Calistoga and walk a trail of Redwood giants with an imagination for the past. Or hike trails into the hills for superb views of the Napa Valley. (pgs. 128-129)

Photo by Bob McClenahan

Photo by Bob McClenahan

STROLL INTO AN ART VENUE

View the many expressions of Napa Valley that artists have conveyed in paintings, sculpture, jewelry, glass and photography. Don't miss Arts in April. (pgs. 118-123)

GET YOURSELF IN GEAR

Stop in at NV Bike Tours, located in Yountville, for a bicycle and a tour that suits your adventurous spirit. (pgs. 127-129)

ENJOY AN OUTDOOR CONCERT

Spend an evening with live music, gourmet food and fine wines. Robert Mondavi Winery features a summer festival of concerts. Most towns offer free concerts throughout the year. (pgs 122, 140)

TOUR THE VALLEY BY LIMOUSINE

Sit back, relax and enjoy the rhythm of the vines and wines. Your driver will know just where to take you. (pgs. 14, 82, 137)

SAMPLE A TASTE OF THE CIA

The Culinary Institute of America, that is. Attend a public cooking demonstration, discover recipes created for the home cook and watch professional culinary techniques in action. (pg. 117, Inside back cover)

TOUR & TASTE THE UNUSUAL

Break away from the ordinary with a unique and personal olive oil, beer or spirit tasting. (pg. 95)

HAVE FUN COOKING

Register for cooking classes where you'll learn about foods and wine pairing and prepare your own gourmet meal. (pg. 117)

EXPLORE THE NAPA RIVER

See a different perspective by kayak or paddleboard. (pg. 127)

II. THE FIVE CONCESSION AREAS

Introduction

As previously noted, Napa County will be seeking appropriate operators for five concession areas at Lake Berryessa. They are listed below, and shown on the following map. From north to south they include:

- Putah Canyon (formerly Putah Creek)
- Monticello Shores (formerly Rancho Monticello)
- Berryessa Point (formerly Berryessa Marina)
- Spanish Flat (always referred to as Spanish Flat)
- Steele Canyon (formerly Steele Park)

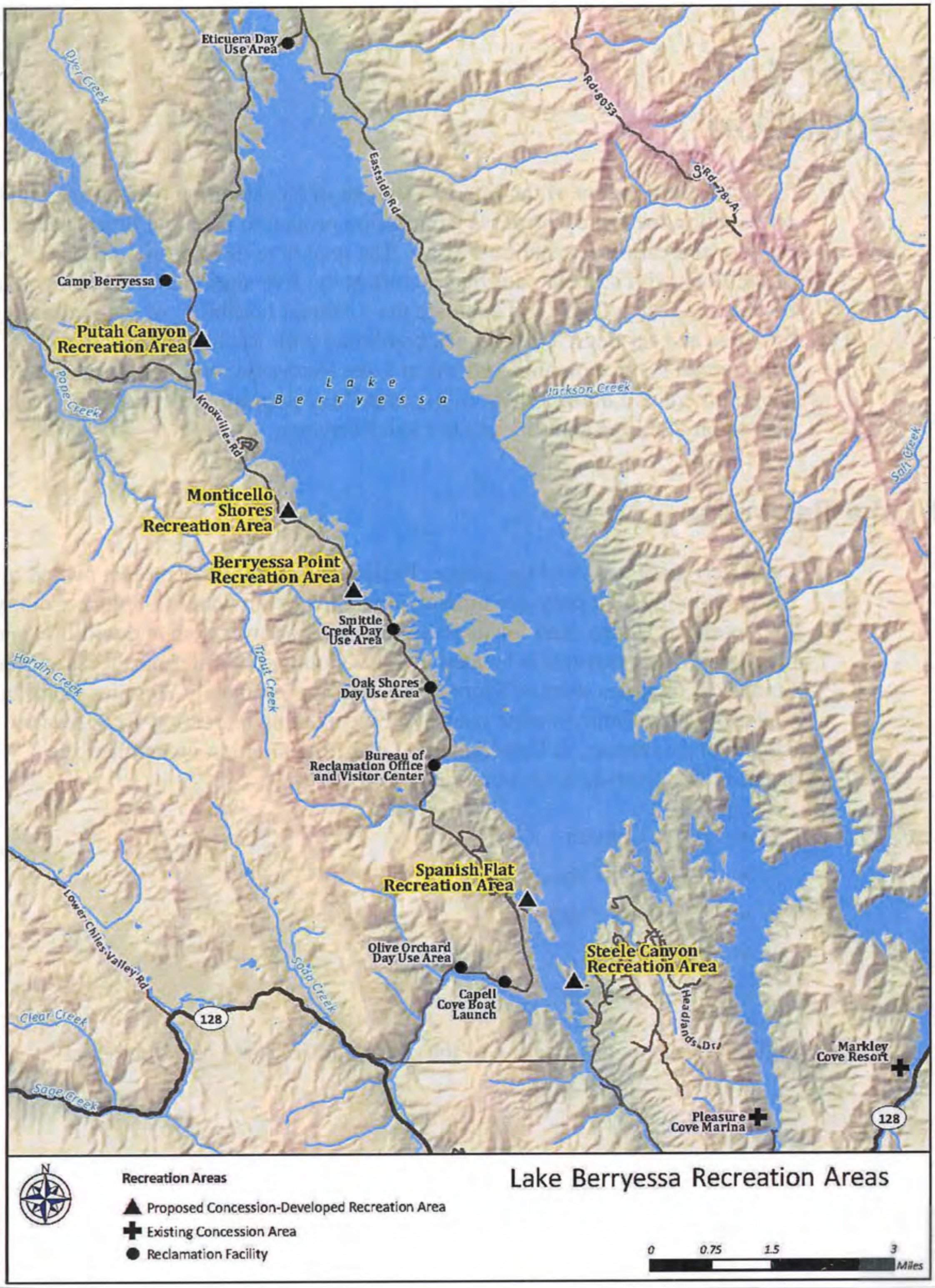
Each of the five areas is unique in terms of size, amount of shoreline, vegetation, viewsheds, etc. All were closed in 2009, and have remained vacant for almost a decade. Most evidence of past development has been erased.

The following pages contain visual materials for each of the five areas, including:

- an aerial photograph prior to the closures
- a topographic map, outlining the concession boundary
- another aerial photograph prior to the closures

Dimensions of the Five Areas

The five concession areas contain 66,751 linear feet of shoreline frontage, representing about 12.6 miles (Table II-3). Some areas have additional frontage, but in non-developable sections. The range is from 7,100 feet (1.3 miles) at Berryessa Point to 19,165 feet (3.6 miles) at Putah Canyon. The average is 13,350 feet (2.5 miles). Such significant shoreline frontage provides opportunities for extensive trail systems, privacy, water views, etc.



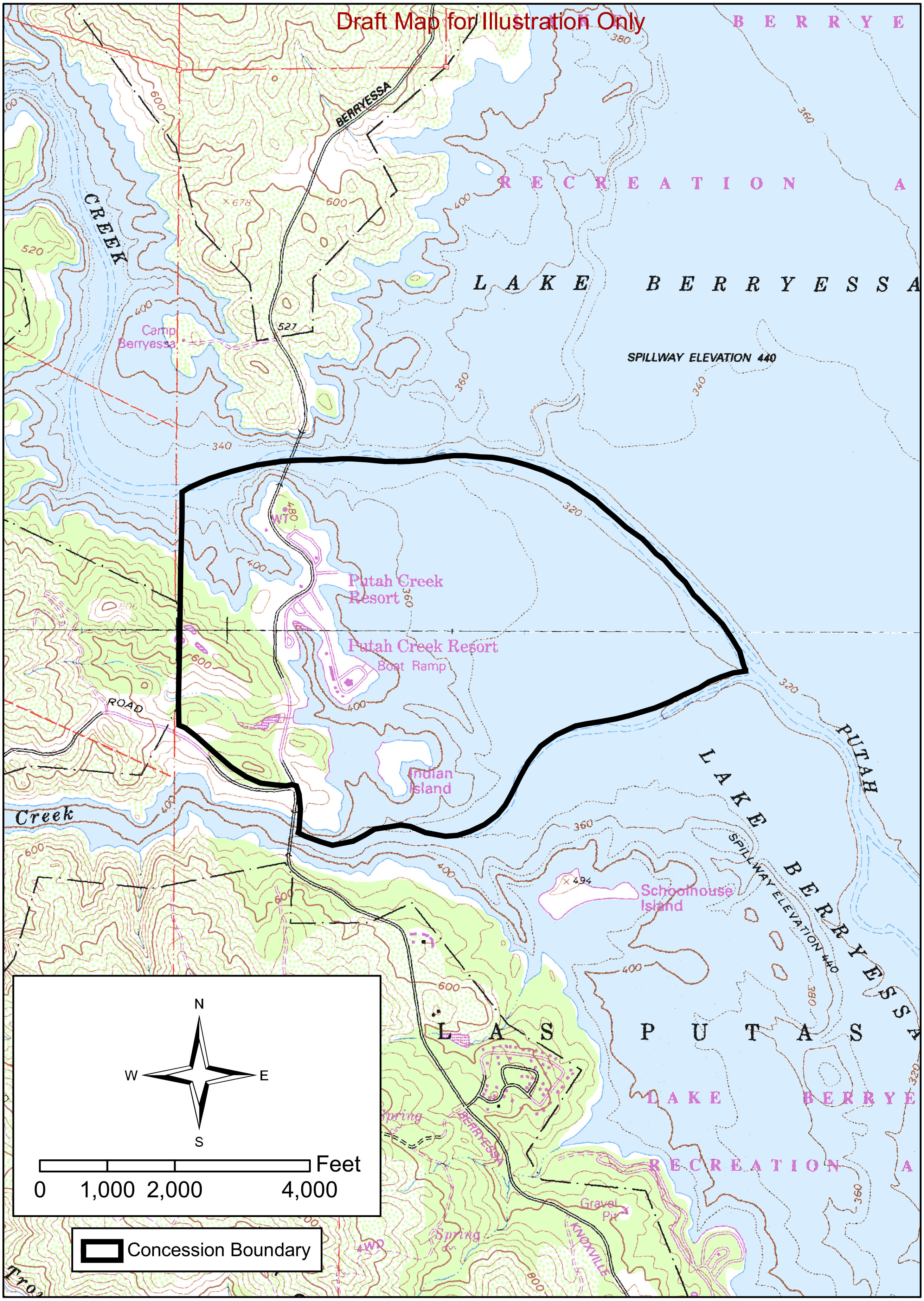
Eticuera Day Use Area
Camp Berryessa
Putah Canyon Recreation Area
Lake Berryessa
Monticello Shores Recreation Area
Berryessa Point Recreation Area
Smittle Creek Day Use Area
Oak Shores Day Use Area
Bureau of Reclamation Office and Visitor Center
Spanish Flat Recreation Area
Olive Orchard Day Use Area
Capell Cove Boat Launch
Steele Canyon Recreation Area
Markley Cove Resort
Pleasure Cove Marina
Dyer Creek
Pope Creek
Knoxville Rd
Eastside Rd
Rd 8053
Rd 78 A
Jackson Creek
Salt Creek
Hardin Creek
Trout Creek
Lower Chiles Valley Rd
Soda Creek
Clear Creek
Sage Creek
Headlands Dr
128
128
Recreation Areas
Proposed Concession-Developed Recreation Area
Existing Concession Area
Reclamation Facility
Lake Berryessa Recreation Areas
0
0.75
1.5
3
Miles

PUTAH CANYON

(formerly Putah Creek)

Putah Creek Resort

Putah Creek Resort Boundary



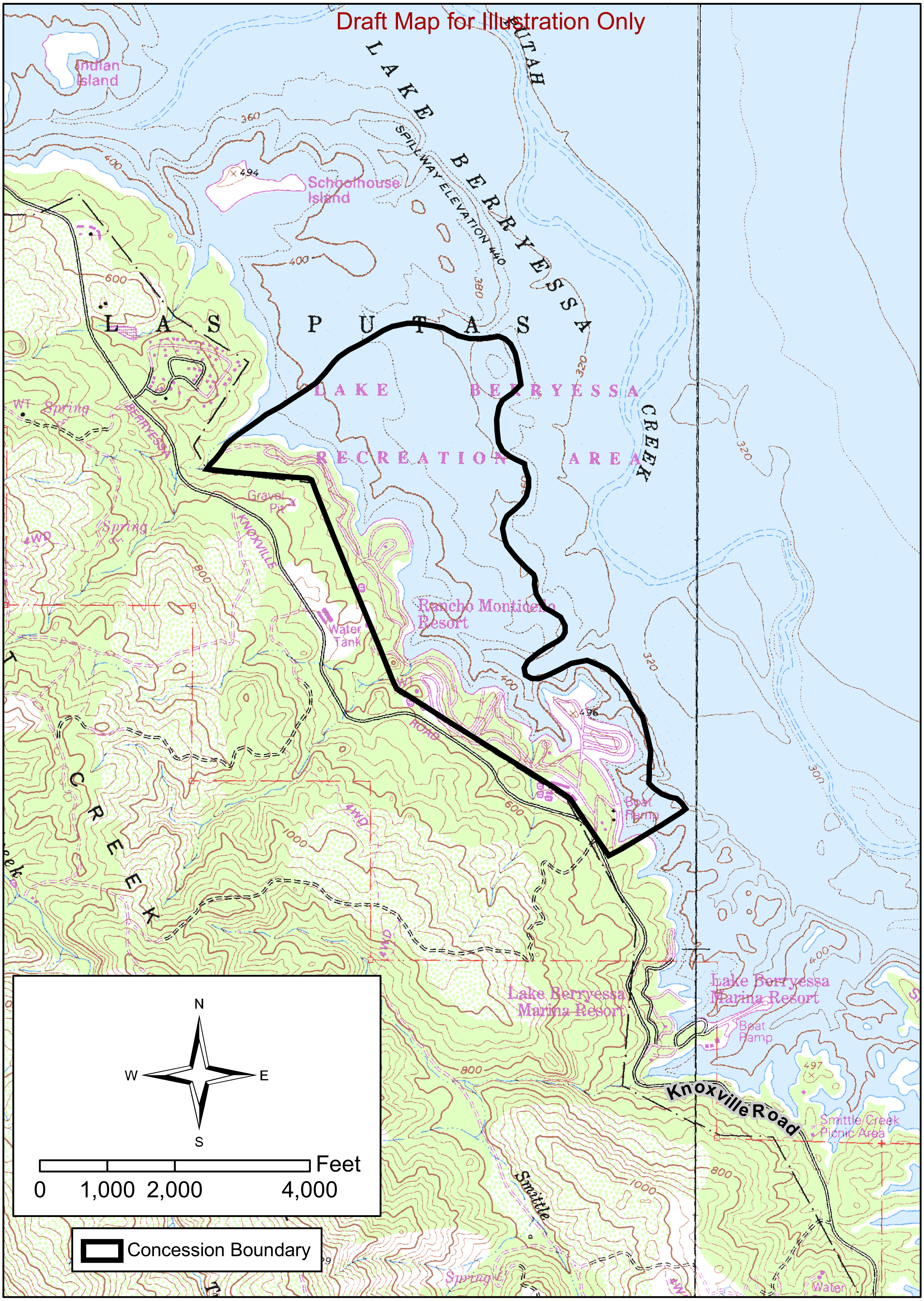
Putah Creek Resort Boundary

MONTICELLO SHORES

(formerly Rancho Monticello)

Rancho Monticello

Rancho Monticello Resort Boundary



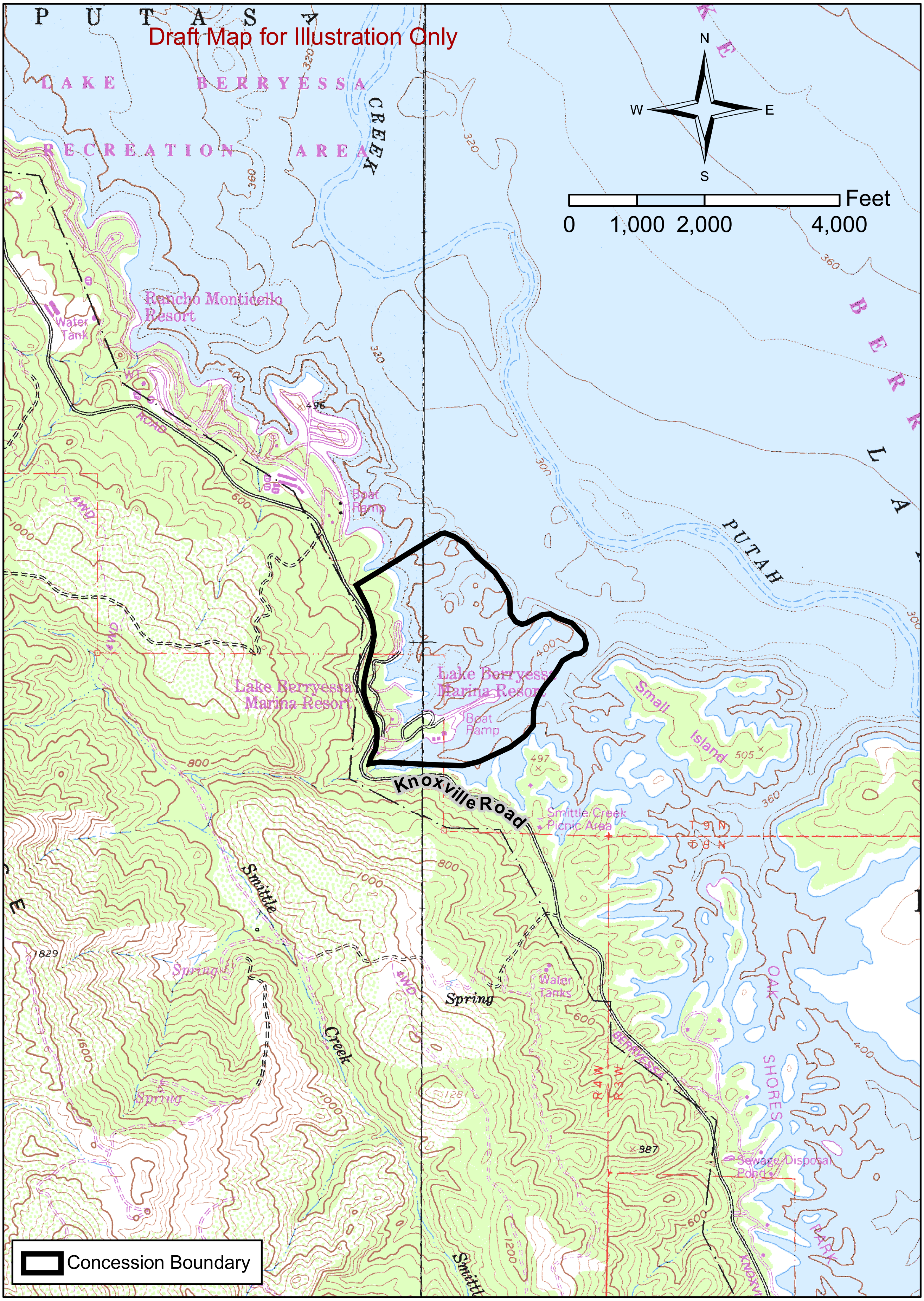
Rancho Monticello Resort Boundary

BERRYESSA POINT

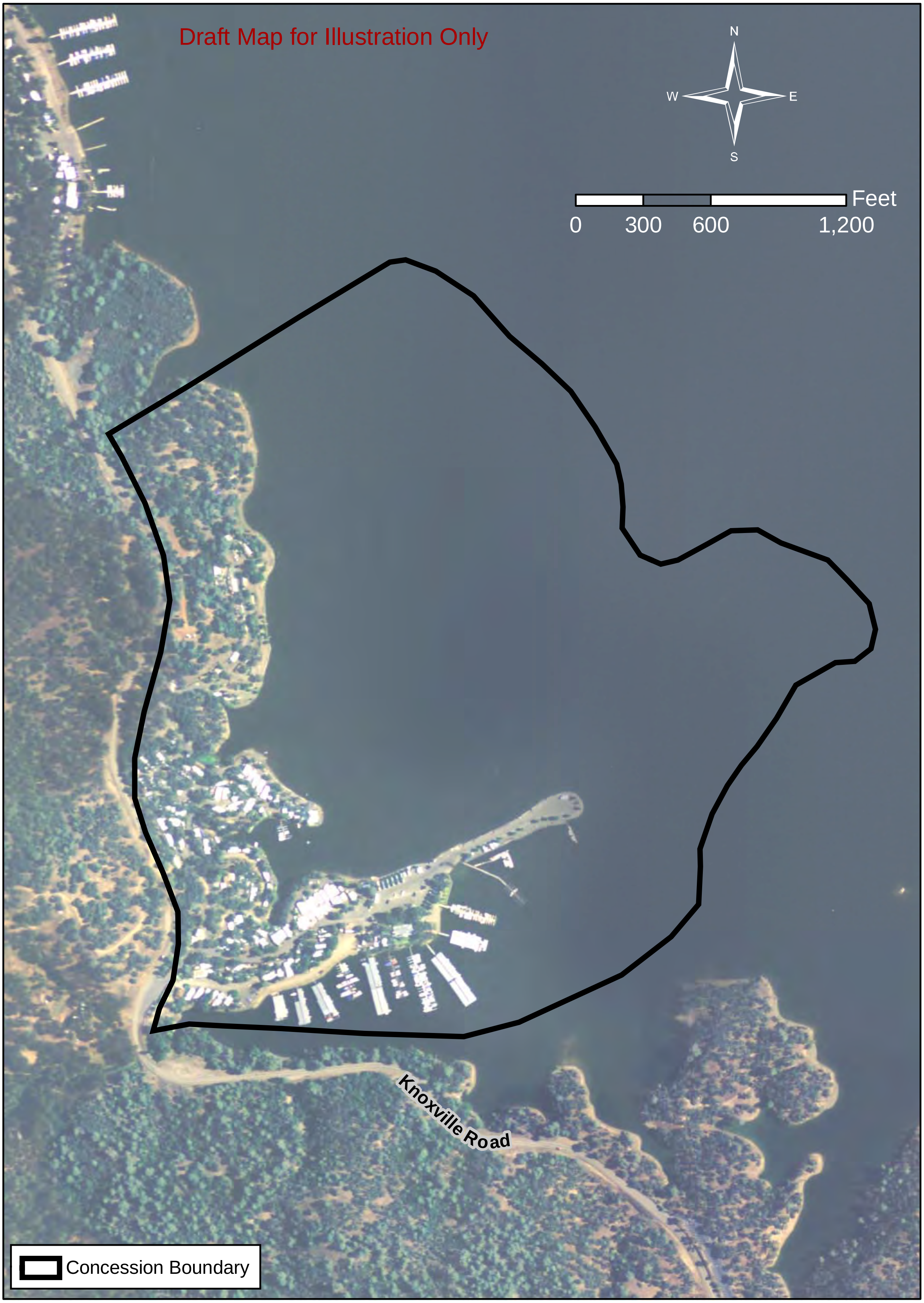
(formerly Berryessa Marina)

Berryessa Marina

Berryessa Marina Resort Boundary



Berryessa Marina Resort Boundary

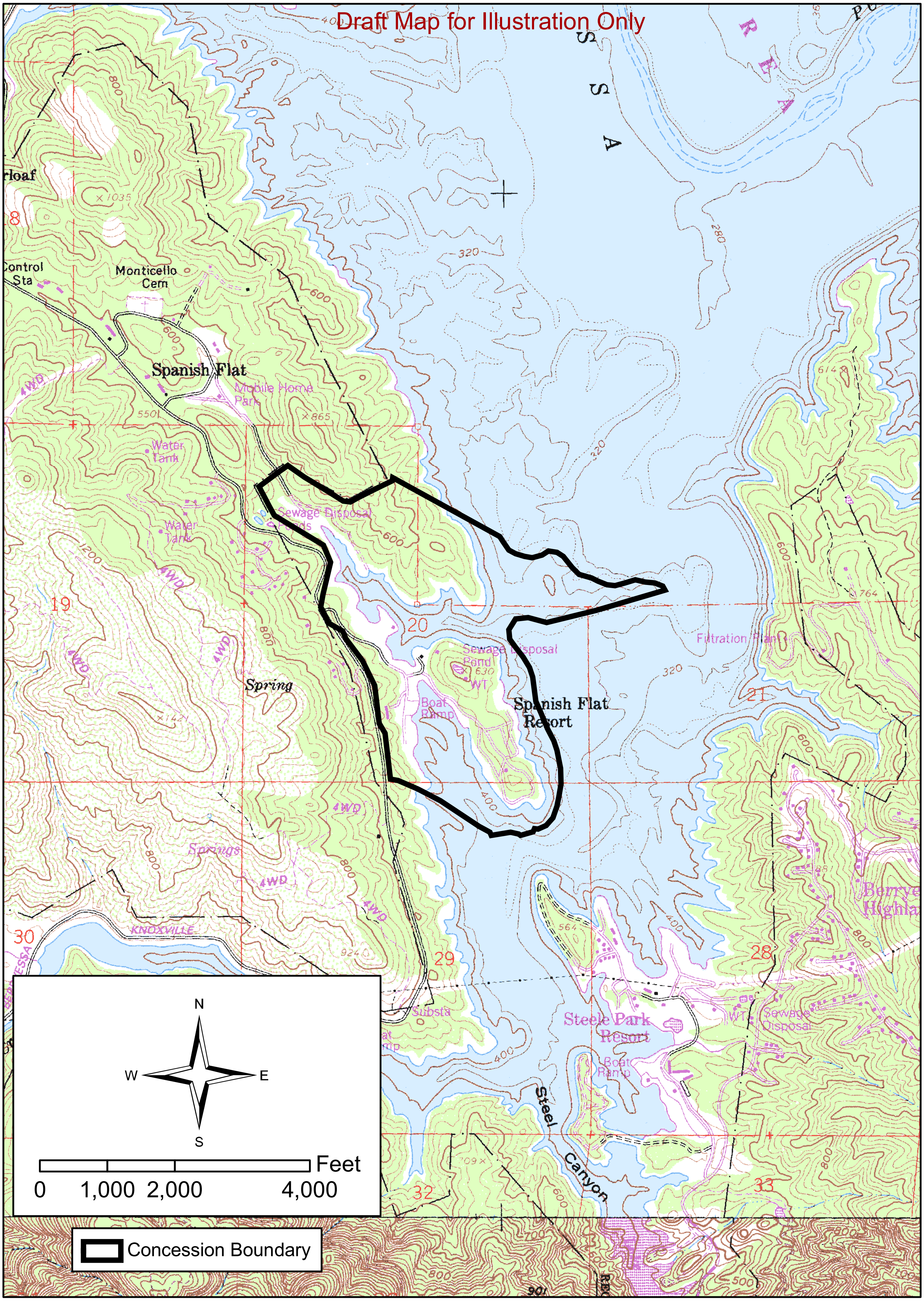


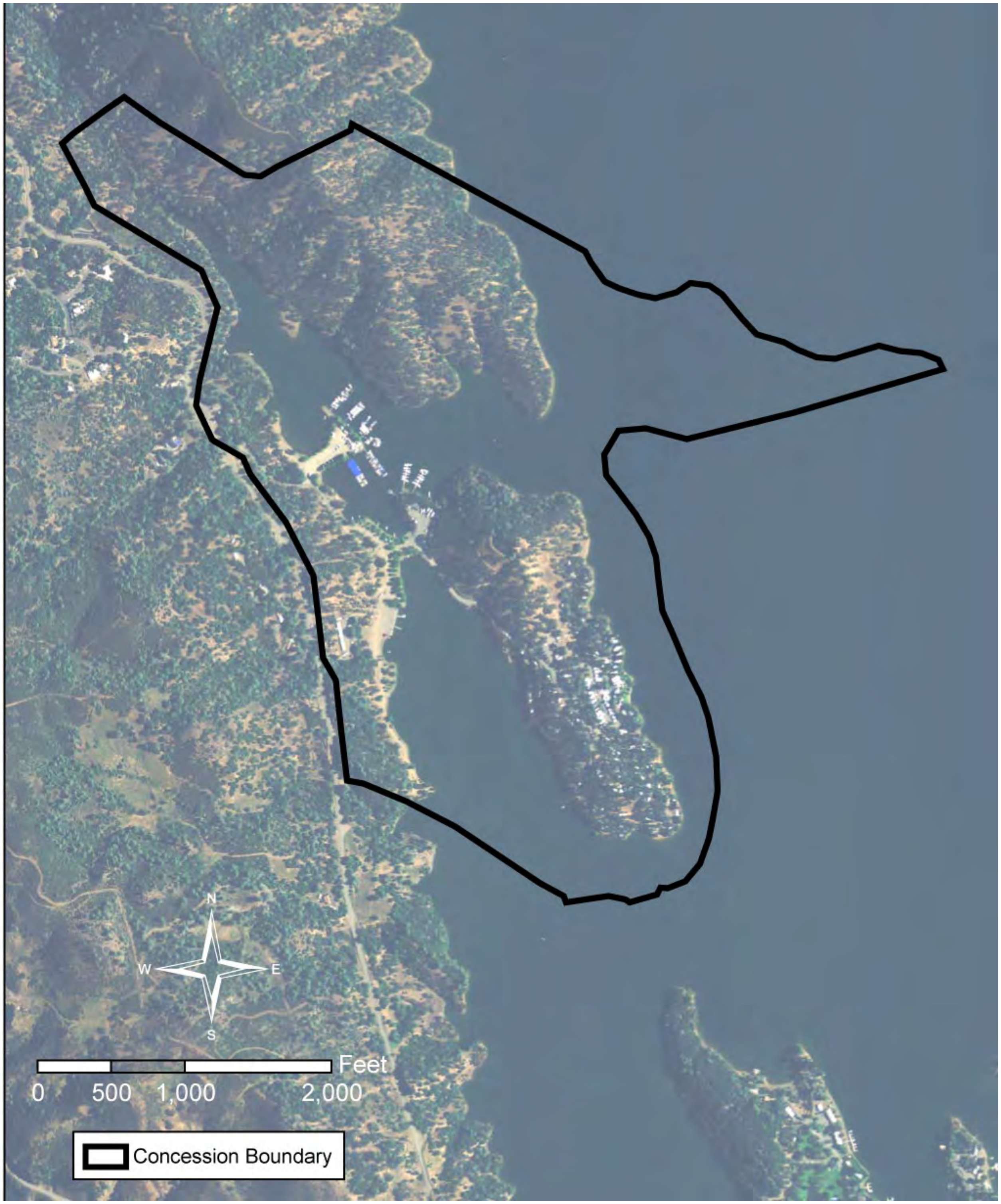
SPANISH FLAT

(always referred to as Spanish Flat)

Spanish Flat

Spanish Flat Resort Boundary



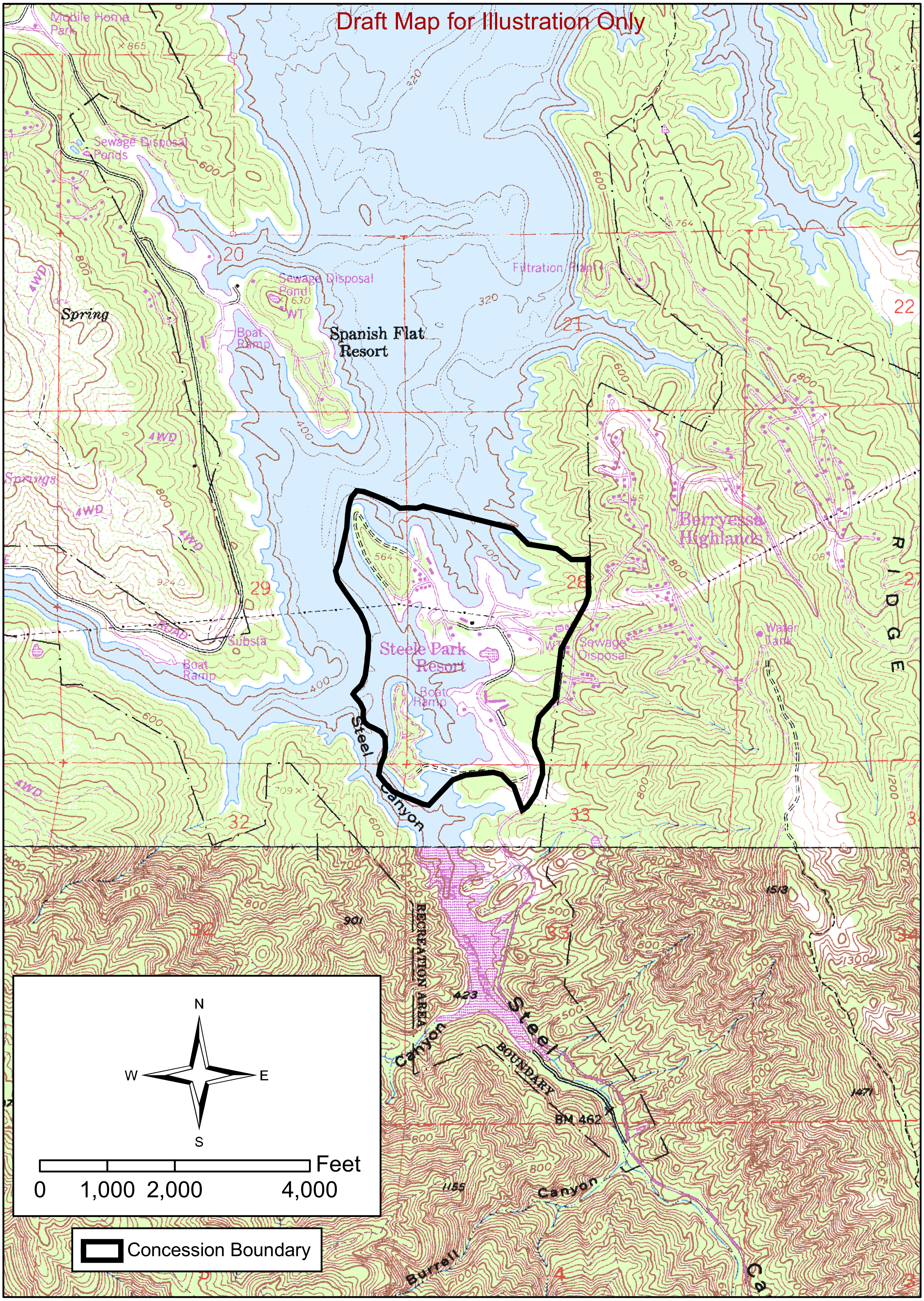

N
W
E
S
Feet
0
500
1,000
2,000
Concession Boundary

STEELE CANYON

(formerly Steele Park)

Steele Park

Steele Park Resort Boundary



Steele Park Resort Boundary

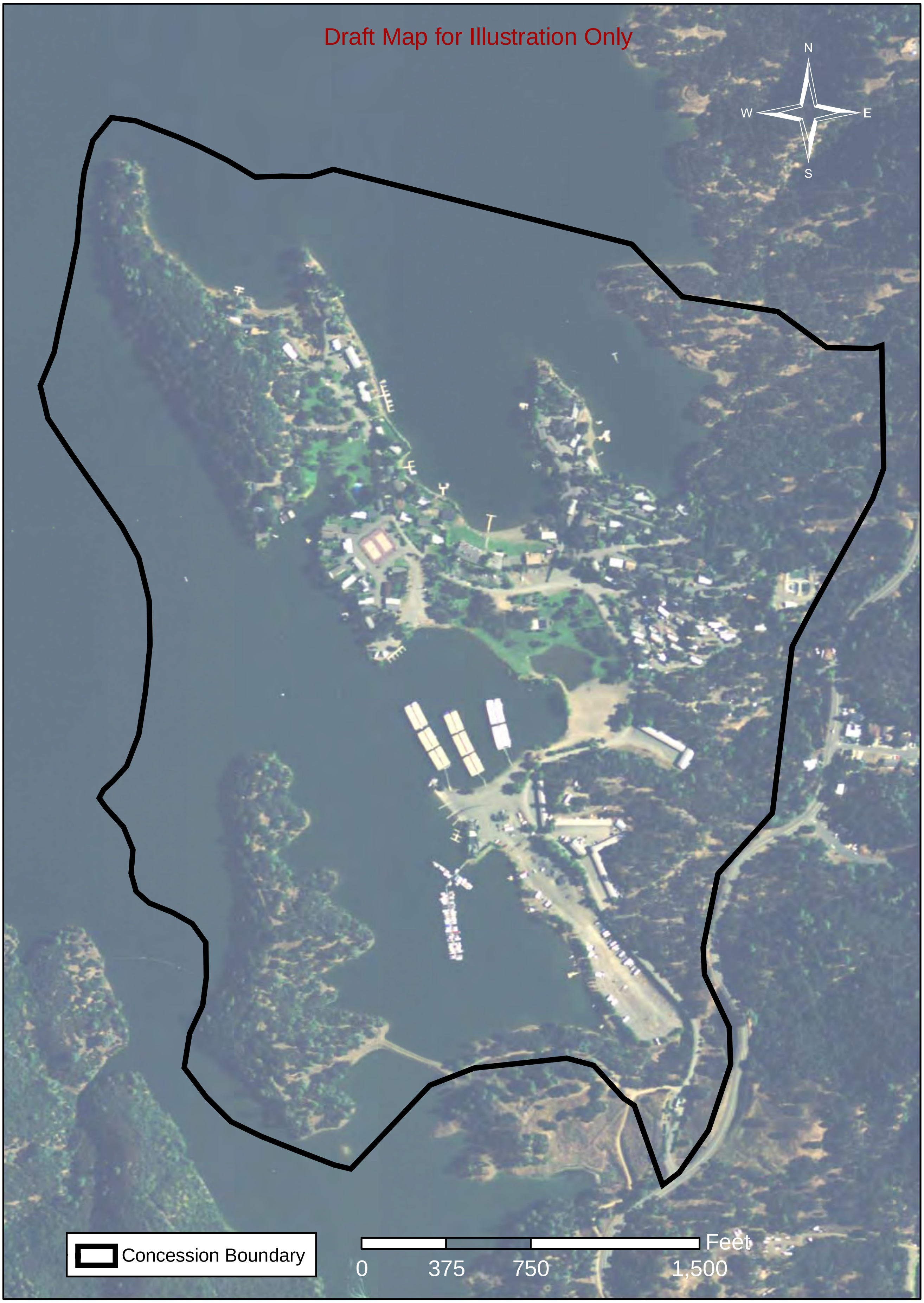


TABLE II-3

Dimensions of the Five Concession Areas

Concession Area	Shoreline Frontage: Linear Feet	Shoreline Frontage: Miles	Acres With Elevations of: 440 to 455 feet	Acres With Elevations of: Over 455 feet	Total Acres
Putah Canyon	19,165	3.6	30.03	137.84	167.87
Monticello Shores	14,600	2.8	31.20	118.06	149.26
Berryessa Point	7,100	1.3	13.41	41.76	55.17
Spanish Flat	11,000	2.1	28.30	187.90	216.20
Steele Canyon	14,886	2.8	34.54	102.55	137.09
Total	66,751	12.6	137.48	588.11	725.59
Average	13,350	2.5	27.50	117.62	145.12

The five areas contain 725.59 acres, ranging from 55.17 at Berryessa Point to 216.20 at Spanish Flat. The average area contains 145.12 acres.

Table II-3 also contains important information in regard to two elevations in the five areas, including:

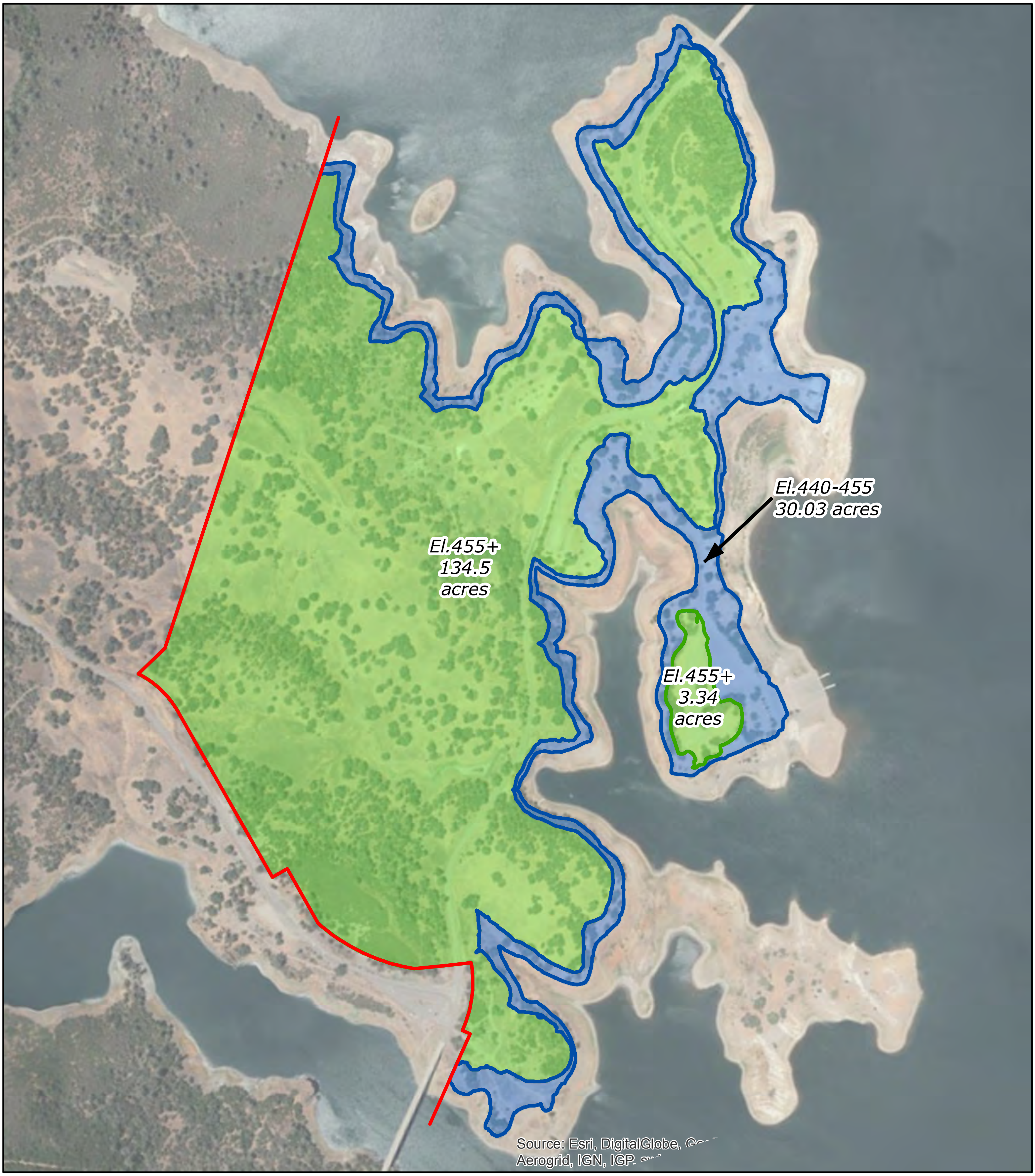
1. 440 feet (representing the high water line) to 455 feet
2. 455 feet to the edge of the BOR land

These two elevations are important because different types of land uses are allowed in them by BOR, as discussed in following paragraphs. Other uses may be considered as the five areas are redeveloped, however.

The five areas contain 137.48 acres in the 440 to 455 foot elevation category. The range is from 13.41 at Berryessa Point to 31.20 at Monticello Shores. The average is 27.50 acres.

The five areas contain 588.11 acres in the 455 foot elevation to the BOR property line category. The range is from 41.76 acres at Berryessa Point to 187.90 at Spanish Flat. The average is 117.62 acres.

The two elevation categories are shown on the following five aerial maps for each area.



Legend

2012 Record of Survey

Elevation 440-455 (NGVD29)

Elevation 455+ (NGVD29)

N

Notes
1. This aerial survey is based on NAVD 1988
2. To approximate the NGVD 1929 440' and 455' contour lines, the NAVD 1988 443' and 458' contour lines were used.

1 inch = 600 feet

RECLAMATION
Managing Water in the West

Putah Canyon
Concession Area

Document Path: S:\413-Solano Project\Lake Berryessa_GIS\2017 Concession Area Acreages\Concession Acreage Request-20170412.mxd

Legend

- 2012 Record of Survey
- Elevation 440-455 (NGVD29)
- Elevation 455+ (NGVD29)

N

Notes
1. This aerial survey is based on NAVD 1988
2. To approximate the NGVD 1929 440' and 455' contour lines, the NAVD 1988 443' and 458' contour lines were used.

1 inch = 1,000 feet

RECLAMATION
Managing Water in the West

Monticello Shores Concession Area

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Legend

- 2012 Record of Survey
- Elevation 440-455 (NGVD29)
- Elevation 455+ (NGVD29)

N

Notes
1. This aerial survey is based on NAVD 1988
2. To approximate the NGVD 1929 440' and 455' contour lines, the NAVD 1988 443' and 458' contour lines were used.

1 inch = 400 feet

RECLAMATION
Managing Water in the West

Berryessa Point
Concession Area

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Legend

- 2012 Record of Survey
- Elevation 440-455 (NGVD29)
- Elevation 455+ (NGVD29)

N

Notes
1. This aerial survey is based on NAVD 1988
2. To approximate the NGVD 1929 440' and 455' contour lines, the NAVD 1988 443' and 458' contour lines were used.

1 inch = 1,000 feet

RECLAMATION
Managing Water in the West

Spanish Flat Concession Area

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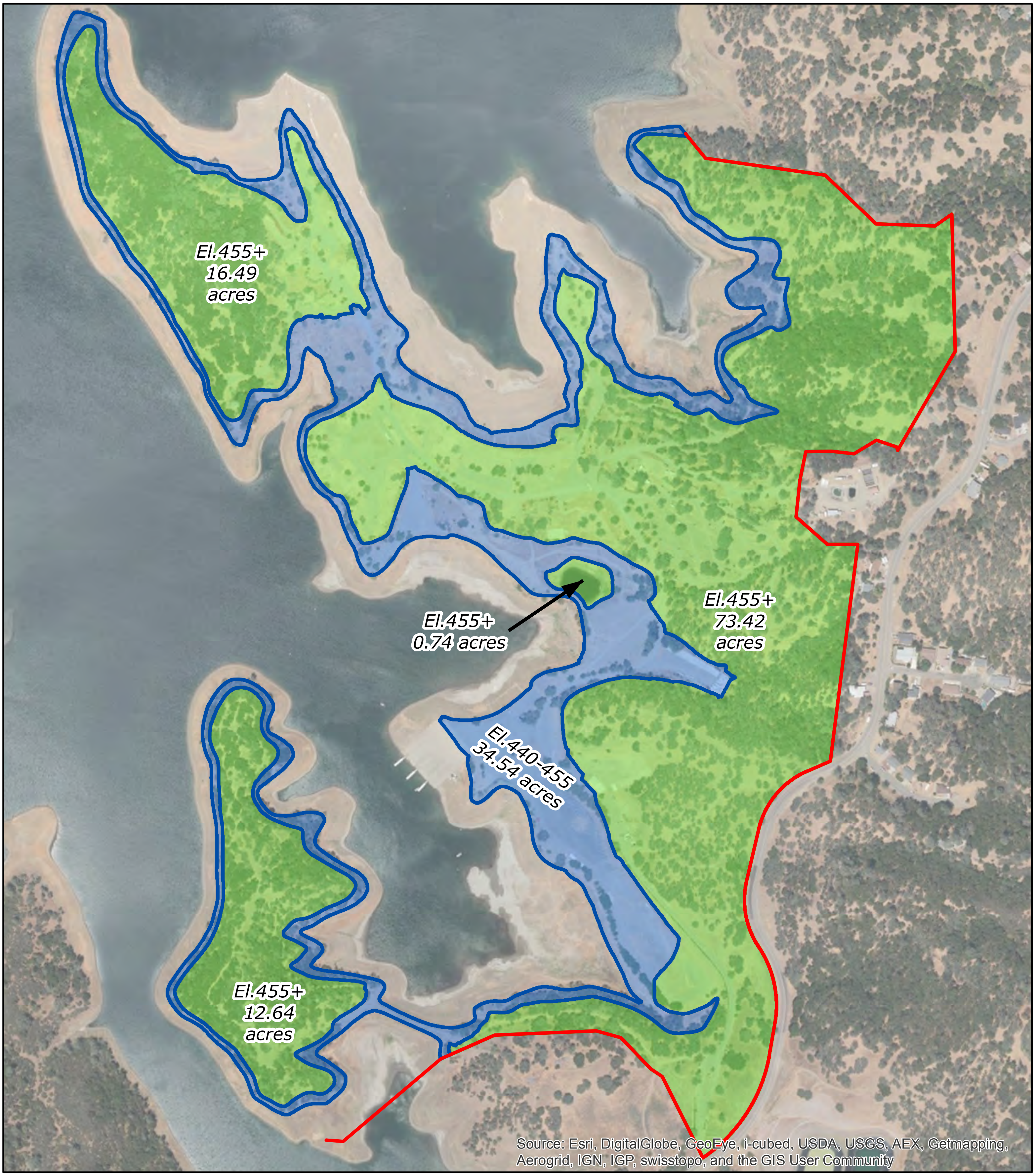

Legend

- 2012 Record of Survey
- Elevation 440-455 (NGVD29)
- Elevation 455+ (NGVD29)

Notes
1. This aerial survey is based on NAVD 1988
2. To approximate the NGVD 1929 440' and 455' contour lines, the NAVD 1988 443' and 458' contour lines were used.

1 inch = 500 feet

RECLAMATION
Managing Water in the West

Steele Canyon Concession Area

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Also found on following pages are other important materials regarding the two elevation categories. All are taken from "Record of Decision: Future Recreation Use and Operations of Lake Berryessa," Bureau of Reclamation, June 2006. Included are:

1. a narrative describing permitted uses and other regulations in each elevation category
2. an itemized list of uses permitted and prohibited in each elevation category, including term of occupancy
3. a glossary defining the types of uses and occupancy patterns

1. narrative describing permitted uses and occupancy patterns

a. From elevation 440' to elevation 455' MSL. Reserved for day-use facilities (marina facilities, swimming areas, picnic sites) and the following non-permanent overnight use facilities: park models approved for short-term occupancy, RV and travel trailer sites, campgrounds, and tent camping. Picnic tables, BBQ grills, restrooms, and other supporting infrastructure for these facilities must be flood-proofed. Flood-proofing for these structures and facilities includes, but is not limited to, sealed openings, removable utilities, flotation devices, and anchoring. Park models must be removed during the off-season or in anticipation of high-water events. Location of these facilities below elevation 455' MSL was evaluated in the RAMP, Action 23.

Retail stores and food and beverage facilities <u>may</u> be located at elevations 440'-455' MSL but only where certified by Reclamation as flood-proof in accordance with reservoir operation requirements, health and safety codes, and other requirements. Flood-proofing for these facilities includes, but is not limited to, stilts, lifts, floating barges, or other features that safely elevate the structure above elevation 455' MSL. Location of these facilities below 455' MSL was evaluated in the RAMP, Action 23.

b. From elevation 455' MSL to the Federal Property Line. Hotels, motels, conference facilities, cabins, cottages, and lodges <u>must</u> be located above the reservoir surcharge area (455' MSL and above). This is consistent with project operational requirements for flood control, water supply, and water quality, and promotes compliance with health and safety code requirements. In addition, the following overnight use facilities and supporting infrastructure <u>may</u> be located at or above elevation 455' MSL: park models approved for short-term occupancy, RV and travel trailer sites, campgrounds, tent camping, and picnic sites. Location of these facilities above elevation 455' MSL was evaluated in the RAMP, Action 22.

2. a list of the permitted uses and occupancy patterns

FACILITIES	OCCUPANCY	LOCATION Elev 440'- 455' MSL	Elev 455' MSL and above
Day-Use Facilities			
Picnic sites	Day	Permissible	Permissible
Swimming areas	Day	Permissible	N/A
Canoe/kayak launch	N/A	Permissible	N/A
Overnight-Use Facilities			
Cabins	Annual	Prohibited	Prohibited
Park models	Annual	Prohibited	Prohibited
Cottages	Annual	Prohibited	Prohibited
Cabins	Short-term	Prohibited	Permissible
Park models	Short-term	Permissible	Permissible
Cottages	Short-term	Prohibited	Permissible
Hotel/motel	Short-term	Prohibited	Permissible
Lodge/lodging center	Short-term	Prohibited	Permissible
Youth/elder hostel	Short-term	Prohibited	Permissible
Conference facilities	Short-term	Prohibited	Permissible
Tent camping (non-motorized access)	Short-term	Permissible	Permissible
Traditional campground	Short-term	Permissible	Permissible
RV/travel trailer sites (full hook-up)	Short-term	Permissible/ flood-proofing required	Permissible
RV/travel trailer sites (other)	Short-term	Permissible	Permissible
RV/travel trailer dump stations	N/A	Prohibited	Permissible
Restrooms, showers, laundry	N/A	Permissible/ flood-proofing required	Permissible
Supporting infrastructure	N/A	Required with flood-proofing	Required in accordance with code

Marina Facilities			
Launch ramps	N/A	Permissible	N/A
Slip rentals (power boats)	Annual	Permissible	N/A
Slip rentals (power boats)	Short-term	Permissible	N/A
Slip rentals (houseboats)	Annual	Permissible	N/A
Slip rentals (houseboats)	Short-term	Permissible	N/A
Houseboats (private)	Annual	Permissible	N/A
Houseboats (rentals)	Short-term	Permissible	N/A
Boat storage facilities	Annual	Permissible	N/A
Fish cleaning station	N/A	Permissible	N/A
Marine fuel facilities	N/A	Permissible/ flood-proofing required	N/A
Supporting infrastructure	N/A	Required with flood-proofing	N/A
Retail facilities	N/A	Permissible/ flood-proofing required	Permissible
Food and beverage facilities			
Restaurants	N/A	Permissible/ flood-proofing required	Permissible
Cafes	N/A	Permissible/ flood-proofing required	Permissible
Snack bars	N/A	Permissible/ flood-proofing required	Permissible
Supporting infrastructure	N/A	Required with flood-proofing	Required in accordance with code

3. glossary of terms

Active conservation storage. In hydrologic terms, that portion of water stored in the reservoir that can be released for all authorized purposes such as water supply, power generation, downstream recreation, fish and wildlife, etc. Conservation storage is the volume of water stored between the inactive pool elevation and flood control stage. At Lake Berryessa, active conservation storage encompasses all reservoir lands at or below elevation 440' MSL.

Annual occupancy. Lease of cabins, cottages, or park models at specific geographic locations within the concession areas (above elevation 455' MSL plus 100 LF) for a term of 1 year with option to renew for not more than two consecutive 1-year terms contingent upon compliance with terms and conditions of the permit and other applicable requirements. Facilities shall not be used as a primary residence. Actual use is limited to a maximum of 90 consecutive days and no more than 6 months total per year.

Cabin. An overnight occupancy structure, either constructed on-site or prefabricated, set on a foundation or otherwise permanently placed. All cabins shall be constructed or installed, operated and maintained by the concession contractor. There shall be no privately owned cabins on Federal lands at Lake Berryessa.

Concession areas. Those areas on Federal property at Lake Berryessa managed on behalf of Reclamation by commercial concession contractors for recreation purposes. Concession areas are also commonly referred to as "resorts" or "resort areas."

Cottage. A small, single-story lodging place, typically no more than 400 square feet, permanently set on a foundation used for temporary overnight stays. All cottages on Federal lands at Lake Berryessa must be constructed or installed, operated, and maintained by the concession contractor. There shall be no privately owned cottages on Federal lands at Lake Berryessa.

Day-use occupancy. Day-use refers to picnicking, boating, hiking, and other activities typically experienced by the general public in a single day and not in conjunction or associated with an overnight stay.

Hotel. A multi-room establishment that provides lodging and usually meals and other services for travelers and other paying guests.

Houseboat. Vessels whose lengths range from 40'-60' that have the capability of providing facilities for overnight occupancy of seven or more individuals (or are being used as such, and include galleys, toilets, showers, etc.), or any other similar vessel which the Lake Berryessa Recreation Manager determines to be a houseboat (from Operational Policy No. 1).

Lodge. A cottage or cabin, often rustic, used for temporary overnight stays.

Motel. A multi-room establishment that provides lodging for motorists in rooms usually having direct access to an open parking area.

Overnight Occupancy Vessel (OOV). OOVs are defined by Reclamation as vessels that do not meet the definition of a houseboat with the capability of providing facilities for overnight occupancy with a galley and toilet facility, or any other similar vessel which the Lake Berryessa Recreation Manager determines to be an OOV. Typically a cabin cruiser, sailboat, etc.

Park model. Term commonly used by the hospitality industry for individual units equipped for temporary or semi-permanent living accommodations. The Recreational Park Trailer Industry Association also refers to these as park trailer recreational models or park trailers. Park models are considered rolling stock and must be removable. All park models on Federal lands at Lake Berryessa shall be constructed or installed, operated, and maintained by the concession contractor. There shall be no privately owned park models on Federal lands at Lake Berryessa.

Recreational vehicles (RVs). For purposes of the VSP ROD: a vehicle designed as temporary living quarters for recreational camping, travel, or seasonal use. RVs may have their own motor power as in the case of motor homes or may be mounted as are truck campers. Not included in the RV definition are off- road vehicles and manufactured housing for long-term residence (park models and mobile homes).

Reservoir surcharge capacity. The reservoir capacity reserved for Project flood control operations. At Lake Berryessa, the reservoir surcharge area includes all reservoir lands between the top of active conservation storage (elevation 440' MSL) and elevation 455.5' MSL.

Short-term occupancy. Overnight use of campsites, RV and travel trailer sites, houseboats or other OOVs, motel or lodge accommodations, permanent cabins or park models at any location for a period not to exceed 14 days during any period of 30 consecutive days.

Travel trailer. A vehicle with a kitchen and sleeping facilities and registered as a travel trailer that is towed by an auto, van, or pick-up truck, and is 8.5' wide or less when any expansion sides or "tipouts" are in the normal travel position. Also included in this definition is a tent trailer.

Utilities

Following is how concession areas at Lake Berryessa have obtained their utilities. It is anticipated the same methods will be used in the redevelopment of the five areas that are the topic of this report at-hand.

- **potable water**
  - Putah Canyon: operated own water system
  - Monticello Shores: operated own water system
  - Berryessa Point: operated own water system
  - Spanish Flat: Spanish Flat Water District
  - Steele Canyon: Napa Berryessa Resort Improvement District

- **sewer**
  - Putah Canyon: operated own sewage treatment system/pond
  - Monticello Shores: operated own sewage treatment system/pond
  - Berryessa Point: operated own sewage treatment system/pond
  - Spanish Flat: operated own sewage treatment system/pond
  - Steele Canyon: Napa Berryessa Resort Improvement District

- **electricity**: all with PG&E

- **garbage**: all with Berryessa Garbage

Remaining Clean-Up

When the five concession areas were closed in 2009, BOR thereafter removed most remnants of existing improvements. However, a few remain, as listed below. Some or all may have to be addressed by new concessionaires. The list is from BOR.

- **Putah Canyon**
    - sewer lift station tank and vault
    - retaining walls (some failing)
    - concrete dump site
    - old stairs
    - concrete pads
    - some failing roads
    - old telephone poles

- **Monticello Shores**
    - sewer lift station
    - failed culverts
    - retaining walls (some failing)
    - failing roads
    - old telephone poles

- **Berryessa Point**
    - large failing sea wall
    - retaining walls
    - failing roads
    - telephone poles

- **Spanish Flat**
    - retaining walls
    - telephone poles

- **Steele Canyon**
  - failed culvert
  - retaining walls (some failed)
  - sewer vault
  - telephone poles
  - stairs

BOR's Concession Infrastructure Design

Over the past years, BOR has devoted an extensive amount of time and resources to analyzing Lake Berryessa. Numerous public policy recommendations, environmental impact statements, land use design proposals, economic impact analyses, etc., have been completed. Some involved years of time in the citizen participation and public hearing process. Content of the efforts are too extensive to detail in this report at-hand, but some of the more noteworthy documents that could impact the redevelopment of the five areas include:

- "Lake Berryessa Market Area Survey," Survey Research Center, California State University, Chico, March 1997.
- "A Study of Boater Recreation on Lake Berryessa, California," College of Natural Resources, Colorado State University, Summer 1998.
- "Environmental Compliance and Facility Condition Assessment Report, Seven Concession Areas, Lake Berryessa, California," Kleinfelder, Inc., December 2002.
- "A Vision for Lake Berryessa," Berryessa Trails and Conservation and the Association for Lake Berryessa, April 2004.
- "Future Recreation Use and Operations at Lake Berryessa," Bureau of Reclamation, 2005.
- "Record of Decision, Future Recreation Use and Operations of Lake Berryessa," Bureau of Reclamation, June 2006.
- "Lake Berryessa Shoreline Management Plan," Bureau of Reclamation, September 2012.

- "Assessment of Market Conditions for Outdoor Recreation Facilities and Services at Lake Berryessa," Bureau of Reclamation, May 2014.
- "Lake Berryessa Concession Infrastructure Design," Bureau of Reclamation, July 2015.

All reports are available online. Collectively, they contain an overwhelming amount of information and guidelines.

The most recent report is the most critical for prospective concessionaires to review and understand ("Lake Berryessa Concession Infrastructure Design"). It builds upon previous efforts, and provides suggested plans.

The goal of the effort was:

> "…to develop site design layouts of facilities with associated infrastructure at the five sites to a 60 percent design level, and evaluate the financial feasibility of the proposed facilities and services. This project, combined with Reclamation's other commercial service planning efforts at Lake Berryessa, will culminate in the development and management of necessary and appropriate long-term recreation facilities and services at Lake Berryessa."

Three comments are critical for anyone reviewing BOR's current plans:

- The plans need not be absolutely adhered to in moving forward with redevelopment of the five sites. The suggested services and facilities are not all required – neither in presence nor in quantity, and additional types of facilities and services can be implemented.

- The phrase "60 percent design level" in the preceding paragraph basically means that environmental impact statements have been completed to the 60 percent completion level for all components of BOR's proposed facilities and infrastructure plan. If new concessionaires adhere to these plans, the final 40 percent of the environmental impact studies will need to be completed. If the existing plans are extensively revised, completely new environmental impact statements may be required.

- While the existing plans are somewhat flexible, and allow for additional services, amenities, building types, uses, etc., it will always be necessary to: (1) abide by the two elevation categories discussed elsewhere in this report (i.e., the 400 to 445 foot category and the over 455 foot to outer BOR boundary category); and (2) fully recognize that Lake Berryessa is "a destination boating, camping and outdoor recreation area for families throughout northern California and beyond that ensures a balance between recreation services and environmental stewardship" (as stated by BOR).

The remainder of this section is taken directly from "Lake Berryessa Concession Infrastructure Design," BOR, July 2015. It describes BOR's current plans for redeveloping the five areas and is completed at the "60 percent design level." At the end of the descriptive text and tables are bubble diagram renderings of the plans. It is again emphasized that future concessionaries are not bound by these plans.

Finally, two columns exist when listing potential facilities at each concession area. They are described by BOR as:

> "The ***required*** facilities and services recommended would be developed at the five recreation areas first to accommodate existing demand identified in this Market Assessment followed by the development of the recommended ***authorized*** facilities and services at some point during the term of the concession contract. The recommended authorized facilities and services would be developed based on future demand and other relevant factors deemed appropriate by Reclamation. If appropriate, the timeframes for development of facilities and services and support components by a concessionaire would be described in the RFP and incorporated into the contract between the concessionaire(s) and Reclamation."

2.1 Putah Canyon Recreation Area

Putah Canyon Recreation Area includes a mix of required camping, lodging, day use, and boating services. The northern portion of the property has all of the required facilities. Development of the northern portion is split on both the east and west sides of Knoxville Road. The southern portion near Pope Canyon Road has only a few proposed improvements that include camping or day use, which are identified as authorized services.

The development on the east side of Knoxville Road includes an entry station, boat launch, tent sites, RV sites, and park models. This is the only entry station at the site and also regulates entry to the west side of the site. The area north of the entry station consists of RV sites, RV dump station, standard sites with and without utilities, tent-only sites, and park models. South of the entry station are additional RV sites, day use sites, boat trailer parking, and a four lane boat ramp. Some of the area west of the existing boat ramp is prohibited from development due to known and documented contaminated subsurface soil conditions. This area is used as overflow parking.

Development on the west side of Knoxville Road includes a marina, tent sites, and day use. Entrance to this side of the site is served by an iron ranger and there is no staffed entry station. An entry station is authorized on this side of the site. The area north of the entrance includes day use sites, tent-only sites, and the marina. The marina has 201 boat slips and 15 houseboat slips. There is a fuel dispenser and sanitary pump for houseboats on the main dock. The marina building is also on the dock to provide service for boat rentals and private boat slips. The boat rental services includes a mix of houseboats, fishing boats, ski boats, kayak/canoes, paddle boards, jet skis and pontoons. There are on-shore fuel storage and sanitary storage tanks. South of the entrances is a dry boat storage area and the wastewater facilities.

The following are unique site design characteristics for the Putah Canyon site plan.

Site Layout (Northern Portion)

- Water, sewer, and electricity would be available on this portion of the property.

- There is one entry station on the east side of Knoxville Road, which serves both the east and west side services. There is an iron ranger on the west side of Knoxville Road visible from the entrance station. The entrance station and iron ranger are placed a minimum of 150 ft from Knoxville Road to allow for queuing of vehicles.

- Site layout features on the east side of Knoxville Road include:
  - Boat trailer parking is close to the existing boat launch. Day use sites line the parking lot along the shore. There is also nearby overflow parking.
  - An RV dump station is centrally located in relation to the RV sites.
  - Tent-only sites are scattered on the knoll in the center of the site and also along the shoreline at the northern end of the site.
  - Five park models are somewhat isolated on a peninsula.
  - At the northern portion of the property, there is a trail connection.
  - Water facilities are located at the north end of the property, including a groundwater well and water storage tank.
- Site layout features on the west side of Knoxville Road include:
  - Parking spaces lined near the gangway to the floating marina building. The floating marina building is 1200 sf and includes boat rental service.
  - The marina has 201 required boat slips, 15 required houseboat slips, and a fuel dispensing and sanitary waste receiving station on the dock.
  - Tent-only and day use sites are located on top of the hill and hill side overlooking the lake.
  - There is a dry boat storage area for 30 boats on trailers.
  - Wastewater facilities include treatment and storage ponds and spray fields.
- Authorized services at Putah Canyon Northern Portion include:
  - Playground and group day use shelter near the boat exclusion area.
  - Fish cleaning stations near the boat launch and marina.
  - An additional park model on the peninsula near the required park models.
  - Employee housing south of the dry boat storage area. Employee housing includes 6 park models and shared picnic tables and barbeque. Parking is adjacent to the park models.

– A boat repair building and concessionaire office near the dry boat storage area.

– Restaurant and retail store combined with the marina building.

Site Layout (Southern Portion - Authorized Only)

- The only publicly accessible day use or camping facilities in this area are located east of Knoxville Road. A one-way vehicle access drive can be provided via an existing service road curb cut north of the Pope Canyon intersection. The exit is located toward the south at an existing curb cut near the bridge crossing over Pope Canyon.

- Since there is no sewer or water hook-up proposed in this area, a 2-unit vault toilet would serve as the comfort station facility for the campground or day use area.

- Public recreation facilities are limited to 20 tent-only sites or 20 day use sites, and an iron ranger would serve to collect fees, and employees would check the area daily. Two access gates would block the area from vehicle access when necessary.

Development of the Putah Canyon Recreation Area shall consist of the Required improvements and may entail the additional Authorized facilities as detailed in Table 2-2.

Table 2-2. Required and Authorized Facilities at Putah Canyon

Item	Required No. of Units	Additional Authorized No. of Units	Total
Camping			
Tent Site	47	20	67
Standard Campsite without Utilities	14	0	14
Standard Campsite with Utilities	5	0	5
RV Sites with Utilities	18	0	18
Camp Host Site with Utilities	1	0	1
RV Dump Station	1	0	1
Playground and Group Area	0	1	1
Iron Ranger	1	1	2
Lodging			
Park Models	5	1	6
Boating			
Launch Lane Boat Ramp	4	2	6
Courtesy Dock	2	2	4
Launch Lane Boat Ramp (marina use only)	0	1	1
Courtesy Dock (marina use only)	0	1	1

Table 2-2. Required and Authorized Facilities at Putah Canyon

Item	Required No. of Units	Additional Authorized No. of Units	Total
Boat Slips	201	0	201
Houseboat Slips	15	0	15
Kiosk (Boat Ramp Sign)	1	0	1
On-Shore Fuel and/or Sanitary Storage Tank	1	0	1
Fuel Dispensing and/or Sanitary Connection	1	0	1
Fish Cleaning Station	0	2	2
Employee Housing (Park models)	0	6	6
Marina Service and Building	1	0	1
Concessionaire Building	0	1	1
Boat Repair, Yard Shop, or Tow Service	0	1	2
Dry Boat Storage (# boats)	30	0	30
Boat Rental Service	1	0	1
Day Use			
Individual Day Use Site	18	20	38
Group Day Use Area	0	1	1
Kiosk (Trail Connection)	0	1	1
Lake			
Boat Exclusion Zone	2	0	2
Amenities			
Restaurant	0	1	1
Retail Store	0	1	1
Facilities/Infrastructure			
Entry Station	1	1	2
Entry Station Vault Toilet	1	0	1
Vault Toilet	0	1	1
Comfort Station, Toilets Only	3	1	4
Comfort Station, Toilets & Family Room	1	0	1
Comfort Station, Toilets, Family Room, & Showers	1	0	1
Comfort Station, Toilets, Family Room, Showers, & Laundry	0	1	1
Access Road Close Gate	2	1	3
Parking			
Single Vehicle Parking at Marina	126	0	126
Vehicle with Boat Trailer Parking	55	0	55

2.2 Monticello Shores Recreation Area

Monticello Shores Recreation Area is proposed to include very little required development, allowing potential bidders to propose a financially feasible site plan.

Entrance to the site is served by an entry station with a single vault toilet. There will be a paved entrance road to this entry station, with enough room to turn around. Past this entry station, a graveled access road will branch off to the north to provide access to the potable groundwater well and water storage facility. There will be no sewer service required and only electrical infrastructure for the entry station, groundwater well, and security lighting.

Development of the Monticello Shores Recreation Area shall consist of the Required improvements and may entail the additional Authorized facilities as detailed in Table 2-3.

Table 2-3. Required and Authorized Facilities at Monticello Shores

Item	Required No. of Units	Additional Authorized No. of Units	Total
Camping			
Tent sites	0	130	130
Standard Sites without Utilities	0	4	4
Standard Sites with Utilities	0	8	8
RV Sites with Utilities	0	21	21
Hike-In/Boat-In Tent Sites	0	20	20
Overnight Group Use Area (50 occupants)	0	1	1
Camp Host Site with Utilities	0	1	1
RV Dump Station	0	1	1
Lodging			
Park Models	0	28	28
Cabins	0	9	9
Yurts	0	6	6
Rustic Cabins	0	4	4
Tent Cabins	0	5	5
Floating Campsite	0	3	3
Boating			
Launch Lane Boat Ramp	0	4	4
Courtesy Dock	0	2	2
Boat Slips	0	50	50
Kiosk (Boat Ramp Sign)	0	1	1
On-Shore Fuel and/or Sanitary Storage Tank	0	1	1
Fuel Dispensing and/or Sanitary Connection	0	1	1
Fish Cleaning Station	0	1	1
Marina Service and Building	0	1	1

Table 2-3. Required and Authorized Facilities at Monticello Shores

Item	Required No. of Units	Additional Authorized No. of Units	Total
Boat Rental Service	0	1	1
Day Use			
Individual Day Use Site	0	8	8
Group Day Use Area	0	1	1
Kiosk (Trail Connection)	0	1	1
Lake			
Boat Exclusion Zone	0	1	1
Amenities			
Restaurant	0	1	1
Retail Store	0	1	1
Facilities/Infrastructure			
Entry Station	1	0	1
Entry Station Vault Toilet	1	0	1
Vault Toilet	0	9	9
Comfort Station, toilets only	0	1	1
Comfort Station, toilets and family room	0	5	5
Comfort Station, toilets, family room, and showers	0	6	6
Access Road Close Gate	1	0	1
Parking			
Single Vehicle Parking at Marina	0	30	30
Vehicle with Boat Trailer Parking	0	49	49

2.3 Berryessa Point Recreation Area

Berryessa Point is proposed as a dry camping site. Entrance to the site is served by an iron ranger and there is no staffed entry station. Development on the site includes 49 tent-only sites. It is assumed that Berryessa Point would be bundled with another recreation area and managed remotely.

There would be no required boating, lodging, or day use facilities. There would be no sewer or potable water and the recreation area would only have vault toilets. Electrical infrastructure would include security lighting.

The following are unique site design characteristics for the Berryessa Point site plan.

Site Layout

- An iron ranger would be stationed at the new site entry location.

- Past the iron ranger, the paved entrance road becomes a gravel main road, continuing east towards to the peninsula. All tent-only sites are on a gravel loop road.
- There are two vault toilets serving the tent-only sites.
- Authorized facilities at Berryessa Point include:
  - An entry station.
  - The concessionaire can choose to make the recreation area an RV park instead of a camping area. There are 41 authorized RV sites that could be developed instead of the 49 tent-only sites. An RV dump station is authorized if the concessionaire develops the RV sites. A water well with associated treatment, storage, and distribution systems as well as enhanced electrical facilities are also authorized to support the RV park development.
  - A camp host site.
  - A group use shelter or similar structure at the end of the peninsula.
  - 17 individual day use sites along the peninsula, which would require additional single vehicle parking.
  - A floating marina, combined with retail and a take-out counter style restaurant, with 50 boat slips. Public parking for cars with boat trailers is not authorized, however 30 single vehicle parking spots for the marina will be necessary.
  - Single lane boat launch, which would also require boat trailer parking.
  - A fuel dispenser on the marina dock with fuel storage nearby.
  - Fish cleaning station
  - Additional vault toilets to serve authorized services.

Development of the Berryessa Point Recreation Area shall consist of the Required improvements and may entail the additional Authorized facilities as detailed in Table 2-4.

Table 2-4. Required and Authorized Facilities at Berryessa Point

Item	Required No. of Units	Additional Authorized No. of Units	Total
Camping			
Tent Site	49	0	49
RV Sites with Utilities	0	41	41
Camp Host Site with Utilities	0	1	1
RV Dump Station	0	1	1
Iron Ranger	1	0	1
Boating			
Launch Lane Boat Ramp	0	1	1
Courtesy Dock	0	1	1
Boat Slips	0	50	50
Kiosk (Boat Ramp Sign)	0	1	1
On-Shore Fuel and/or Sanitary Storage Tank	0	1	1
Fuel Dispensing and/or Sanitary Connection	0	1	1
Fish Cleaning Station	0	1	1
Marina Service and Building	0	1	1
Day Use			
Individual Day Use Site	0	17	17
Kiosk (Trail Connection)	0	1	1
Gazebo/Group Use Shelter	0	1	1
Amenities			
Restaurant	0	1	1
Retail Store	0	1	1
Facilities/Infrastructure			
Entry Station	0	1	1
Vault Toilet	2	0	2
Parking			
Single Vehicle Parking at Marina	0	30	30
Single Vehicle Parking	60	18	78

2.4 Spanish Flat Recreation Area

Spanish Flat Recreation Area includes a mix of required tent camping, day use, and boating services. There are no required services on the southern peninsula of the site.

The entry station is located at the bottom of the entrance road off of Knoxville Road. There is a marina with 75 boat slips and no houseboat slips, parking lot, and day use sites just north of the entry station. South of the entry station is a boat trailer parking lot with a 2-lane boat launch. There are day use sites that line the parking lot along the shore line. There are tent sites north of the parking lot.

Water and electric utilities would be available for the entire site. There is no wastewater service required at Spanish Flat. There are 3 vault toilets and an RV dump station. Potable water is provided by Spanish Flat Water District.

Although this site has the most acreage of all 5 sites, the majority of the property north of the site entry is inaccessible to vehicles due to steep topography and the lack of potential areas to develop convenient and efficient water crossings. Recreation uses north of the site entry, if allowed, are limited to strenuous hiking only.

The following are unique site design characteristics for the Spanish Flat site plan.

Site Layout

- The new site entry building is placed down the hill from the exit off of Knoxville Road to allow additional space for improved and safer queuing of vehicles as they enter the site off the main road. The building also has a nearby accessible parking area.

- The marina has boat rental services and private boat slips. Boat rentals include a mix of fishing boats, ski boats, kayak/canoes, paddleboards, jet skis, and pontoons. Fuel dispensing and storage is located off the peninsula to the southwest of the marina.

- The boat trailer parking lot is designed as a linear loop arrangement, parallel to the shoreline. Although earthwork associated with the new boat trailer parking lot would not be visible from the lake, this parking lot design creates a flat area along the shoreline that would require a graded vegetated slope that needs to be stabilized with natural grasses.

- West of the marina and boat trailer parking area are tent-only sites, day use sites, the camp host site, and an RV dump station in a small turn-around area. Reclamation has installed a RV dump station shown on the site plans. RV sites on the southern peninsula are authorized services.

- An access road leads to the top of the hill on the peninsula where there is a water storage tank to store fire flows.

- Authorized facilities at Spanish Flat include:

  - Wastewater service is authorized at Spanish Flat.

  - A playground near the boat trailer parking lot.

  - A restaurant and retail store combined with the floating marina.

- A single lane boat launch to serve the marina.
- Fish cleaning station.
- Extension of the boat ramp to accommodate lower water levels and a new 2-lane boat ramp.
- The southern peninsula of the site has a mix of authorized camping, lodging, and day use services, including tent-only sites, standard sites, RV sites, yurts, rustic cabins, tent cabins, and day use sites. Vault toilets or comfort stations would be required to service these facilities.
- A concessionaire building is also authorized on the peninsula.

Development of the Spanish Flat Recreation Area shall consist of the Required improvements and may entail the additional Authorized facilities as detailed in Table 2-5.

Table 2-5. Required and Authorized Facilities at Spanish Flat

Item	Required No. of Units	Additional Authorized No. of Units	Total
Camping			
Tent sites	17	39	56
Standard Sites without Utilities	0	10	10
RV Sites with Utilities	0	12	12
Camp Host Site with Utilities	1	0	1
RV Dump Station	1	0	1
Playground and Group Area	0	1	1
Lodging			
Yurts	0	3	3
Rustic Cabins	0	4	4
Tent Cabins	0	3	3
Boating			
Launch Lane Boat Ramp	2	2	4
Courtesy Dock	1	1	2
Launch Lane Boat Ramp (marina use only)	0	2	2
Courtesy Dock (marina use only)	0	1	1
Boat Slips	75	0	75
Kiosk (Boat Ramp Sign)	1	0	1
On-Shore Fuel and/or Sanitary Storage Tank	1	0	1
Fuel Dispensing and/or Sanitary Connection	1	0	1
Fish Cleaning Station	0	1	1
Marina Service and Building	1	0	1
Concessionaire Building	0	1	1

Table 2-5. Required and Authorized Facilities at Spanish Flat

Item	Required No. of Units	Additional Authorized No. of Units	Total
Boat Rental Service	1	0	1
Day Use			
Individual Day Use Site	10	8	18
Boat Exclusion Zone	1	0	1
Kiosk (Trail Connection)	0	1	1
Lake			
Boat Exclusion Zone	1	0	1
Amenities			
Restaurant	0	1	1
Retail Store	0	1	1
Facilities/Infrastructure			
Entry Station	1	0	1
Vault Toilet	3	1	4
Comfort Station, toilets only	0	2	2
Comfort Station, toilets, family room	0	1	1
Access Road Close Gate	1	1	2
Parking			
Single Vehicle Parking at Marina	45	0	45
Vehicle with Boat Trailer Parking	33	0	33

2.5 Steele Canyon Recreation Area

Steele Canyon Recreation Area is designed with similar facilities proposed at Putah Canyon, including marina, boating, camping, lodging, and day use. There is a main 2-way access road that travels from the entry station north through the site.

At the south end of the site near the entry station, there is boat trailer parking boat launch, RV sites and standard sites. As the road continues past the parking lot, there are standard sites with utilities on west side. The road continues westerly past a day use area with individual day use sites and a comfort station to a parking lot with the marina building. North of the parking lot and on the northern peninsula of the site, there are park models and cabins, which have water, wastewater, and electric utilities.

Water, wastewater, and electric utilities would be available for the entire site. Water and wastewater treatment services for the entire site will be provided by NBRID. There is a pipeline from the main road north of the boat trailer parking east through the site to connect to the NBRID system.

The following are unique site design characteristics for the Steele Canyon site plan.

Site Layout

- The new site entry building is located in the same area as existing, but has a new accessible parking area and a new vehicle turnaround that allows vehicles to immediately exit the area.

- The boat launch remains in the existing location, and nearby is a larger parking lot for vehicles with boat trailers. The Required 6-lane boat ramp is narrower than the existing 10-lane ramp, 4 ramp lanes are Authorized. South of the parking lot is an access loop with RV sites.

- An RV dump station is located along the 2-way access drive at the north end of the boat trailer parking lot.

- No buildings or structures are located within 25 ft of the centerline of the existing electric towers per PG&E requirements.

- Proceeding westerly on the 2 way access drive, the marina building is ahead on the left. The marina services include both boat rentals and private boat slips. South of the marina building is the access to the dock and boat slips. The marina has 178 boat slips and 32 houseboat slips. There is a fuel dispenser and sanitary pump for houseboats on the main dock. The boat rental services includes a mix of houseboats, fishing boats, ski boats, kayak/canoes, paddle boards, jet skis and pontoons. There are on-shore fuel storage and sanitary storage tanks just east of the access to the gangway.

- On the northern peninsula, there are 15 cabins and 12 park models that are generally isolated from the rest of the site.

- Authorized facilities at Steele Canyon include:

  - A major campground for RVs sited up gradient, to the east and northeast of the main road. Standard sites are located around an access loop on the small peninsula. Comfort stations would be required to serves these sites. A comfort station with showers and laundry is authorized.

  - A playground, group day use structure, and an area for recreation courts.

  - An employee housing area with its own access drive and parking area.

– A concession office building and maintenance/yard area complete with a small boat repair with tow service building, and a covered, 4 story dry boat storage building that is anticipated to house about 72 boats. Inside the storage building, the boats would be lifted by forklift, and the exterior pavement will need to be designed to accommodate loads. Boats will be moved between the boat ramp and building by a concessionaire operated tractor pulled universal boat trailer system. Adjacent to the enclosed boat storage building is a smaller dry boat storage facility with space for storing 24 boats and one open wall for ease of access. The storage buildings are situated to minimize potential grading of the nearby steep slopes. There would be fencing around the facility.

– Retail services combined with the marina in the same building. A separate building for a restaurant. Additional parking would be required for the restaurant.

– 100 additional boat slips, 4 additional launch lanes at the existing boat ramp with 2 courtesy docks, two fish cleaning stations, 5 hike-in/boat-in tent-only sites, and 3 floating campsites. Additional parking would be required for these facilities.

– A multiuse events center for planned group events like seminars, small conferences, school group gatherings and possibly family reunions, weddings or other similar venues or activities. Additional parking would be required for the multiuse center.

Development of the Steele Canyon Recreation Area shall consist of the Required improvements and may entail the additional Authorized facilities as detailed in Table 2-6.

Table 2-6. Required and Authorized Facilities at Steele Canyon

Item	Required No. of Units	Additional Authorized No. of Units	Total
Camping			
Tent sites	0	19	19
Standard Sites without Utilities	0	22	22
Standard Sites with Utilities	10	22	32
RV Sites with Utilities	4	7	11
Hike-In/Boat-In Tent Sites	0	5	5
Overnight Group Use Area (20 occupants)	0	1	1
Camp Host Site with Utilities	1	0	1
RV Dump Station	1	0	1
Playground and Group Area	0	1	1

Table 2-6. Required and Authorized Facilities at Steele Canyon

Item	Required No. of Units	Additional Authorized No. of Units	Total
Lodging			
Park Models	12	0	12
Cabins	15	0	15
Floating Campsite	0	3	3
Boating			
Launch Lane Boat Ramp	6	4	10
Courtesy Dock	4	2	6
Boat Slips	178	100	278
Houseboat Slips	32	0	32
Kiosk (Boat Ramp Sign)	1	0	1
On-Shore Fuel and/or Sanitary Storage Tank	1	0	1
Fuel Dispensing and/or Sanitary Connection	1	0	1
Fish Cleaning Station	0	2	2
Employee Housing (Park models)	0	10	10
Marina Service and Building	1	0	1
Concessionaire Building	0	1	1
Boat Repair, Yard Shop, or Tow Service	0	1	1
Dry Boat Storage (# boats)	0	96	96
Boat Rental Service	1	0	1
Day Use			
Individual Day Use Site	10	0	10
Group Day Use Areas	0	1	1
Kiosk (Trail Connection)	0	1	1
Multi-Use Special Events Center	0	1	1
Lake			
Boat Exclusion Zone	1	0	1
Amenities			
Restaurant	0	1	1
Retail Store	0	1	1

Table 2-6. Required and Authorized Facilities at Steele Canyon

Item	Required No. of Units	Additional Authorized No. of Units	Total
Facilities/Infrastructure			
Entry Station	1	0	1
Entry Station Vault Toilet	1	0	1
Comfort Station, toilets only	2	3	5
Comfort Station, toilets and family room	1	2	3
Comfort Station, toilets, family room, and showers	0	1	1
Comfort Station, toilets, family room, showers, and laundry	0	1	1
Access Road Close Gate	1	0	1
Parking			
Single Vehicle Parking at Marina & Restaurant	128	60	188
Vehicle with Boat Trailer Parking	75	0	75

2.6 Summary of Required and Authorized Facilities and Services

Table 2-7 summarizes the number of required facilities and services proposed at each site. Table 2-8 summarizes the number of authorized facilities at each site.

Table 2-7. Proposed Quantities of Required Facilities at Each Recreation Area

Facilities	Putah Canyon	Monticello Shores	Berryessa Point	Spanish Flat	Steele Canyon	Total
Camping						
Tent sites	47	0	49	17	0	**113**
Standard Sites without Utilities	14	0	0	0	0	**14**
Standard Sites with Utilities	5	0	0	0	10	**15**
RV Sites with Utilities	18	0	0	0	4	**22**
Hike-in/Boat-in tent sites	0	0	0	0	0	**0**
Overnight Group Use Area (50 occupants)	0	0	0	0	0	**0**
Overnight Group Use Area (20 occupants)	0	0	0	0	0	**0**
Camp Host Site with Utilities	1	0	0	1	1	**3**
RV Dump Station	1	0	0	1	1	**3**
Playground and Group Area	0	0	0	0	0	**0**
Iron Ranger	1	0	1	0	0	**2**
Lodging						
Park Models	5	0	0	0	12	**17**
Cabins	0	0	0	0	15	**15**
Yurts	0	0	0	0	0	**0**

Table 2-7. Proposed Quantities of Required Facilities at Each Recreation Area

Facilities	Putah Canyon	Monticello Shores	Berryessa Point	Spanish Flat	Steele Canyon	Total
Rustic Cabins	0	0	0	0	0	**0**
Tent Cabins	0	0	0	0	0	**0**
Floating Campsite	0	0	0	0	0	**0**
Boating						
Launch Lane Boat Ramp	4	0	0	2	6	**12**
Courtesy Dock	2	0	0	1	4	**7**
Boat Slips	201	0	0	75	178	**454**
Houseboat Slips	15	0	0	0	32	**47**
Kiosk (Boat Ramp Sign)	1	0	0	1	1	**3**
On-Shore Fuel and/or Sanitary Storage Tank	1	0	0	1	1	**3**
Fuel Dispensing and/or Sanitary Connection	1	0	0	1	1	**3**
Fish Cleaning Station	0	0	0	0	0	**0**
Employee Housing (Park models)	0	0	0	0	0	**0**
Marina Service and Building	1	0	0	1	1	**3**
Concessionaire Building	0	0	0	0	0	**0**
Boat Repair, Yard Shop, or Tow Service	0	0	0	0	0	**0**
Dry Boat Storage (# boats)	30	0	0	0	0	**30**
Boat Rental Service	1	0	0	1	1	**3**
Day Use						
Individual Day Use Site	18	0	0	10	10	**38**
Group Day Use Area	0	0	0	0	0	**0**
Kiosk (Trail Connection)	0	0	0	0	0	**0**
Multi-Use Special Events Center	0	0	0	0	0	**0**
Lake						
Boat Exclusion Zone	2	0	0	1	1	**4**
Amenities						
Restaurant	0	0	0	0	0	**0**
Retail Store	0	0	0	0	0	**0**
Facilities/Infrastructure						
Entry Station	1	1	0	1	1	**4**
Entry Station Vault Toilet	1	1	0	0	1	**3**
Vault Toilet	0	0	2	3	0	**5**
Comfort Station, toilets only	3	0	0	0	2	**5**
Comfort Station, toilets and family room	1	0	0	0	1	**2**
Comfort Station, toilets, family room, and showers	1	0	0	0	0	**1**
Comfort Station, toilets, family room, showers, and laundry	0	0	0	0	0	**0**
Access Road Close Gate	2	1	0	1	1	**5**
Parking						
Single Vehicle Parking at Marina	126	0	0	45	128	**299**

Table 2-7. Proposed Quantities of Required Facilities at Each Recreation Area

Facilities	Putah Canyon	Monticello Shores	Berryessa Point	Spanish Flat	Steele Canyon	Total
Vehicle with Boat Trailer Parking	55	0	0	33	75	**163**

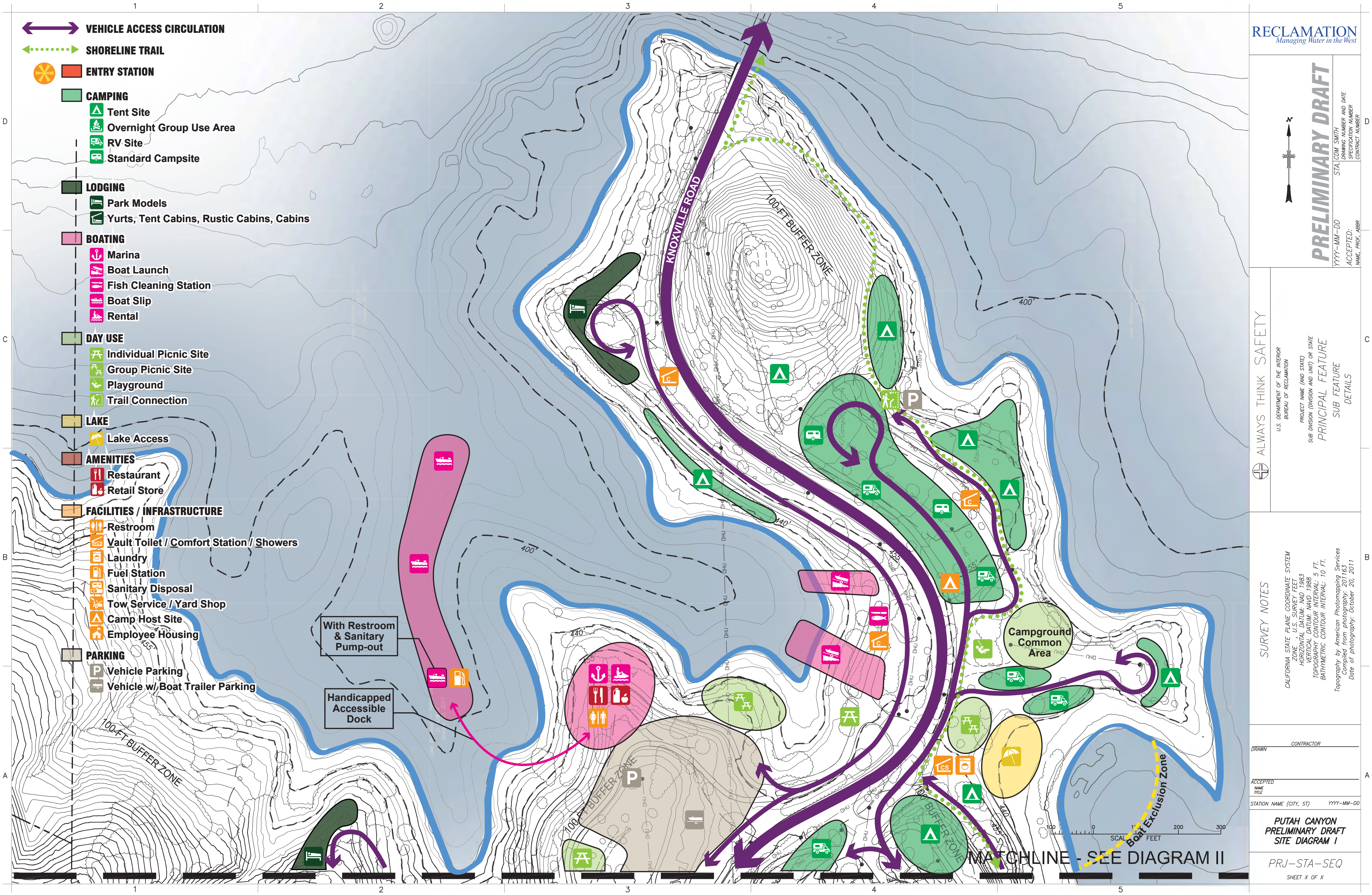
Table 2-8. Proposed Quantities of Authorized Facilities at Each Recreation Area

Facilities	Putah Canyon	Monticello Shores	Berryessa Point	Spanish Flat	Steele Canyon	Total
Camping						
Tent sites	20	130	0	39	19	**208**
Standard Sites without Utilities	0	4	0	10	22	**36**
Standard Sites with Utilities	0	8	0	0	22	**30**
RV Sites with Utilities	0	21	41	12	7	**81**
Hike-in/Boat-in tent sites	0	20	0	0	5	**25**
Overnight Group Use Area (50 occupants)	0	1	0	0	0	**1**
Overnight Group Use Area (20 occupants)	0	0	0	0	1	**1**
Camp Host Site with Utilities	0	1	1	0	0	**2**
RV Dump Station	0	1	1	0	0	**2**
Playground and Group Area	1	0	0	1	1	**3**
Iron Ranger	1	0	0	0	0	**1**
Lodging						
Park Models	1	28	0	0	0	**29**
Cabins	0	9	0	0	0	**9**
Yurts	0	6	0	3	0	**9**
Rustic Cabins	0	4	0	4	0	**8**
Tent Cabins	0	5	0	3	0	**8**
Floating Campsite	0	3	0	0	3	**6**
Boating						
Launch Lane Boat Ramp	2	4	1	2	4	**13**
Courtesy Dock	2	2	1	1	2	**8**
Launch Lane Boat Ramp (marina use only)	1	0	0	2	0	**3**
Courtesy Dock (marina use only)	1	0	0	1	0	**2**
Boat Slips	0	50	50	0	100	**200**
Houseboat Slips	0	0	0	0	0	**0**
Kiosk (Boat Ramp Sign)	0	1	1	0	0	**2**
On-Shore Fuel and/or Sanitary Storage Tank	0	1	1	0	0	**2**
Fuel Dispensing and/or Sanitary Connection	0	1	1	0	0	**2**
Fish Cleaning Station	2	1	1	1	2	**7**
Employee Housing (Park models)	6	0	0	0	10	**16**
Marina Service and Building	0	1	1	0	0	**2**
Concessionaire Building	1	0	0	1	1	**3**

Table 2-8. Proposed Quantities of Authorized Facilities at Each Recreation Area

Facilities	Putah Canyon	Monticello Shores	Berryessa Point	Spanish Flat	Steele Canyon	Total
Boat Repair, Yard Shop, or Tow Service	1	0	0	0	1	**2**
Dry Boat Storage	0	0	0	0	96	**96**
Boat Rental Service	0	1	0	0	0	**1**
Day Use						
Individual Day Use Site	20	8	17	8	0	**53**
Group Day Use Area	1	1	0	0	1	**3**
Kiosk (Trail Connection)	1	1	1	1	1	**5**
Multi-Use Special Events Center	0	0	0	0	1	**1**
Gazebo/Group Use Shelter	0	0	1	0	0	**1**
Lake						
Boat Exclusion Zone	0	1	0	0	0	**1**
Amenities						
Restaurant	1	1	1	1	1	**5**
Retail Store	1	1	1	1	1	**5**
Facilities/Infrastructure						
Entry Station	1	0	1	0	0	**2**
Entry Station Vault Toilet	0	0	0	0	0	**0**
Vault Toilet	1	9	0	1	0	**11**
Comfort Station, toilets only	1	1	0	2	3	**7**
Comfort Station, toilets and family room	0	5	0	1	2	**8**
Comfort Station, toilets, family room, and shower	0	6	0	0	1	**7**
Comfort Station, toilets, family room, shower, and laundry	1	0	0	0	1	**2**
Access Road Close Gate	1	0	0	1	0	**2**
Parking						
Single Vehicle Parking at Marina & Restaurant	0	30	30	0	60	**120**
Vehicle with Boat Trailer Parking	0	49	0	0	0	**49**

PUTAH CANYON



VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Site
Group Picnic Site
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
KNOXVILLE ROAD
100-FT BUFFER ZONE
With Restroom & Sanitary Pump-out
Handicapped Accessible Dock
Campground Common Area
Boat Exclusion Zone
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SCALE FEET
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Managing Water in the West
PRELIMINARY DRAFT
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NAME, PROF, ABBR
STA. CDM SMITH
DRAWING NUMBER AND DATE
SPECIFICATION NUMBER
CONTRACT NUMBER
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BUREAU OF RECLAMATION
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SUB DIVISION (DIVISION AND UNIT) OR STATE
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SUB FEATURE
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Compiled from photography: 201163
Date of photography: October 20, 2011
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YYYY-MM-DD
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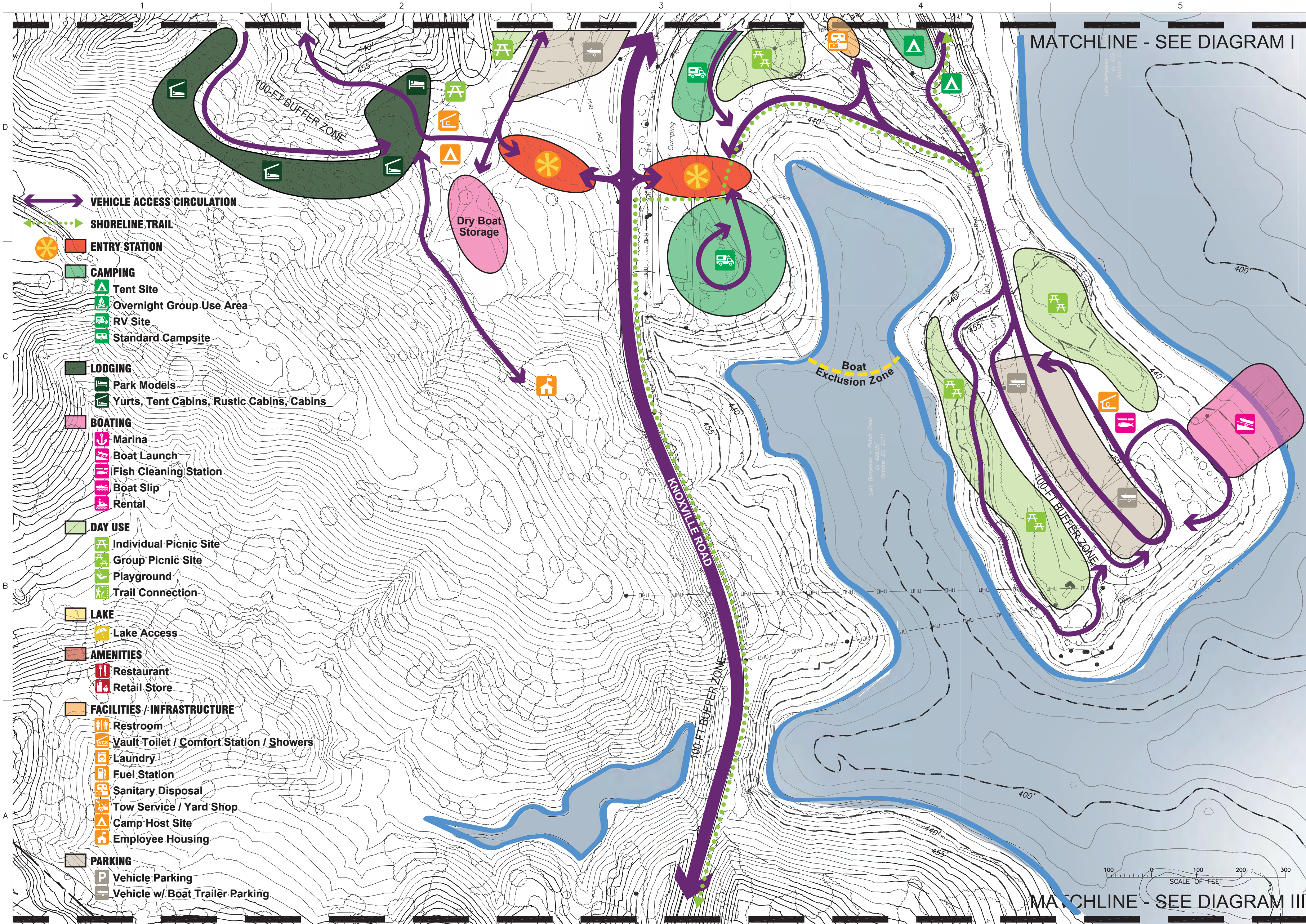

RECLAMATION
Managing Water in the West

PRELIMINARY DRAFT

ALWAYS THINK SAFETY

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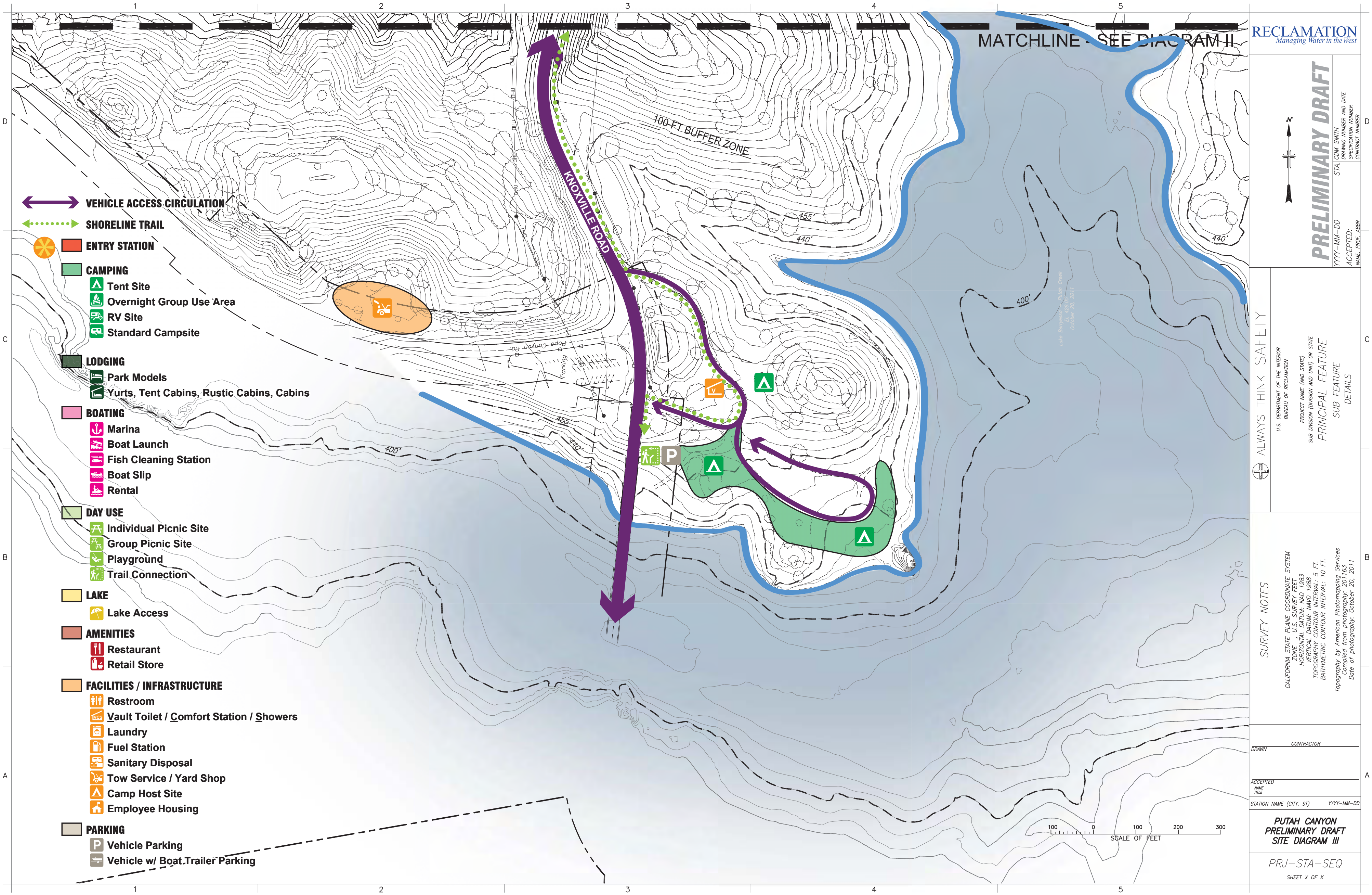
DETAILS

SURVEY NOTES

PUTAH CANYON
PRELIMINARY DRAFT
SITE DIAGRAM II

PRJ–STA–SEQ

SHEET X OF X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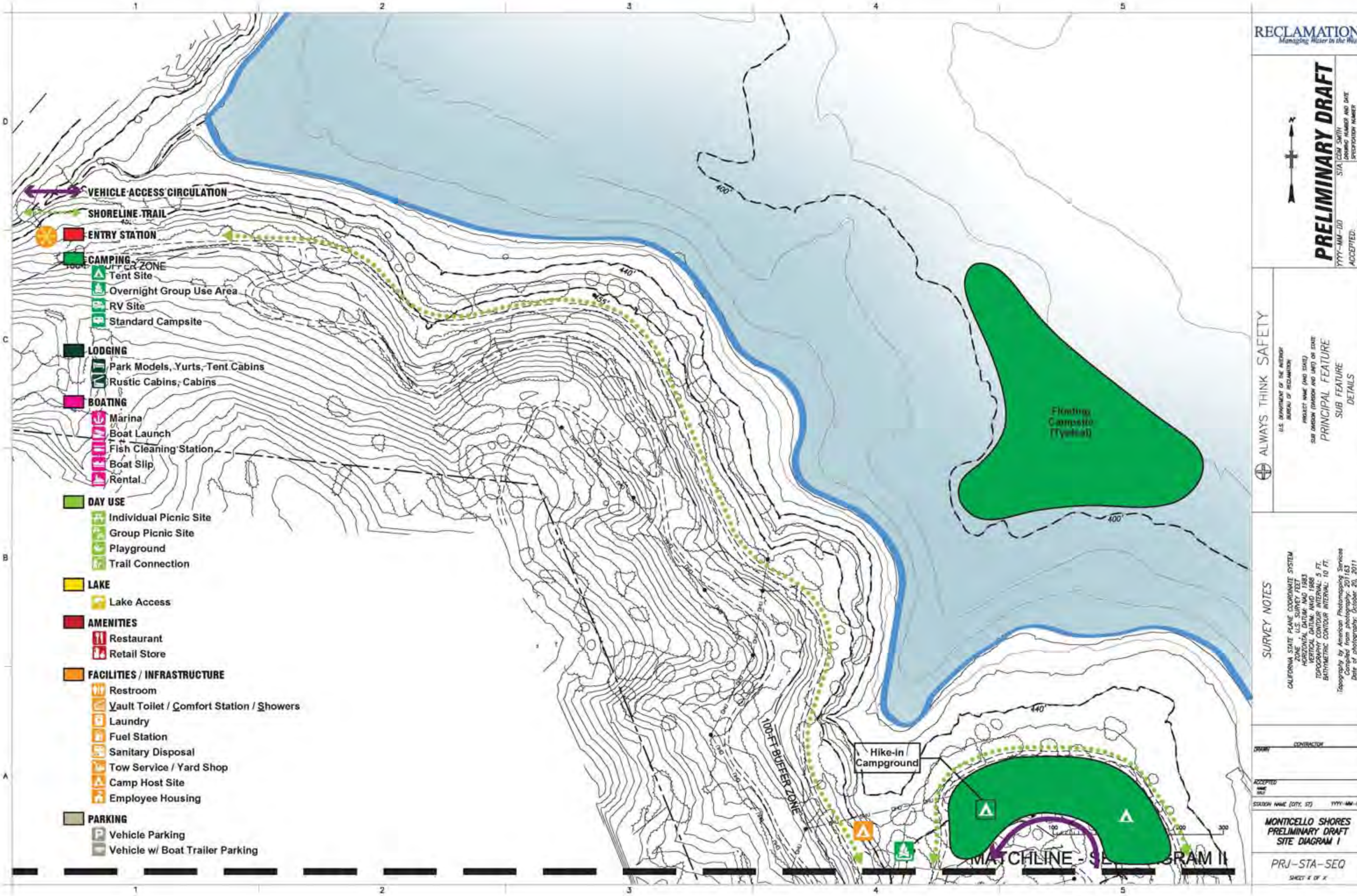
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Site
Group Picnic Site
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
SCALE OF FEET
100 0 100 200 300
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ACCEPTED:
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
CONTRACTOR
DRAWN
ACCEPTED
STATION NAME (CITY, ST)
YYYY-MM-DD
PUTAH CANYON
PRELIMINARY DRAFT
SITE DIAGRAM III
PRJ-STA-SEQ
SHEET X OF X

MONTICELLO SHORES



RECLAMATION
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PRELIMINARY DRAFT
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models, Yurts, Tent Cabins
Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Site
Group Picnic Site
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
Floating Campsite (Typical)
Hike-in Campground
100-FT BUFFER ZONE
400'
440'
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
MONTICELLO SHORES PRELIMINARY DRAFT SITE DIAGRAM I
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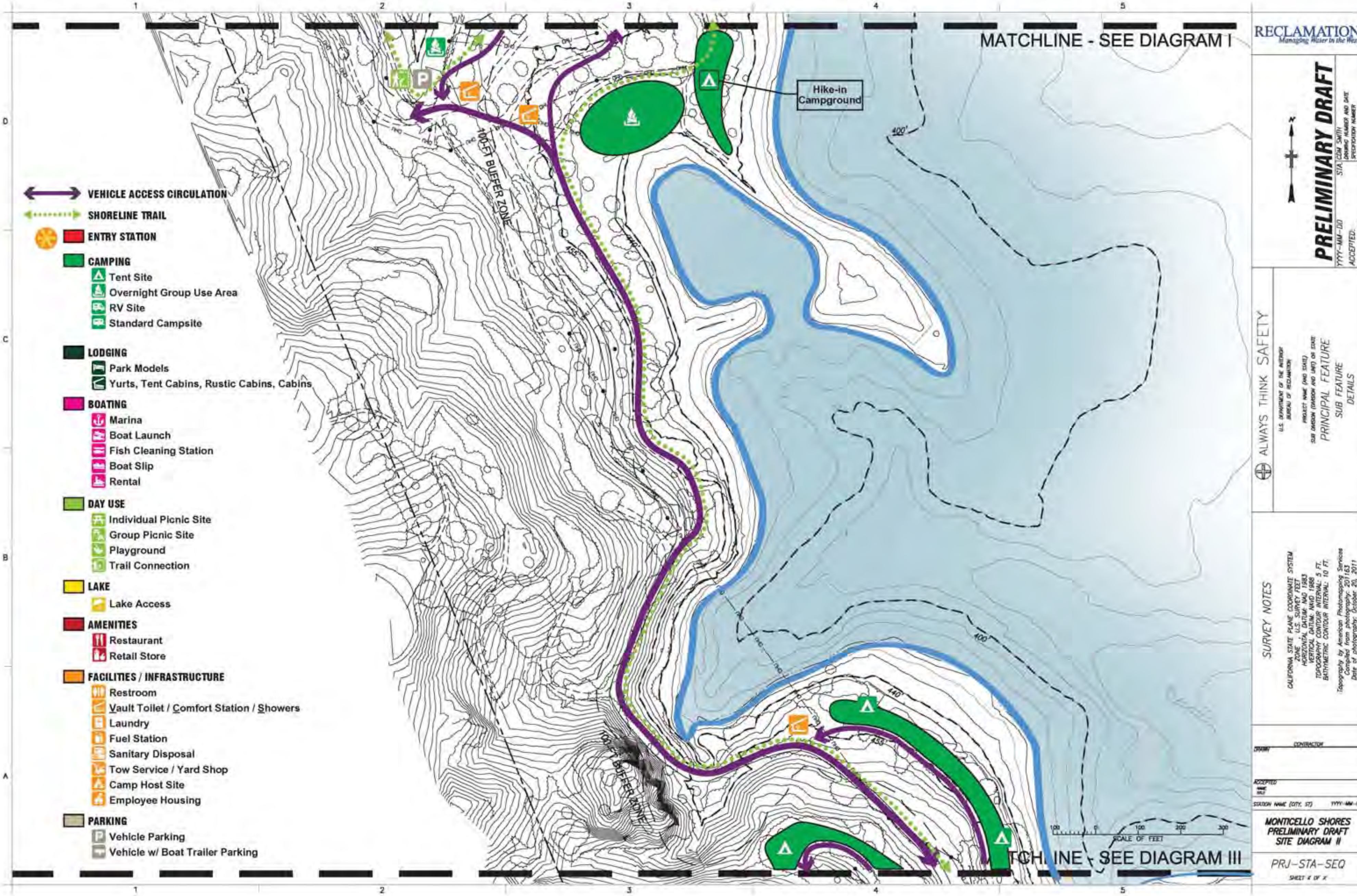

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MATCHLINE - SEE DIAGRAM III
Hike-in Campground
100-FT BUFFER ZONE
400'
440'
455'
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Site
Group Picnic Site
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
SCALE OF FEET
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
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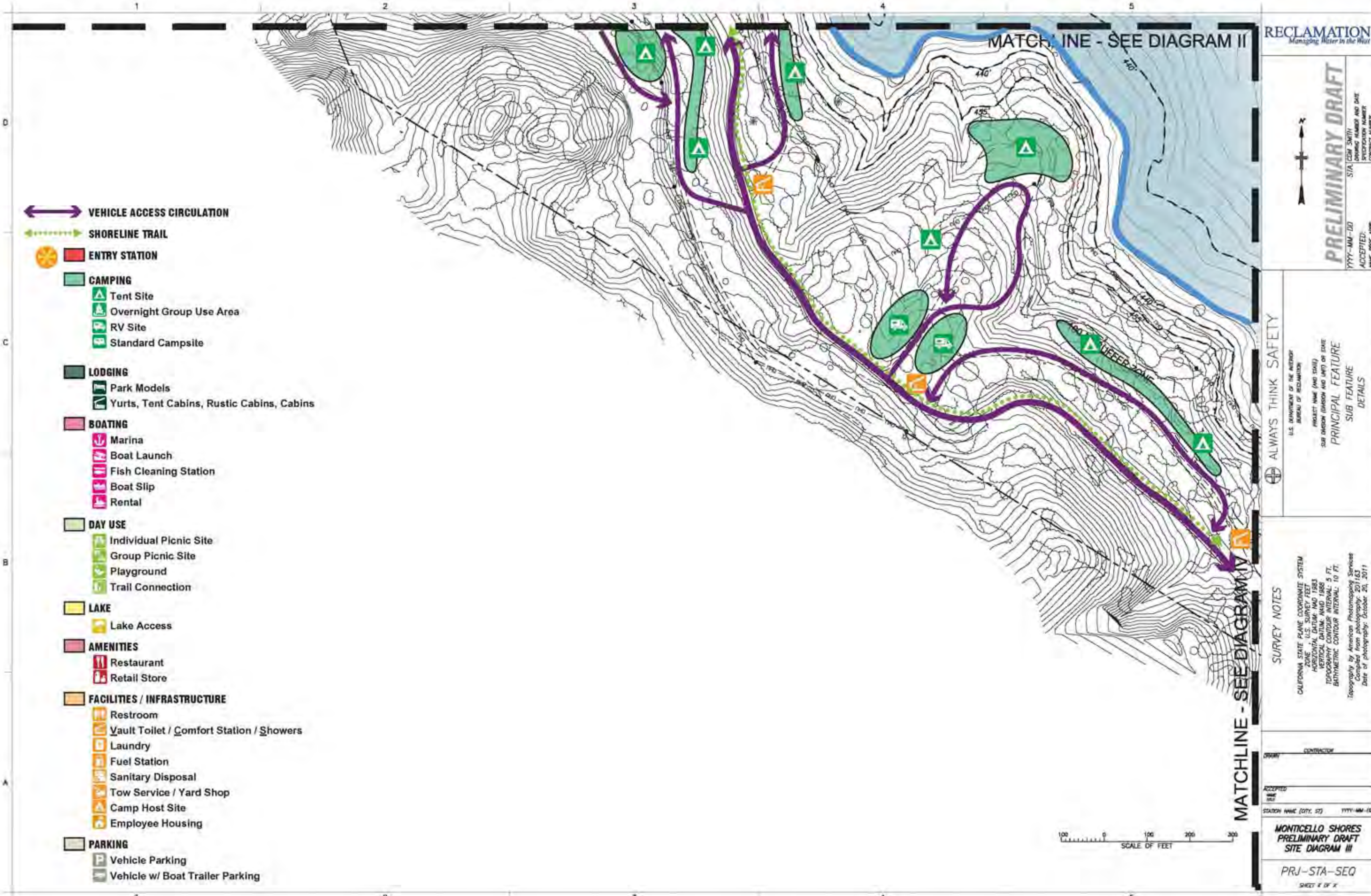
MONTICELLO SHORES
PRELIMINARY DRAFT
SITE DIAGRAM II
PRJ-STA-SEQ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ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Site
Group Picnic Site
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
100 0 100 200 300
SCALE OF FEET
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
CALIFORNIA STATE PLANE COORDINATE SYSTEM
ZONE , U.S. SURVEY FEET
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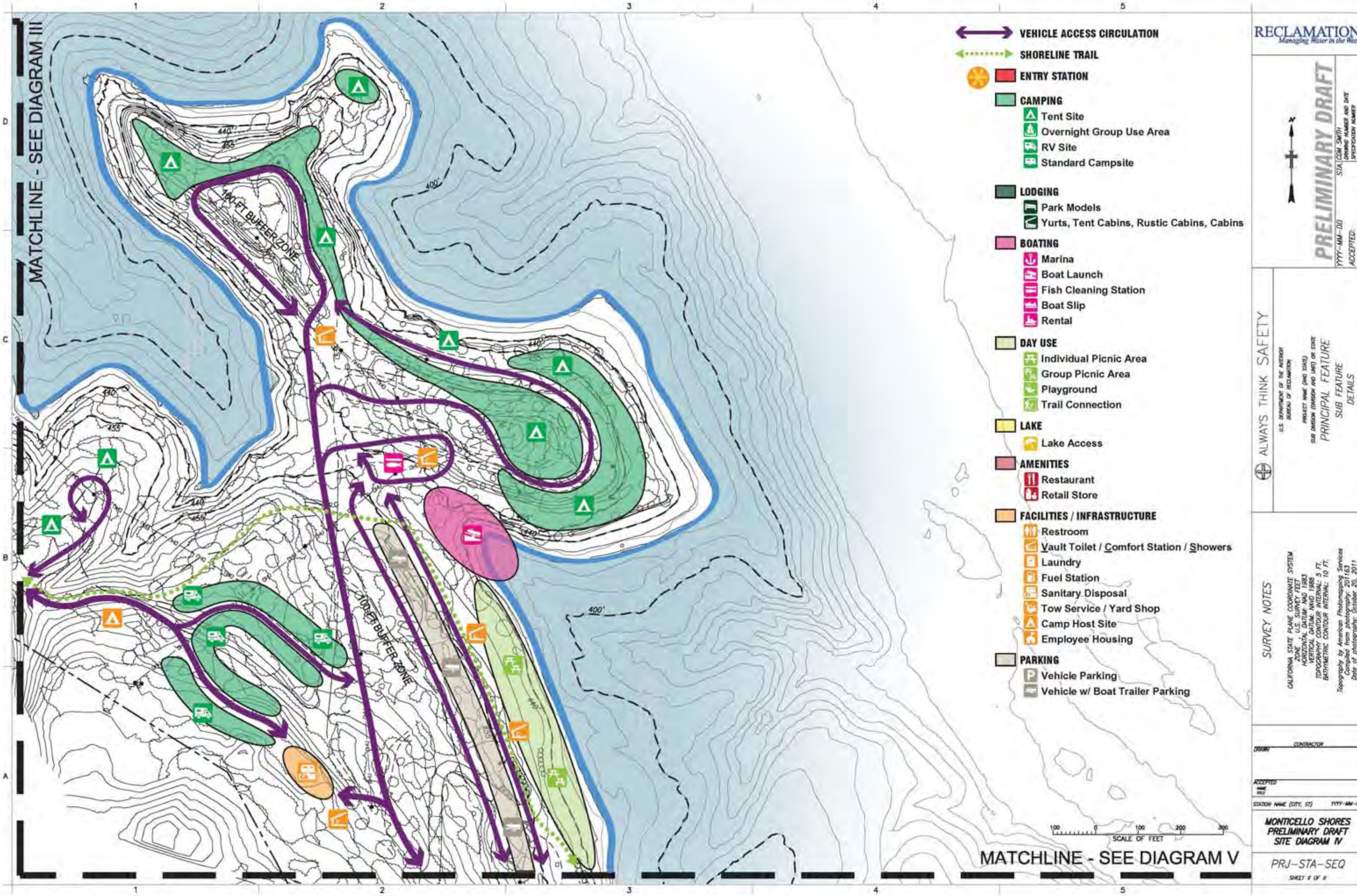
SITE DIAGRAM III
PRJ-STA-SEQ



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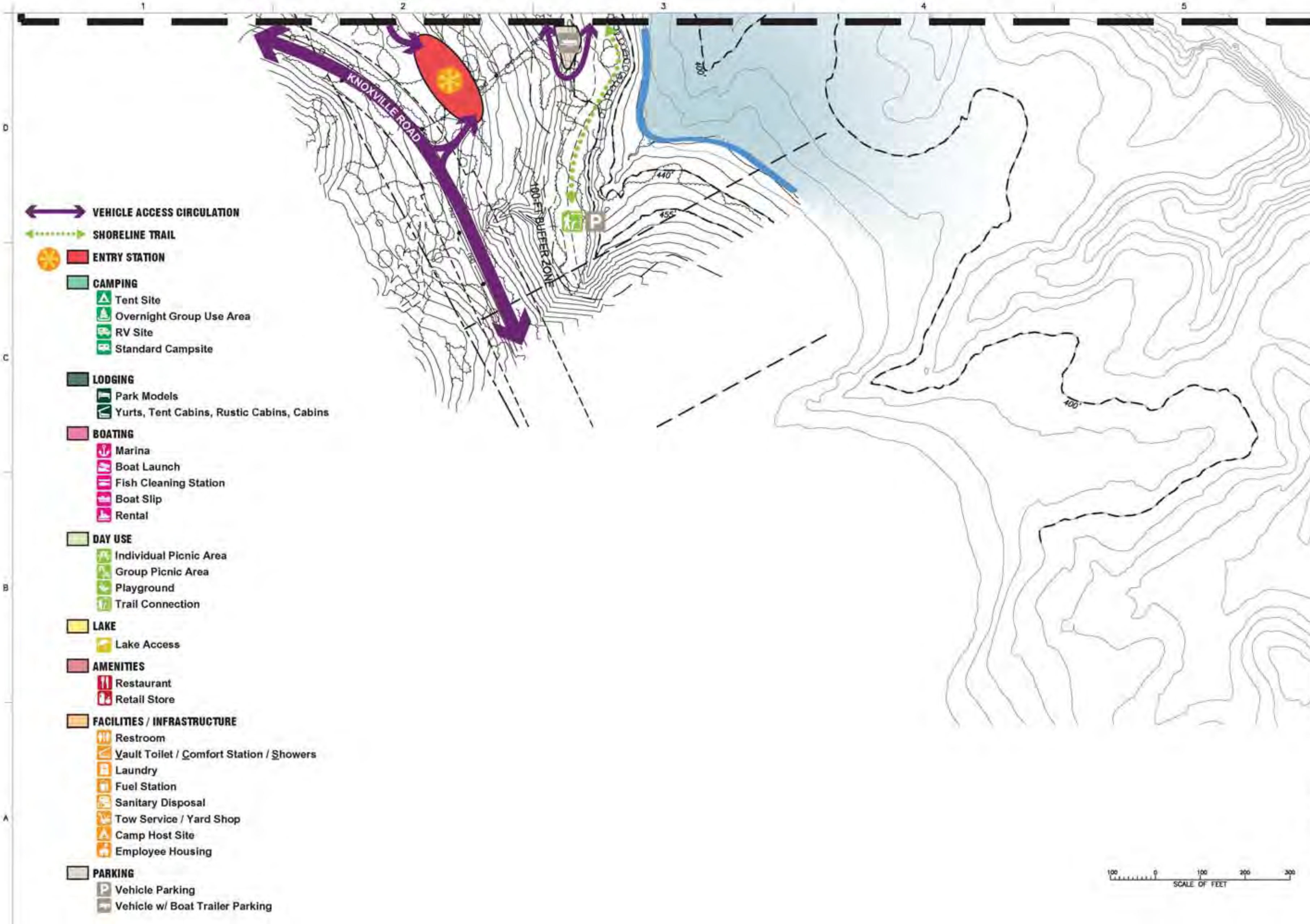
MATCHLINE - SEE DIAGRAM V
100 FT BUFFER ZONE
100 FT BUFFER ZONE
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Area
Group Picnic Area
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
SCALE OF FEET
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
MONTICELLO SHORES
PRELIMINARY DRAFT
SITE DIAGRAM IV
PRJ-STA-SEQ



RECLAMATION
Managing Water in the West

PRELIMINARY DRAFT

YYYY-MM-DD
ACCEPTED:
NAME, PROF. ABBR

ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

PROJECT NAME (AND STATE)
SUB DIVISION (DIVISION AND UNIT) OR STATE
PRINCIPAL FEATURE
SUB FEATURE
DETAILS

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM
ZONE , U.S. SURVEY FEET
HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.
BATHYMETRIC CONTOUR INTERVAL: 10 FT.

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Compiled from photography: 201163
Date of photography: October 20, 2011

DRAWN
CONTRACTOR

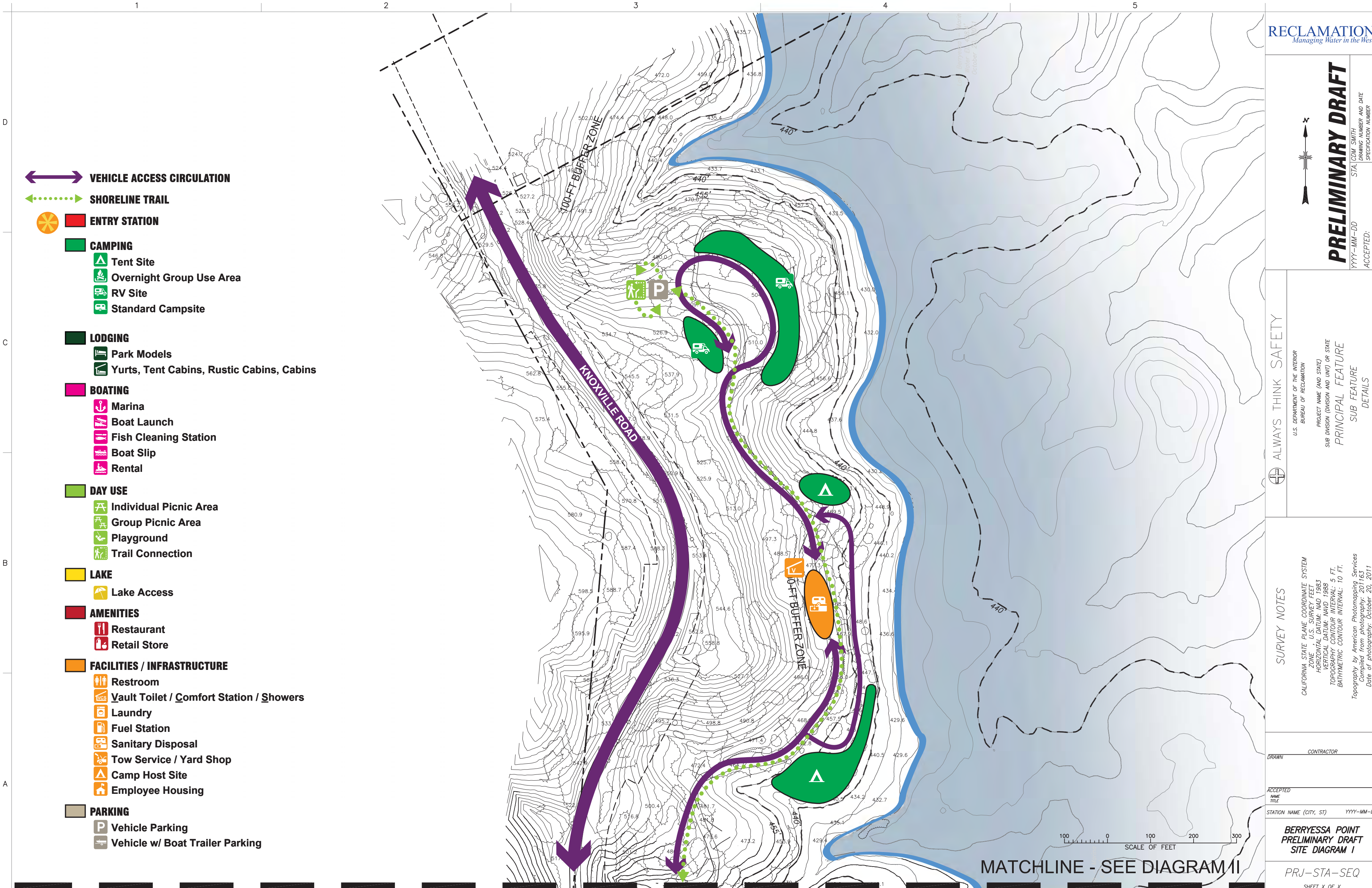
ACCEPTED

STATION NAME (CITY, ST) YYYY-MM-DD

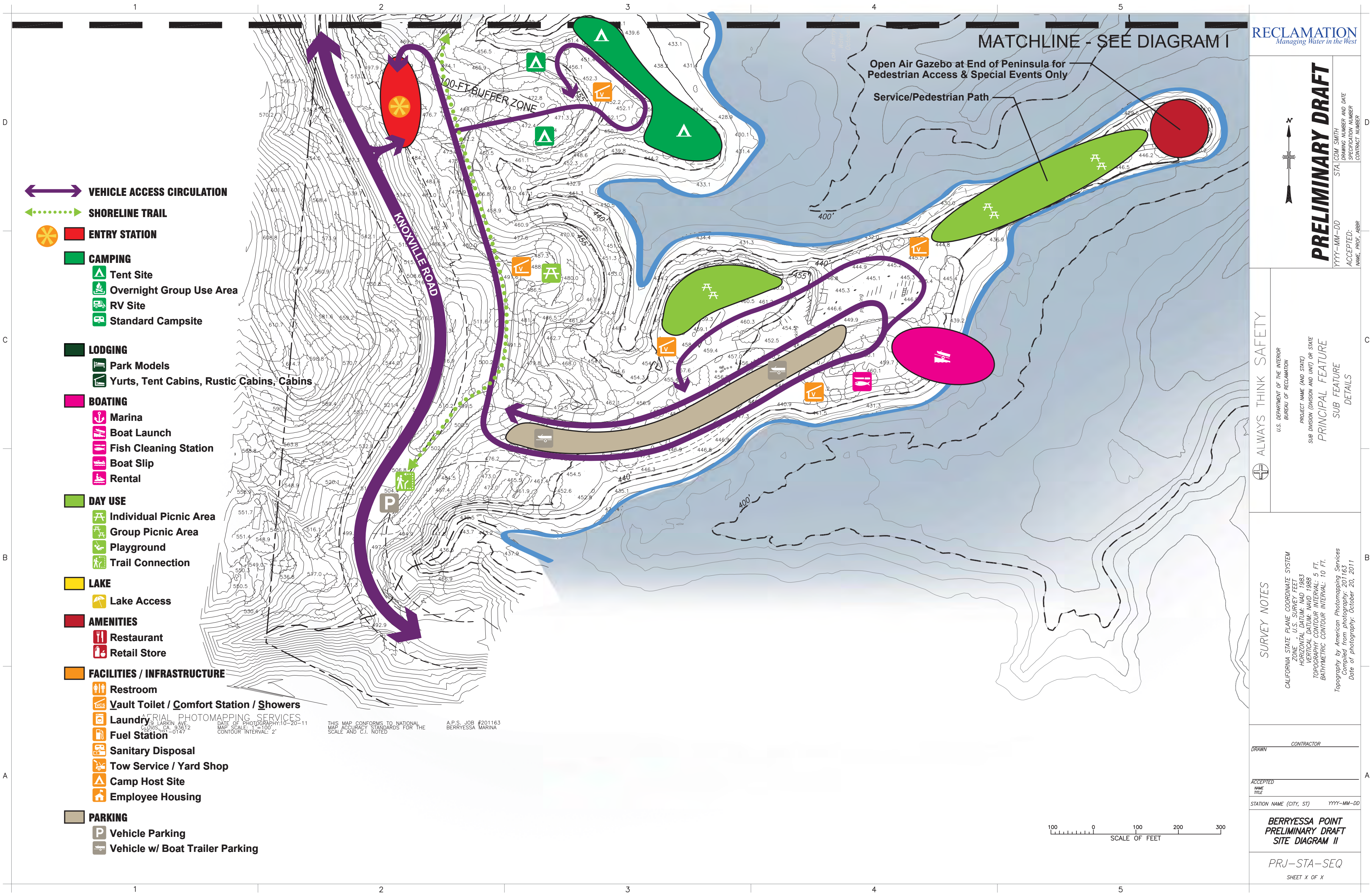
MONTICELLO SHORES
PRELIMINARY DRAFT
SITE DIAGRAM V

PRJ-STA-SEQ
SHEET X OF X

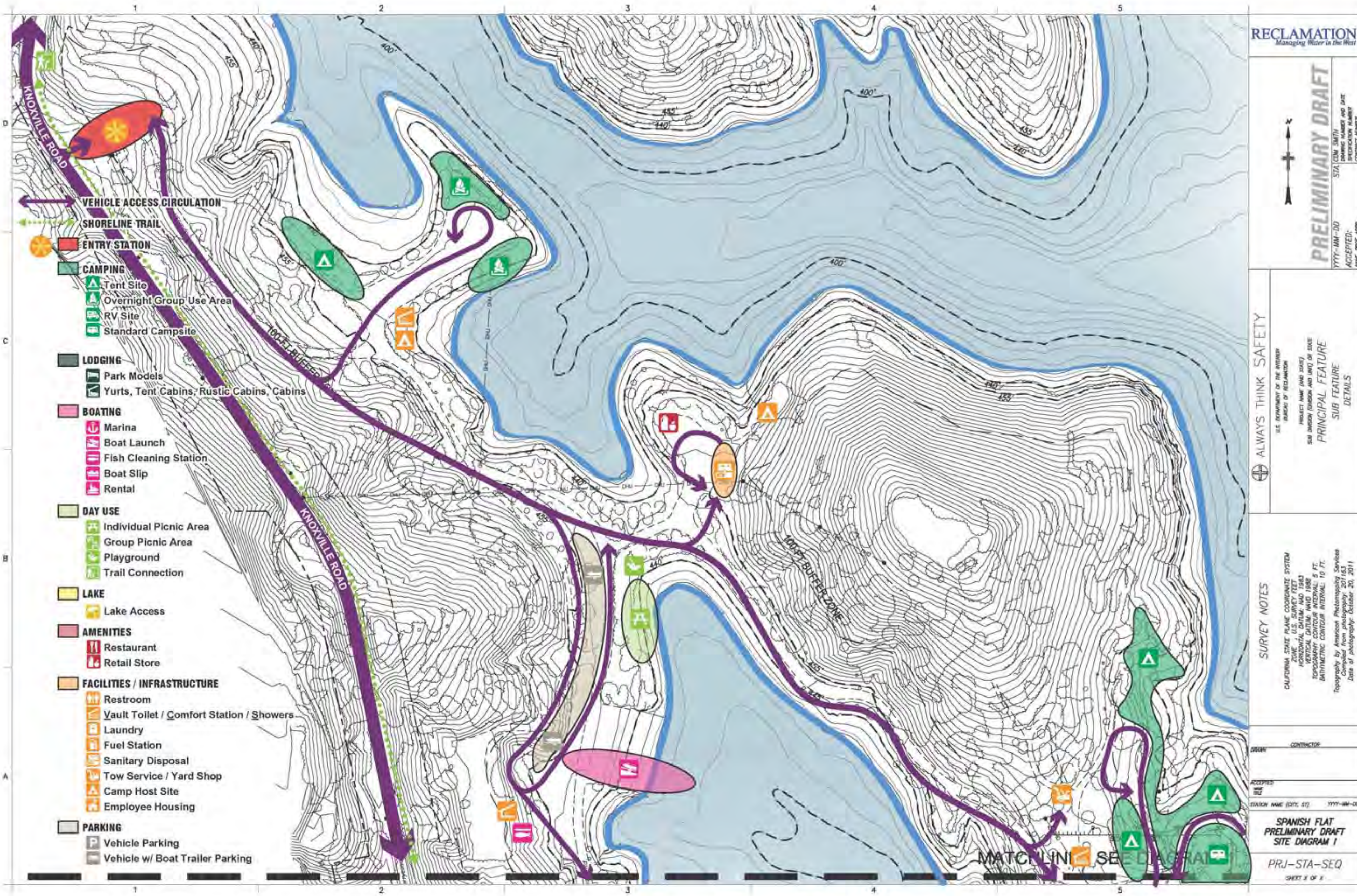
BERRYESSA POINT



VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Area
Group Picnic Area
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
KNOXVILLE ROAD
100-FT BUFFER ZONE
100-FT BUFFER ZONE
440'
455'
SCALE OF FEET
100 0 100 200 300
MATCHLINE - SEE DIAGRAM II
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
CALIFORNIA STATE PLANE COORDINATE SYSTEM
ZONE ... U.S. SURVEY FEET
HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.
BATHYMETRIC CONTOUR INTERVAL: 10 FT.
Topography by American Photomapping Services
Compiled from photography: 201163
Date of photography: October 20, 2011
CONTRACTOR
DRAWN
ACCEPTED
STATION NAME (CITY, ST)
YYYY-MM-DD
BERRYESSA POINT
PRELIMINARY DRAFT
SITE DIAGRAM I
PRJ-STA-SEQ
SHEET X OF X


MATCHLINE - SEE DIAGRAM I
Open Air Gazebo at End of Peninsula for Pedestrian Access & Special Events Only
Service/Pedestrian Path
KNOXVILLE ROAD
100-FT BUFFER ZONE
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Area
Group Picnic Area
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
AERIAL PHOTOMAPPING SERVICES
THIS MAP CONFORMS TO NATIONAL MAP ACCURACY STANDARDS FOR THE SCALE AND C.I. NOTED
A.P.S. JOB #201163
BERRYESSA MARINA
SCALE OF FEET
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
CALIFORNIA STATE PLANE COORDINATE SYSTEM
HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988
TOPOGRAPHIC CONTOUR INTERVAL: 5 FT.
BATHYMETRIC CONTOUR INTERVAL: 10 FT.
Topography by American Photomapping Services
Compiled from photography: 201163
Date of photography: October 20, 2011
CONTRACTOR
DRAWN
ACCEPTED
STATION NAME (CITY, ST)
YYYY-MM-DD
BERRYESSA POINT
PRELIMINARY DRAFT
SITE DIAGRAM II
PRJ-STA-SEQ
SHEET X OF X

SPANISH FLAT



RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
SPANISH FLAT
PRELIMINARY DRAFT
SITE DIAGRAM I
PRJ–STA–SEQ
MATCHLINE SEE DIAGRAM
KNOXVILLE ROAD
100-FT BUFFER ZONE
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
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Restroom
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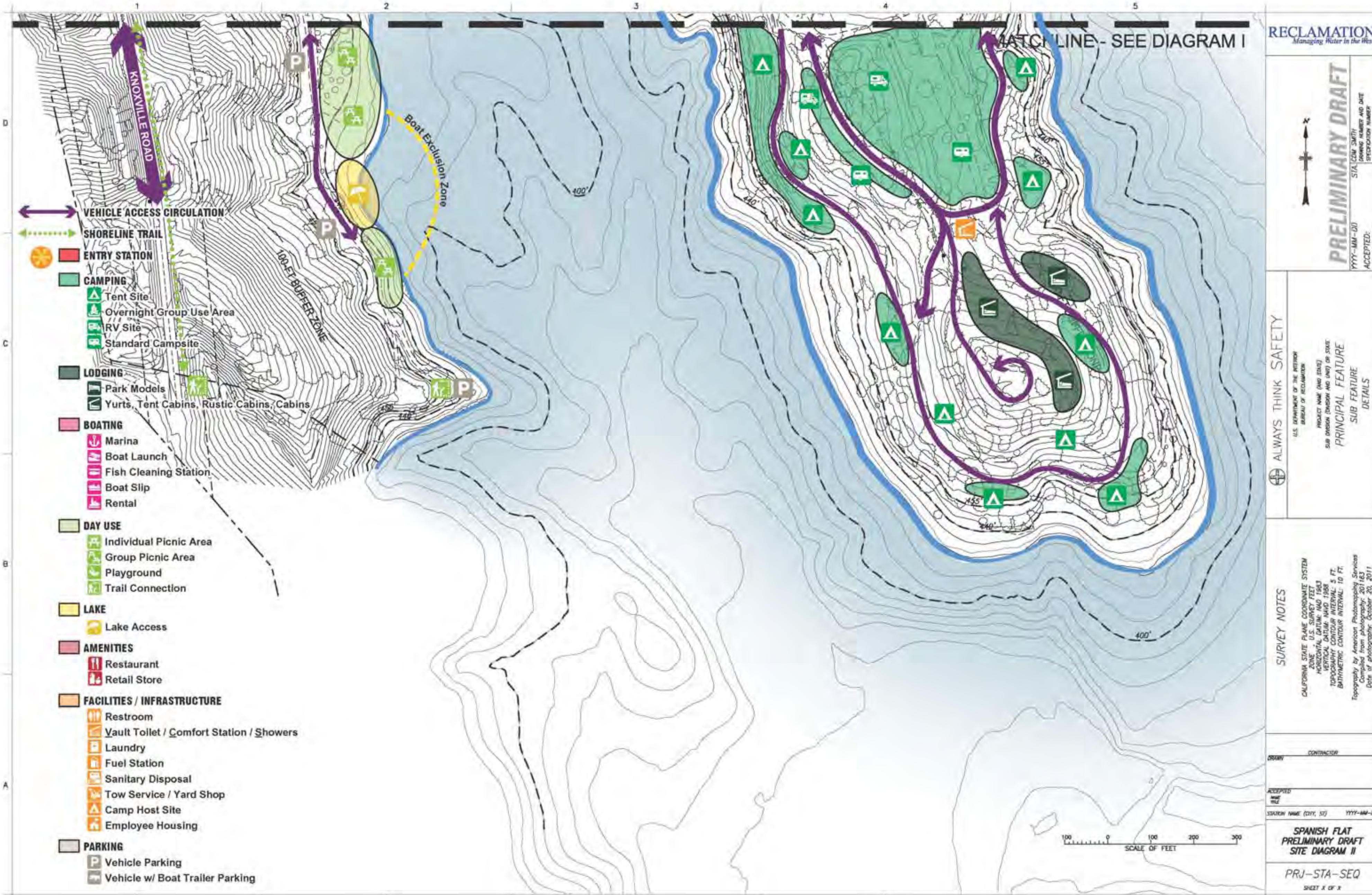
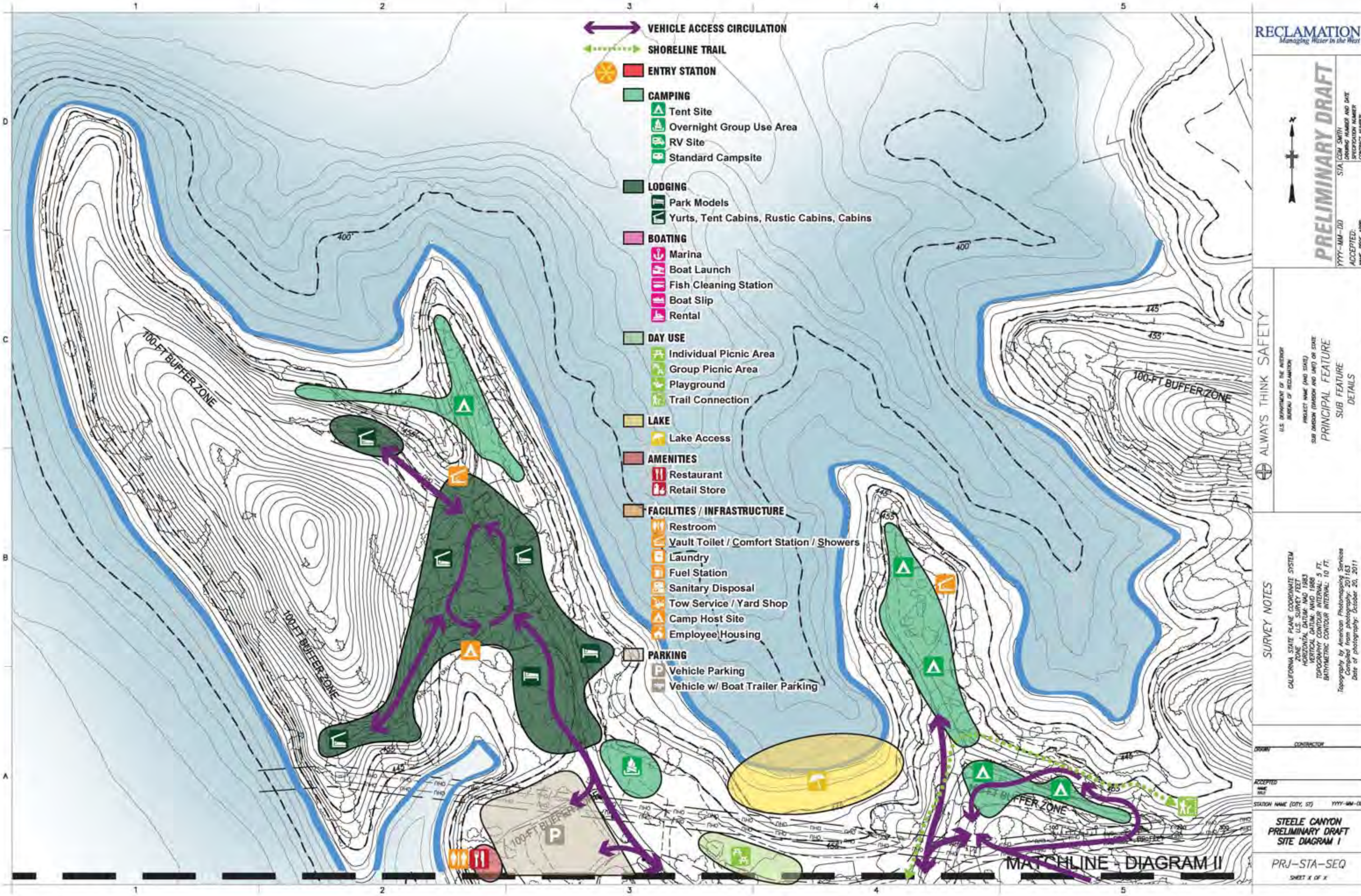
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking



MATCHLINE - SEE DIAGRAM I
KNOXVILLE ROAD
Boat Exclusion Zone
100-FT BUFFER ZONE
400'
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Area
Group Picnic Area
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
SCALE OF FEET
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
SPANISH FLAT
PRELIMINARY DRAFT
SITE DIAGRAM II
PRJ–STA–SEQ
SHEET X OF X

STEELE CANYON


VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
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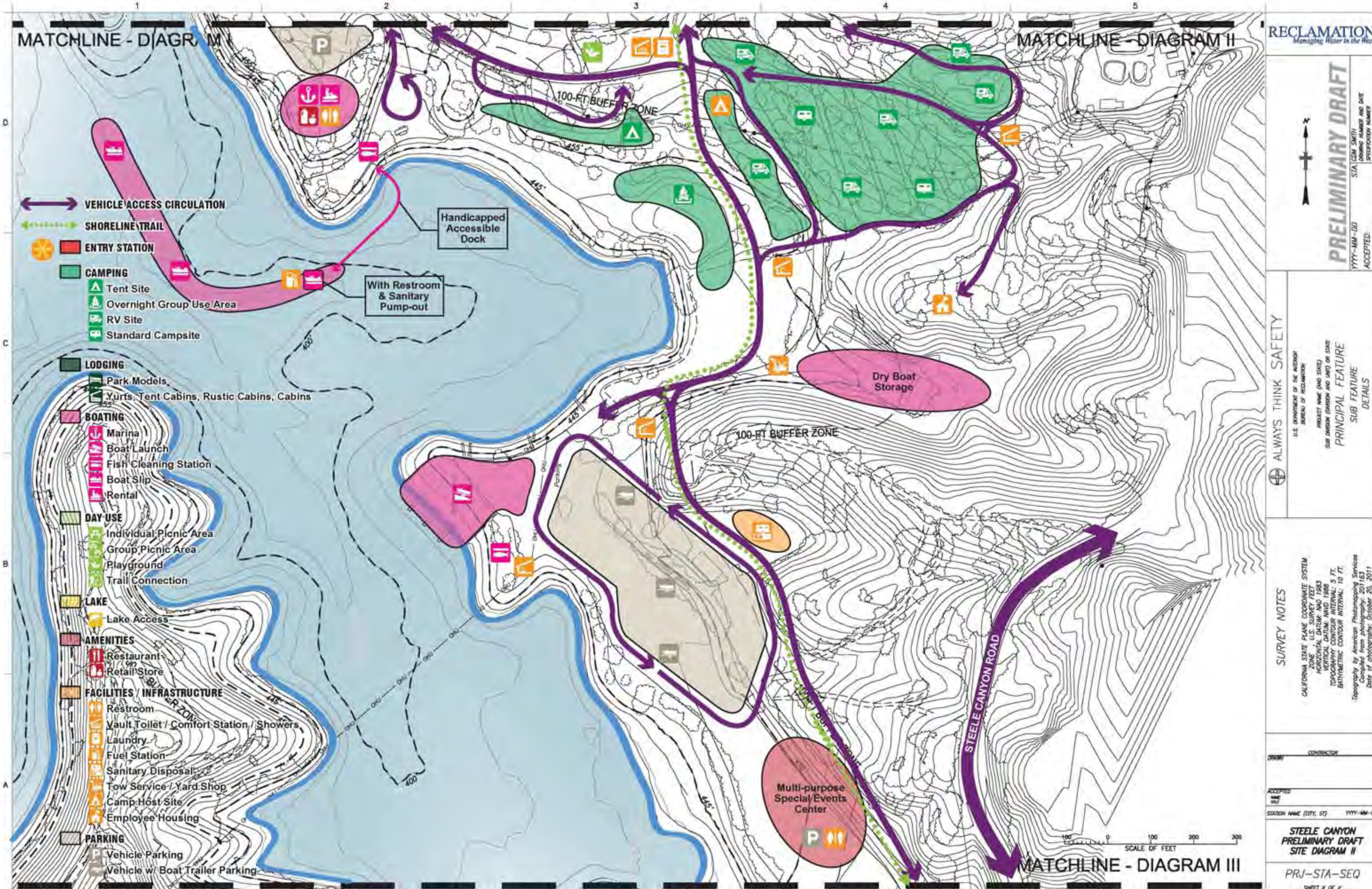
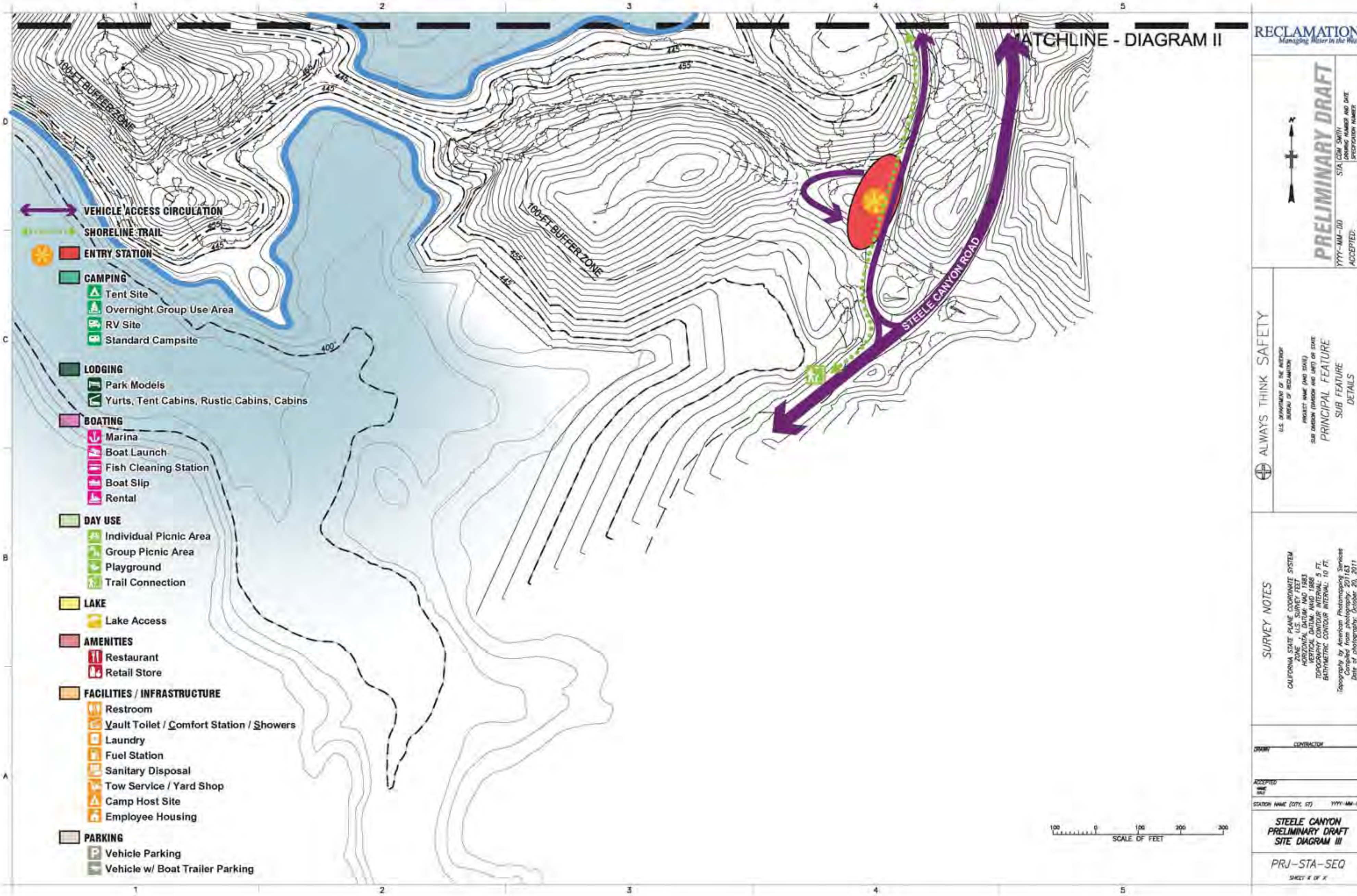
Group Picnic Area
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
100-FT BUFFER ZONE
400'
445'
455'
MATCHLINE - DIAGRAM II
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
CALIFORNIA STATE PLANE COORDINATE SYSTEM
ZONE , U.S. SURVEY FEET
HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.
BATHYMETRIC CONTOUR INTERVAL: 10 FT.
Topography by American Photomapping Services
Compiled from photography: 201163
Date of photography: October 20, 2011
CONTRACTOR
STATION NAME (CITY, ST) YYYY-MM-DD
STEELE CANYON
PRELIMINARY DRAFT
SITE DIAGRAM I
PRJ-STA-SEQ
SHEET X OF X



MATCHLINE - DIAGRAM I
MATCHLINE - DIAGRAM II
MATCHLINE - DIAGRAM III
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
100-FT BUFFER ZONE
Handicapped Accessible Dock
With Restroom & Sanitary Pump-out
Dry Boat Storage
Multi-purpose Special Events Center
STEELE CANYON ROAD
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
DAY USE
Individual Picnic Area
Group Picnic Area
Playground
Trail Connection
LAKE
Lake Access
AMENITIES
Restaurant
Retail Store
FACILITIES / INFRASTRUCTURE
Restroom
Vault Toilet / Comfort Station / Showers
Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
ALWAYS THINK SAFETY
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
SCALE OF FEET
STEELE CANYON PRELIMINARY DRAFT SITE DIAGRAM II
PRJ-STA-SEQ



MATCHLINE - DIAGRAM II
100-FT BUFFER ZONE
100-FT BUFFER ZONE
STEELE CANYON ROAD
445'
455'
400'
VEHICLE ACCESS CIRCULATION
SHORELINE TRAIL
ENTRY STATION
CAMPING
Tent Site
Overnight Group Use Area
RV Site
Standard Campsite
LODGING
Park Models
Yurts, Tent Cabins, Rustic Cabins, Cabins
BOATING
Marina
Boat Launch
Fish Cleaning Station
Boat Slip
Rental
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Playground
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Laundry
Fuel Station
Sanitary Disposal
Tow Service / Yard Shop
Camp Host Site
Employee Housing
PARKING
Vehicle Parking
Vehicle w/ Boat Trailer Parking
100 0 100 200 300
SCALE OF FEET
RECLAMATION
Managing Water in the West
PRELIMINARY DRAFT
ALWAYS THINK SAFETY
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
PRINCIPAL FEATURE
SUB FEATURE
DETAILS
SURVEY NOTES
CALIFORNIA STATE PLANE COORDINATE SYSTEM
ZONE , U.S. SURVEY FEET
HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.
BATHYMETRIC CONTOUR INTERVAL: 10 FT.
Topography by American Photomapping Services
Compiled from photography: 201163
Date of photography: October 20, 2011
STEELE CANYON
PRELIMINARY DRAFT
SITE DIAGRAM III
PRJ-STA-SEQ

Additional Reading on BOR's History and Influence on Lake Berryessa

The final section of Part Two of the overall report is intended for readings seeking more detail of the history of BOR's involvement in Lake Berryessa, along with its perceived role in environmental stewardship.

The first document of this section is "Overview of Lake Berryessa," as taken from "Assessment of Market Conditions for Outdoor Recreation Facilities and Services at Lake Berryessa" (draft), BOR, May 2014. The second document is "Recommended Commercial Facilities and Services" (draft), as taken from the same publication. The third and final document is "Visitor Experience," as taken from "Future Recreation Use and Operations of Lake Berryessa," BOR, October 2005. These relatively brief excerpts are supported by literally thousands of pages of material prepared by BOR since Lake Berryessa was formed in the 1950's.

1.5 Overview of Lake Berryessa

Lake Berryessa is part of Reclamation's Solano Project (Project). The Project was authorized by the Congress in 1948 under the terms of the Reclamation Project Act of 1939. The Project was authorized for flood control and to supply water for irrigation, municipal, and industrial uses. However, due to the anticipated radically fluctuating water levels, recreational use was initially considered not important. The main primary Project feature is Monticello Dam that was constructed in 1957 on Putah Creek. Both the dam and hydroelectric powerplant are operated by Solano County Water Agency. Lake Berryessa was formed by the damming of Putah Creek and has a total water storage capacity of 1.6 million acre-feet[2] and 19,250 water surface acres. The lake is one of the largest fresh water lakes in California and has 165 miles of shoreline. The lake is approximately 23 miles long and 3 miles wide, at the widest point. Reclamation has federal jurisdiction over 28,916 acres of land surrounding the lake primarily for Project, recreation, and wildlife purposes. Reclamation and the California Department of Fish and Wildlife jointly manage a 2,000 acre wildlife area on the east side of the lake.

In 1958, Reclamation entered into a management agreement with Napa County for the development of public use facilities. Napa County subsequently entered into seven concession contracts with private entities for the development of facilities on 1,700 acres of federal lands surrounding the lake. However, the development of facilities by the seven concessionaires did not follow the Public Use Plan (PUP) that was prepared in 1959, but instead focused on developing trailer/mobile home parks instead of public campgrounds and day use facilities.

Audits by the General Accountability Office in 1971 and the Department of the Interior Office of Inspector General in 1995 and 2000 required Reclamation to address health, safety, and exclusionary issues associated with the nearly 1,500 long-term trailers and mobile homes located on federal property around the lake.

In March 1974, Napa County notified Reclamation that it was returning public use management of the lake back to Reclamation. In October 1974 and prior to the official termination of the agreement with Napa County in 1975, the Congress passed Public Law 93-493 that authorized Reclamation to assume management of the concession areas and to expend up to three million dollars for development of recreation facilities to be operated directly by Reclamation. After Reclamation assumed management, the PUP was reviewed and subsequently modified to better reflect the existing concessionaire developed facilities and define recreation and land use objectives at the lake. As a result of Public Law 93-493, Reclamation developed the first non-resort public facilities

[2] An acre foot is a term used in measuring the volume of water needed to cover 1 acre (43,560 square feet) 1 foot deep (325,851 gallons or 1,233.5 cubic meters).

at the lake. These new public use facilities were immediately accepted by the public and provided access for short-term recreational use.

In 1980, Public Law 96-375 was enacted that, among other things, authorized the Secretary of the Interior, at the request of the existing concessionaires, to extend the original 30-year contracts for no more than two consecutive terms of 10 years each, for a total of 50 years. The contracts were otherwise due to expire in 1988/1989. The Secretary eventually invoked the full extent of the authority that would result in the contracts expiring in 2008/2009.

- Prior to their expiration, Reclamation initiated a planning effort to evaluate future recreation operations at Project lands and Lake Berryessa. A final Environmental Impact Statement (EIS) on future recreation operations was published in 2005 for the document titled "*Future Recreation Use and Operations of Lake Berryessa*," and a Record of Decision (ROD)[3] was signed in 2006. This document is hereafter referred to as the Visitor Services Plan (VSP). Refer to the section below for a more detailed discussion of this document. The ROD included the removal of 1,500 privately owned trailers and construction, through successor contracts, of a diverse range of new recreation facilities at the seven concession areas at Lake Berryessa.

- Since the expiration of the original contracts, Reclamation has removed the 1,500 privately owned trailers and personal property as required by the ROD, and has conducted an extensive clean-up program, including removal of all former concessionaire facilities and personal property, as well as environmental remediation at all concession areas.

Per the terms of the ROD, recreation services at Lake Berryessa's seven concession areas are to continue to be provided through commercial concession services. Planning to award new long term contracts for concession operated recreation services was conducted in 2007 and again in 2009, through a competitive RFP process with successful awards made for all seven concession areas in spring of 2010.

The seven concession areas at Lake Berryessa were assigned to two long-term concessionaires. Pensus Lake Berryessa Properties, LLC (Pensus) was assigned operations at five of these areas (which Pensus renamed Lupine Shores, Foothill Pines, Blue Oaks, Manzanita Canyon, and Chaparral Cove) and was scheduled to take over operations at a sixth site (Mahogany Bay, formerly Markley Cove) on May 27, 2013. Markley Cove was being operated under an interim contract by its former concessionaire until May 26, 2013. Forever Resorts Inc. (doing

[3] A ROD is a concise public record of an agency's decision or an agency's recommendation to the Congress following the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act. A ROD only applies to actions for which an Environmental Impact Statement has been prepared.

business as Pleasure Cove Marina, LLC) was assigned to operate the seventh concession area, Pleasure Cove Marina, under a 30 year concession contract.

On December 6, 2012, Reclamation notified Pensus of its decision to terminate Concession Contract #10-LC-20-0184 for default due to their failure to comply with the terms of the contract. The termination was effective on December 9, 2012. The decision affected the provision of public recreation services at five of the seven concession areas at Lake Berryessa (the sixth concession area was still being operated by the former concessionaire at that time).

As a result of Pensus' termination during the winter of 2012/2013, Reclamation implemented an immediate plan to provide basic services at three sites formerly operated by Pensus (Lupine Shores, Foothill Pines and Chaparral Cove) through government operations. In the spring of 2013, Reclamation entered into interim concession contracts at these three sites to provide recreation services for the next two to four recreation seasons, until new long-term concession contracts can be awarded. Additionally, a new interim concession contract was awarded to the existing operator at Markley Cove for continued operation of existing facilities for two to four recreation seasons. Pleasure Cove Marina continues to be operated under its long-term contract.

In January 2013, Reclamation established the Lake Berryessa Community Forum (Forum) as outlined in the ROD. The regular meetings of the Forum provide an opportunity for public and agency involvement to promote communication, thoughtful consideration of interests, consistency and uniformity, and constructive resolution of problems or conflicts.

As an early outcome of the Forum, Reclamation has permanently renamed the concession areas as follows:

- Lupine Shores is named Steele Canyon Recreation Area
- Foothill Pines is named Spanish Flat Recreation Area
- Blue Oaks is named Berryessa Point Recreation Area
- Manzanita Canyon is named Monticello Shores Recreation Area
- Chaparral Cove is named Putah Canyon Recreation Area

Markley Cove Resort and Pleasure Cove Marina will retain their names through the terms of the current interim concession contract/long term contract, respectively.

In the spring of 2013, Reclamation again began planning for the future long-term management of the concession areas by commercial businesses as called for in the ROD, with the goal of providing a diverse range of sustainable, short-term recreation opportunities for the public in the seven concession areas. To achieve a successful solicitation and economically sound business ventures, these recreation services will be designed using a combined approach consisting of a comprehensive market assessment, conceptual site planning and financial feasibility evaluation along with infrastructure design and environmental analyses.

Continuing input from the Forum will help Reclamation to understand the public's interests for management and development of the concession areas.

1.6 Guidance Documents Affecting Lake Berryessa Recreation and Commercial Services Management

Recreation and land management activities at Lake Berryessa are governed by a variety of laws, internal policies, directives and standards, planning and guidance documents, and studies. As much as possible, this Market Assessment must be consistent with the following.

1.6.1 Solano Project Authorization and Public Law 93-493

The Project was authorized by the Secretary of the Interior on November 11, 1948 under the terms and conditions of the Reclamation Project Act of 1939. As is typical at most Reclamation reservoirs/lakes, the use of Project lands shall be compatible with and not interfere with the primary Reclamation Project purposes (i.e., flood control and water delivery for irrigation, municipal, and industrial uses). Additionally, any authorized public use of Lake Berryessa lands and waters for public use will comply with the stipulations and guidance contained in the Reclamation Development Act of 1974, Public Law 93-493, 88 Stat. 1486.

1.6.2 Public Use Plan

The PUP for Lake Berryessa was prepared by the National Park Service in 1959.[4] The PUP included a General Development Plan that would guide development to include: (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 (Reclamation, 1992).

1.6.3 1992 Reservoir Area Management Plan for Lake Berryessa and 1993 Record of Decision

From the time that Napa County turned back management of Lake Berryessa to Reclamation in 1975, the concessionaires continued to promote long-term, private exclusive use at the concession areas. Due to the fact that the concession areas occupied the best access points to the lake and created overcrowding conditions in these areas, Reclamation determined there was a need to update the 1959 PUP to address carrying capacity issues and the

[4] In the beginning of federal water project development by Reclamation, the National Park Service was often actively involved in recreation planning activities.

diversity of recreation opportunities at the lake. Therefore, the 1992 Reservoir Area Management Plan (RAMP), EIS, and associated 1993 ROD was prepared to provide additional guidance and a framework for planning, developing, and managing Lake Berryessa's natural resources, land and recreation programs, and public use facilities in an environmentally sensitive manner. Since the RAMP is currently in effect, the Market Assessment recommendations shall be consistent with the RAMP and ROD, as applicable.

1.6.4 2005 Future Recreation Use and Operations of Lake Berryessa and Record of Decision

Reclamation initiated a visitor services planning process in 2000 that led to the preparation of the VSP ROD. Reclamation initiated the visitor services planning process in compliance with the National Environmental Policy Act (NEPA) requirements. The primary objective of this NEPA planning effort was to solicit public participation and input in determining the future recreation use and operation of the lake prior to the expiration of the existing concession operations that were in place at that time. After extensive public involvement, a draft EIS (DEIS) was completed in 2003 that identified four broad alternatives. After public review of the DEIS, Reclamation prepared a final EIS (FEIS) in 2005. The FEIS identified Alternative B as the preferred visitor services management strategy. The main focus of Alternative B was to develop new facilities and programs that would better serve short-term visitors to the lake. Pursuant to the documented actions in Alternative B, all long-term, private exclusive use trailers and mobile homes would be removed and replaced with short-term facilities according to a plan developed for each individual concession area. After another round of public involvement, the VSP ROD was finalized in 2006. Alternative B was modified to include certain elements of Alternatives A, C, and D as well as key recreation-related provisions from the 1992 (RAMP) and its associated ROD. The Market Assessment shall be prepared in a manner that is consistent with the VSP ROD. Specifically, the Market Assessment will recommend the ***required***[5] facilities and services that will be developed and managed by a perspective concessionaire and, if applicable, recommend additional facilities and services that may be ***authorized.***[6]

As stated, the 2006 VSP ROD outlined the framework for the development of new facilities and programs that better serve the short-term visitors to Lake Berryessa. The basic management principles outlined in the VSP ROD and that pertain to this Market Assessment are those that:

- Guide and support lake-wide federal and commercial operations in the interest of visitors.

[5] Required facilities and services are those types of facilities and services that a concessionaire is required to offer to the public. Required facilities and services are not optional and must be provided.
[6] Authorized facilities and services are those types of facilities and services that a concessionaire is authorized to provide during the term of the concession contract based on demand and other factors as determined by Reclamation to be applicable.

- Limit future development to those facilities that support short-term, traditional, non-exclusive use, and diverse recreation opportunities.

- Specify the types of public occupancy facilities (i.e., day use, short-term, and annual) that will be permitted within three specific geographic areas at each potential concession area. Those specific geographic areas are described in terms of elevations above mean sea level (MSL) as prescribed in the 1992 RAMP and reservoir capacity allocations for the Project.

Following is a list that summarizes all facilities identified in Alternative B of the FEIS, certain elements of Alternatives, A, C, and D of the FEIS, and key recreation-related provisions from the 1992 RAMP ROD. Pursuant to the VSP ROD, a proposed concession operation may include any or all of the following facilities listed in Table 1.1. A more definite list of facilities with occupancy and location requirements will be included in the RFP. Refer to Chapter 4 for the consolidated recommendations on the identified types, quantities, and locations of required and authorized facilities and services.

ES.12 Recommended Commercial Facilities and Services

Lake Berryessa has a special rural market niche that is distinctly different than the highly developed, urbanized and intensively managed water-based recreation areas found in the San Francisco Bay and Sacramento-San Joaquin Delta areas. This may be a unique and special niche worth maintaining through careful development, and thus create a market demand.

The recommendations provided are based on sound professional judgment, basic assumptions, consideration of several factors that can influence demand decisions, opportunities, and analysis of information collected from a variety of sources.

ES.12.1 Assumptions

The recommendations for commercial facilities and services at Lake Berryessa are based upon the following primary assumptions:

- Reclamation's concession management objectives will continue to support traditional, short-term, and diverse outdoor recreation opportunities that are compatible with the Lake Berryessa RAMP and VSP.
- If future demand warrants substantial new development at Lake Berryessa, it may be necessary to look at additional sites other than the five areas discussed in this Market Assessment.
- Reclamation and concessionaires will actively market the newly developed facilities and services and collaborate with local tourism entities to attract new and past visitors to Lake Berryessa.

- Reclamation would only accept incoming concessionaires willing to implement an approved business plan that would sustain a viable business venture on a long term basis.

- The lost visitation due to the recent marina closures and trailer removals can be reclaimed in 5-10 years after the construction of new and high quality recreation facilities.

- The existing and available information used in this Market Assessment is of sufficient quantity and quality to make reasonable future projections.

- The construction of high quality recreation facilities and services will encourage return visits, increase the financial viability of commercial operators, and maintain and/or improve visitor satisfaction and user expectations.

- Reclamation will have adequate management resources (i.e. staff, boats, equipment, programs, partnerships, and monitoring capabilities) to ensure the public health, safety and enjoyment of the visiting public and that the natural and cultural resources are conserved and managed in a sustainable fashion. Without a strong and visible public agency presence, the quality of the recreation opportunities and resources will erode and the public will be displaced to other recreation settings.

ES.12.2 Key Factors Influencing Recommendations

The integrity of the Market Assessment was based upon a level 1 analysis of existing information, local expert opinions and sound professional judgment. The amount of available information considered was voluminous but there were several key factors or considerations that heavily influenced the recommended commercial facilities and services at Lake Berryessa.

The key influential factors include the following:

- Projected county population increases within the 25 county market area and Central Valley.

- Compliance with the provisions of the VSP.

- National and State of California increases (trends) in the participation of selected outdoor recreation activities that can be provided at Lake Berryessa.

- Observations made amongst the comparable recreation areas within the vicinity of Lake Berryessa.

- Higher than normal income levels of residents within the market area to support the development of quality facilities and services.
- Public need for outdoor recreation activities identified by the California Department of Parks and Recreation.
- Alternative camping options (e.g., cabins, park models, yurts, floating campsites) and their benefit to increasing recreation participation throughout the calendar year.
- Public participation and trends in recreational boating in California.
- The ability to provide services such as increased security and oversight that can mitigate pass problems (i.e., vandalism, partying) and thus attract disenfranchised and displaced visitors.
- Volume of unmet demand that can be satisfied with the development of quality recreation facilities and services that appeal to potential visitors with varied levels of income and demographic profile.
- Demand for high quality rural type recreation opportunities that are close to home (i.e., within the market area).
- Projections for many water-based activities that show increases over population growth through the year 2050.
- Projections that developed land activities, such as camping and family gatherings, are expected to increase at a rate greater than population growth through 2050.
- Projections that non-consumptive wildlife activities, such as birdwatching, photography, and other types of wildlife viewing, are expected to increase more than the population growth through the year 2050.

ES.12.3 Opportunities

There are opportunities at Lake Berryessa that can reverse any downward trends in the quality of facilities and services that were provided previously, enhance the visitor's outdoor recreation experience and meet future demand.   There are opportunities to:

- Establish facilities and services that are consistent with Reclamation's VSP ROD, other planning documents, concessions directives, standards, and policy, as well as studies that are specific to Lake Berryessa.

- Establish facilities and services that provide families and friends an opportunity to get away from the many urban settings typical in California but especially within the Bay Area.

- Change the perception that Lake Berryessa is a congested and overcrowded "party lake" by marketing the lake as a safe and desirable recreation destination.

- Cooperate with Napa County in packaging and marketing the many quality outdoor recreation opportunities that are available within the county.

- Leverage the proximity of Napa Valley and its substantial visitor base when marketing Lake Berryessa to residents within the market area and potential tourists from outside the market area.

- Provide recreation areas where visitors can enjoy the sights, sounds, solitude and tranquility of Lake Berryessa, which is largely defined by its water resource, fishery, aesthetics, and surrounding wildlife areas, wilderness, and forests.

- Provide commercial operations that offer only necessary and appropriate facilities and services that are financially profitable.

- Fill a void in the limited quantity of overnight camping facilities (i.e., tent, standard and RV sites) that are currently being offered by 3 of the primary recreation providers in Bay Area (i.e., EBRPD, EBMUD and NPS).

- Offer Napa Valley visitors alternative overnight lodging options at Lake Berryessa such as yurts, tent cabins, luxury cabins and park models. These unique and quality lodging units would typically be less expensive than existing lodging options within the Napa Valley.

- Establish facilities and services that are competitive with other recreation areas within the marketplace.

- Provide facilities and services that support public participation in numerous recreation activities on a year-round basis.

- Provide facilities and services that will disperse users to different areas and potentially reduce overcrowding and user conflicts.

- Provide facilities and services that are visually appealing and harmonious in form, color, and texture with the surrounding landscape.

Visitor Experience

The quality of a visitor experience depends on a number of variables, including natural resource conditions; the number, duration, and character of encounters with other groups; the number and condition of developed facilities; and the type of activity that the visitor wishes to pursue. Experiences also depend on the preferences, motivations and needs of the user. For instance, visitors on a houseboat seek a type of recreation experience that is different from that sought by kayakers, and so have a different set of expectations and preferences relating to the nature of shoreline development.

Many of the visitors surveyed for the 1998 boater survey commented positively about the water quality and natural environment, which added to their enjoyment of their lake experience. In that study, both user groups were asked to name the qualities they liked best about Lake Berryessa. The most frequent response was related to water conditions (e.g., water quality, availability of calm water conditions) and the condition of the natural environment (e.g., scenery, wildlife, other natural features). Qualities least-liked by ramp users were crowded conditions, increasing boat traffic and the use conflict resulting from incompatible boat types and activities. Least-liked by marina users were use conflicts resulting from incompatible boat types and activities. Only half as many marina/resort users as ramp users viewed more crowded conditions and increased boating traffic as a problem – presumably because they were more interested in social and sporting activities than in solitude and relaxation. All told, though, less than 15% of all boaters surveyed in 1997 thought the reservoir was overcrowded.

The 1992 RAMP identified five land-use categories, of which four were based on the level of shoreline development and user density. (The fifth category consisted of restricted areas.) Section 3.1 of this document describes these land-use categories in detail.

The range and diversity of categories shows that Lake Berryessa provides for a range of visitor experiences. Visitors using the Class I - High Density Recreation Areas, which consist mostly of the seven resorts, would have a highly social experience in a well-developed area with many visitor conveniences. Their recreational activities would occur in a high-use and somewhat unnatural setting. This kind of experience does not appeal to everyone, but many users enjoy the opportunity to engage in socially- oriented activities and appreciate the conveniences and creature comforts available at the resorts.

Visitors using Class IV- Semi-Primitive Areas, such as those along the lake’s eastern shore, would experience solitude in a natural setting. Their recreational activities would occur in a quieter, undeveloped environment. Again, this kind of experience does not appeal to everyone, but many users appreciate the sights, sounds, and scents of nature, and enjoy the experience of “roughing it” in a remote area.

The condition of the developed facilities and the natural environment encountered by visitors is also an important part of their experience. As stated earlier, the privately operated day-use and camping areas at the resorts are in deteriorating condition, are rudimentary in design and accommodations, and are situated in less than optimal locations. Visitors often are willing to endure the inadequate facilities because no other choice is available, but their recreational experience is diminished by the unsatisfactory condition of the facilities there.

The variety of recreational activities available is another part of the visitor experience. Visitors to the reservoir enjoy 44 water-related activities, including various kinds of boating, fishing, skiing, swimming, sightseeing, picnicking, and camping/lodging

(RAMP, Appendix J, J-1, see associated Website). Some land-based recreational activities, such as walking, hiking, riding all-terrain vehicles and cycling, also occur on the 8,958 acres of public lands surrounding the lake, but those are secondary to the water activities in terms of visitor participation.

Most of the on-shore recreation use occurs on the west side of the lake, where there is a much greater level of development. The east side is managed under the Lake Berryessa Wildlife Area Management Plan, which allows for recreation facilities and use, but in a less developed setting.

The different types of visitor activities are discussed below under the categories "day-use" and "overnight use." To some extent, these categories overlap: although day-users, by definition, do not engage in overnight activities, overnight-users do engage in "day-use" activities during their stays. The categories are employed here only for organizational purposes.

Day-Use Activities

Boating

Most boating activity at the lake occurs on summer weekends between April 1 and October 15. Although some types of boating, such as sightseeing, occur year-round, most activity is concentrated in the warmer months. The most common watercraft used on the reservoir are runabouts and ski boats. Other common vessels include personal watercraft, fishing boats, pontoon/patio boats, houseboats, sailboats, rubber rafts, canoes, kayaks, paddleboats and rowboats. Runabouts, jet skis, self-powered surfboards and sailboards appear to be particularly popular with visitors, judging from a 1998 aerial survey of boats on Lake Berryessa. See the earlier reference to "A Study of Boater Recreation On Lake Berryessa, California."
Visitors use their watercraft for pleasure boating, sailing, fishing, sight-seeing and water-skiing, as well as for nontraditional and "extreme" sports such as para-skiing, para-sailing, surf-sailing, inner tube "skiing," and jet-skiing. These uses occur throughout the reservoir, but predominantly across the western half.

Houseboats, too, are gaining in popularity at the reservoir. House-boating was first introduced to Lake Berryessa in 1981, when a commercial houseboat fleet was authorized at Markley Cove Resort. Because of public concern about direct discharge of gray water (sink and shower discharge) into the lake, Reclamation analyzed the effects of the houseboat program on water quality and concluded that the amount of gray water from the number of houseboats currently on the lake would not harmfully contaminate the lake. However, DFG has conducted a number of studies of chemicals commonly found in gray water discharges, and has found those chemicals to be deleterious to aquatic life. Discharging any gray water or black water (sewage) is a violation of Section 5650 of the Fish & Game Code, and also of Reclamation policy. Reclamation's requirements for houseboat use entitled "Private and Commercial Houseboat Policy for Lake Berryessa and New Melones Lake," dated April 2, 2002, is in draft and not yet available for general distribution.

The use of personal watercraft (e.g., jet skis or wave-runners) has increased steadily, along with more traditional boating uses on the lake. These smaller vehicles are typically designed to hold one to three passengers, and can tow at least one water skier. Older models are equipped with a two-stroke water- jet engine; the latest versions are fitted with four-stroke engines that produce fewer emissions. Both models eliminate the need for a propeller, allowing them to access areas otherwise too shallow for conventional boats.

Fishing

Most fishing use occurs in the fall, winter, and spring, but typically diminishes throughout the summer. Cold-water game species include brook trout, rainbow trout and Konkani salmon. The lake is stocked with rainbow trout each year and more recently with Chinook and Konkani salmon. Silver salmon and brown trout were formerly stocked at the lake, but have not been reported in recent years. Warm-water game species include bluegill, largemouth and small mouth bass, white crappie, black crappie, and channel catfish.

Although no data specifically on fishing use of the reservoir are available, individuals are routinely observed engaging in several kinds of fishing. According to the 1988 Water Recreation Carrying Capacity Analysis, fly-fishing, spin casting, and cane pole fishing from the lakeshore occurs mostly along the lake's west shoreline. Still-boat fishing, or fishing from an anchored boat or one that is allowed to drift, generally involves spin casting, fly fishing or cane pole fishing from nearly any location on the reservoir. Trolling takes place from a motorboat or rowboat moving at about three miles per hour or less, and occurs in parts of the lake where the water is more than 6 feet deep. Tournament fishing, generally for bass, usually runs from January through April.

Swimming

During the period from 1975 to the drought of the 1980s, Reclamation provided lifeguard supervision at the swimming areas in the Oak Shores day-use area. The reduction in visitor-use during the drought caused the lifeguard program to be eliminated. Today, visitors enjoy non-organized recreational swimming at Lake Berryessa. Other activities associated with swimming are air mattress and inner tube floating, playing with inflatable toys and flotation devices, wading, snorkeling and diving. Swimming and floating occur throughout the lake, whereas the other related activities tend to occur in particular areas. Special swim events, such as open water swimming, distance swimming, triathlons and biathlons, are held at the lake each year under special-use permits issued by Reclamation.

Interpretation

Interpretation and information services are offered in a small Visitor Center adjacent to the Reclamation administrative building. Reclamation personnel and volunteers staff the Visitor Center on a regular basis from May through September. Information is provided regarding recreational opportunities at the lake. The Visitor Center also contains a number of interpretive displays, including several mounted wildlife exhibits and historical information about the local area. Other interpretive efforts, including interpretive trails and seasonal programs, are being initiated by Reclamation. Some regulation-related information is available at the Visitor Center, the entrance station to Oak Shores, several other day-use areas and the boat launch facilities at the resorts.

Picnicking, Boat Launching and Parking

Government-operated facilities available to the public include the Capell Cove launch ramp, which was constructed between 1977 and 1978. Parking for 71 vehicles and boat trailers is provided there. Since the State of California contributed a substantial portion of the funds for the facility's construction, it stipulated that the public be allowed to use the ramp without charge for a period of 10 years. That time period has expired. Capell Cove has been a popular facility, and its parking spaces usually are filled by mid-morning. However, most summer weekends the boaters continue to use the ramp even when the parking facilities are filled, parking their vehicles and boat trailers along the county road, up to more than half a mile from the ramp entrance. Because of the congestion this situation causes along the road, Reclamation has installed traffic control devices and gates that can be closed when the facility is full.

Construction of Oak Shores and Smittle Creek day-use recreation facilities began in 1978 and was completed in the spring of 1980. Prior to construction, the public utilized the area for day-use by parking within the county road right-of-way and walking down to the shoreline. These facilities now provide fewer than 500 parking spaces, many of which are located close to the water. Picnic tables, barbecues and garbage receptacles are placed throughout the area, and modern, conveniently spaced public restrooms are provided. Two swimming areas, Acorn and Coyote, have been designated at Oak Shores.

The resorts also offer a number of other facilities, including picnic areas, boat ramp, marinas, restaurants and food stores. Each resort offers a variety of marina services, including moorage, gas service and boat rentals.

Special-Use Activities

Any club or organization wanting to establish a special-use area, whether for long-term use or short-term use, must enter into an agreement with Reclamation. If the proposal is acceptable and an agreement is signed, Reclamation issues a special-use permit. Reclamation can cancel the permit at any time if the user fails to adhere to the terms of the agreement. Reclamation would continue to manage special events and uses on its land and water resources, under special recreation use permit procedures in compliance with Federal regulations, Reclamation policies and the 1992 RAMP
One of the current long-term permits was issued by Reclamation in 1975, to allow the Monticello Ski Club to operate a public ski slalom and jump course at Skier's Cove, north of Steele Park Resort. On weekends, ski club members are on hand to demonstrate the proper use of the facilities to club members and the general public. Visitors are charged for use of the facilities, which is on a first-come, first-served basis. Due to the increasing popularity of this facility, a demand is growing for additional areas for advanced water-skiing and wake-board event opportunities.

Short-term special-use permits may be issued for races, regattas, bass fishing tournaments, swim-a-thons and other events that may occupy large sections of the lake surface or surrounding land or otherwise exclude general public. Generally, Reclamation charges a fee for these activities, to cover administrative costs.

Another important special use is the military's use of the lake for operational exercises. Under the terms of a Memorandum of Understanding with the military, Reclamation is notified when the Department of Defense wants to use the area. Unless there is a conflicting prior use arrangement, permission is routinely granted.

Various business enterprises that provide recreational equipment or services have requested permits or agreements to provide services and/or facilities to the public from areas outside of the resorts. Such business opportunities include rentals of boats, personal watercraft, wind-surfing equipment and a variety of other water-related services. Reclamation typically encourages those entrepreneurs to contact the resorts to discuss the possibility of entering into a sub-concession agreement and conducting their business through the concessions.

Hiking

The existing trail system at Lake Berryessa consists of the Smittle Creek and North End trails. The Smittle Creek trail is 2.5 miles long, starting from Coyote Knolls at the Oak Shores day-use area and following the shoreline to the Smittle Creek day-use area. The North End trail is 4.5 miles long, and begins on the north end of the Putah Creek Bridge and follows the lakeshore to Eticuera Creek. This trail is eroded in many areas, and needs extensive maintenance. Finally, the Markley Cove area has an informal social trail system (created by visitor use, not by plan) connecting various roads-side parking areas with the shoreline.

Reclamation is interested in planning and developing trails to serve the lake and surrounding areas. To that end, an informal partnership for trail development is being formed among Reclamation, the BLM, DFG, the University of California at Davis, and Lake, Napa, Yolo and Solano Counties. No specific plans for trail alignments or construction details have been developed for review under this EIS; instead, site-specific environmental evaluation likely will be required as each trail-segment proposal is formulated.

Overnight Use

Short-term campgrounds are provided by six of the resorts at Lake Berryessa; Reclamation does not directly operate any campgrounds at the reservoir. Since the resorts have emphasized development of extensive mobile home parks, which occupy of the more desirable shoreline locations. The short-term overnight facilities generally are inadequately designed and relegated to locations with limited access to the lake. For instance, many of the sites are crowded together and rudimentary, offering only the bare necessities: picnic tables, a cooking grill, a parking place and a tent pad. Often, the sites are located in areas with conflicting uses, are next to trailers, or are near high-activity areas such as parking lots, boat ramps and main access highways. Demand for campsites during the summer is high, however, and even these marginal facilities are filled to capacity on weekends during the recreation season.

PART THREE

THE MARKET AREA FOR LAKE BERRYESSA

PART THREE
THE MARKET AREA FOR LAKE BERRYESSA

I. INTRODUCTION

The purpose of this part of the overall report is to describe market forces impacting future demand for outdoor recreational activities at Lake Berryessa. It contains several sections, including ones on:

- demographics of the designated 13-county primary market area (PMA)
- competitive freshwater lakes in California
- marinas and boat registrations
- public and private campgrounds
- recreational vehicle registrations
- participation rates in outdoor recreational activities
- tourism trends in Napa County

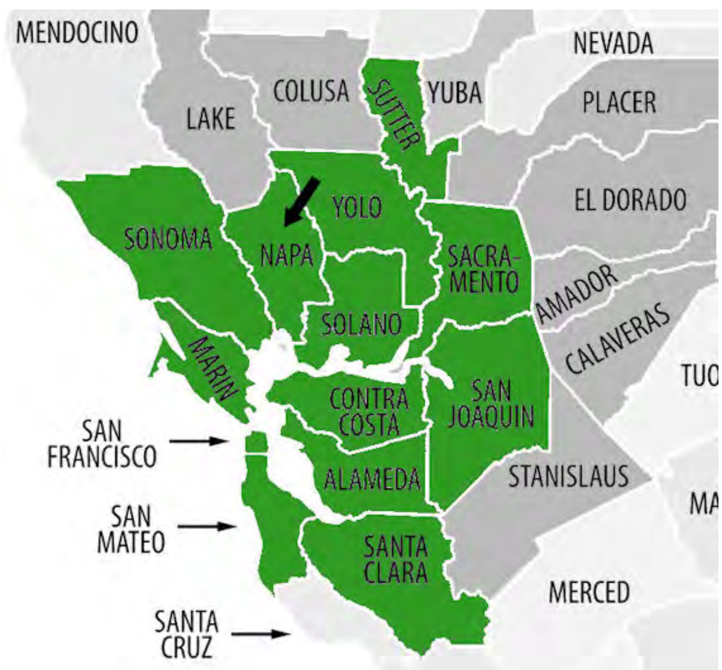
The information nicely describes the uniqueness of Lake Berryessa: in the midst of a large and wealthy population base with high participation rates in all types of outdoor recreational activities, very limited competition from other freshwater lakes with camping and boating opportunities; and strategically located and accessible.

II. DEMOGRAPHICS OF THE DESIGNATED PRIMARY MARKET AREA (PMA)

Introduction

For purposes of this report, the primary market area for Lake Berryessa is defined by 13 surrounding counties. Hereafter, they are simply referred to as the PMA. They include:

- Alameda
- Contra Costa
- Marin
- Napa
- Sacramento
- San Francisco
- San Joaquin
- San Mateo
- Santa Clara
- Solano
- Sonoma
- Sutter
- Yolo



The 13 counties are outlined on the map to the right. They include six counties to the south of Lake Berryessa, which comprise the San Francisco Bay Area (Alameda, Contra Costa, Marin, San Francisco, San Mateo and Santa Clara Counties), three counties to the east which comprise the Sacramento-Stockton urban area (Sacramento, San Joaquin and Sutter Counties), and four counties surrounding Lake Berryessa (Napa, Solano, Sonoma and Yolo Counties). All 13 counties are within a 100 mile radius, or about two hours driving time, from Lake Berryessa.

The 13 counties were chosen due to their close proximity, easy access, and limited supply of large freshwater lakes for outdoor recreation. Other counties also are within a 100 mile radius of Lake Berryessa, but are excluded from the designated PMA. They include Mendocino, Lake, Glenn, Colusa, Butte and Yuba Counties. All are north of Lake Berryessa. Most likely, people in these counties seeking lake-oriented outdoor recreation would use Clear Lake in Lake County, Shasta Lake in Shasta County, or Lake Oroville in Butte County.

Defining any primary market area is a subjective process, with destinational crossover most likely occurring. For example, many people in the designated PMA will use other large lakes in northern California such as Clear Lake, Shasta Lake, Lake Oroville and Lake Tahoe, as well as others. Some people in the six counties to the north will prefer Lake Berryessa to ones in closer proximity, and a secondary market area may extend further to the south. This is especially true if the new resorts at Lake Berryessa are properly planned and implemented, and contain an attractive set of services, amenities and activities. However, it is anticipated that the vast majority of future recreationists at Lake Berryessa will reside in the designated PMA.

Population and Households

Within the designated PMA reside about 9.8 million people, as shown in Table III-1. They generate 3.5 million households. Some 60.3 percent reside within just four counties, including Santa Clara (18.7 percent), Alameda (15.8 percent), Sacramento (14.8 percent) and Contra Costa (11.0 percent). The six smallest counties account for only 16.4 percent.

The 13 counties represent 22.4 percent of the 58 counties in California, and 25.7 percent of its population. The three large southern California counties of Los Angeles, Orange and San Diego contain 42.6 percent of the population. Napa County itself has a population of about 140,000.

Thus, the designated PMA for future recreationists at Lake Berryessa contains almost 10 million people and over 3.5 million households. All reside within a 100 mile radius; about seven million reside within a 75 mile radius; and over five million reside within a 50 mile radius.

TABLE III-1

Population and Households, PMA, 2015

County	Population	Percent of Total	Households	Percent of Total
Alameda	1,545,462	15.8%	560,658	10.1%
Contra Costa	1,078,634	11.0%	386,862	15.7%
Marin	257,265	2.6%	105,403	3.6%
Napa	139,284	1.4%	50,113	2.5%
Sacramento	1,449,771	14.8%	526,662	19.8%
San Francisco	819,976	8.4%	353,900	1.7%
San Joaquin	704,555	7.2%	222,146	11.8%
San Mateo	734,211	7.5%	264,701	4.4%
Santa Clara	1,829,541	18.7%	623,853	10.5%
Solano	418,798	4.3%	144,306	6.7%
Sonoma	491,352	5.0%	189,405	7.9%
Sutter	95,075	1.0%	31,659	2.6%
Yolo	203,000	2.1%	71,709	2.7%
Total	9,766,924	100.0%	3,531,377	100.0%

Source: *Demographics Now*

On a per household basis, the PMA is one of the wealthiest areas in the entire country. As shown in Table III-2, 65.3 percent of the households have annual incomes over $50,000, and 36.1 percent are over $100,000.

There is disparity among the 13 counties in regard to household income. For example, 73.2 percent of households in Santa Clara County have incomes over $50,000, and 47.9 percent are over $100,000. In Sutter County, only 52.4 percent are over $50,000, and only 18.4 percent are over $100,000. Three counties (Alameda, Contra Costa and Santa Clara) contain over one-half (51.3 percent) of all households in the PMA with incomes over $100,000. On the other hand, seven other counties contain only 18.4 percent.

When measured by median household income, nine of the top 15 counties in California are in the PMA, as well as seven of the top 10, and six of the top seven.

Only 52.7 percent of all households in the U.S. have incomes over $50,000, and only 22.5 percent have incomes over $100,000. In the PMA, these percentages are 65.3 percent and 36.1 percent, respectively.

TABLE III-2

Households With Annual Incomes Over $50,000 and $100,000, PMA, 2015

	Over $50,000			Over $100,000		
		Percent of:			Percent of:	
County	Households	All Households	Total	Households	All Households	Total
Alameda	363,867	64.9%	15.8%	202,398	36.1%	15.9%
Contra Costa	266,161	68.8%	11.6%	153,584	39.7%	12.0%
Marin	75,574	71.7%	3.3%	49,403	46.6%	3.9%
Napa	32,273	64.4%	1.4%	16,487	32.9%	1.3%
Sacramento	295,457	56.1%	12.8%	120,658	22.9%	9.5%
San Francisco	232,158	65.6%	10.1%	139,436	39.4%	10.9%
San Joaquin	119,959	54.0%	5.2%	47,807	21.5%	3.7%
San Mateo	193,761	73.2%	8.4%	123,086	46.5%	9.7%
Santa Clara	456,037	73.1%	19.8%	298,825	47.9%	23.4%
Solano	93,799	65.0%	4.1%	43,147	29.9%	3.4%
Sonoma	117,053	61.8%	5.1%	55,117	29.1%	4.3%
Sutter	16,589	52.4%	0.7%	5,825	18.4%	0.5%
Yolo	41,709	57.7%	1.8%	19,146	26.7%	1.5%
Total	2,304,397	65.3%	100.0%	1,274,919	36.1%	100.0%

Source: *Demographics Now*

In summary, the PMA for Lake Berryessa is large and wealthy. Within 100 miles reside almost 10 million people and over 3.5 million households. About two-thirds of the households have annual incomes over $50,000, and over one-third have incomes over $100,000. As shown in a following section, participation rates among people in the area are quite high for all types of outdoor recreation. It is a well-defined area, a very populous area, a high-income area, an area with high participation rates in all types of outdoor recreation, and all within 100 miles of Lake Berryessa. And, as shown in other sections, competition from other freshwater lakes in the area that offer outdoor recreational activities is very limited.

III. FRESHWATER LAKES IN CALIFORNIA AND THE PMA

The Largest Freshwater Lakes

There are over 3,000 named lakes, reservoirs and dry lakes throughout California. However, only 69 contain more than 2,000 surface acres. As previously noted, Lake Berryessa contains 20,700 surface acres.

Of the 69 lakes, over one-half (55.1 percent, or 38) contain between 2,000 and 5,000 surface acres, as shown in Table III-3. Only 11 (15.9 percent) contain more than 20,000.

Only nine of the 69 lakes are freshwater, allow motor boats, and contain more than 15,000 surface acres. They are shown in Table III-4. Lake Berryessa is the eighth largest of these with its 20,700 surface acres. The largest is Lake Tahoe with 122,000 surface acres, and is bordered by Nevada.

Lake Berryessa is the only one of the nine located within the PMA. The other eight are in counties to the north and further away. Relative to the three largest cities in the area, Lake Berryessa is only 65 miles from Sacramento. The second closest to this city is Clear Lake at 101 miles. Only three others are within 150 miles. Lake Berryessa is only 80 miles from San Francisco. The second closest to this city is Clear Lake at 109 miles. Only one other is within 200 miles. Lake Berryessa is only 111 miles from San Jose. The second closest to this city is Clear Lake at 140 miles. Only two others are within 225 miles.

Other Large Lakes in 20 Surrounding Counties

As noted, of the nine freshwater lakes in California with over 10,000 surface acres and that allow motor boating, Lake Berryessa is the only one within the PMA. However, there are 15 **smaller** freshwater lakes in the PMA and seven additional nearby counties that contain more than **2,000** surface acres. The additional seven counties include Lake,

TABLE III-3

Freshwater Lakes in California Allowing Motor Boats,

With More Than 2,000 Surface Acres[1]

Surface Acres	Lakes	Percent of Total
2,000 to 4,999	38	55.1%
5,000 to 9,999	11	15.9%
10,000 to 14,999	7	10.1%
15,000 to 19,999	2	2.9%
20,000 to 24,999	5	7.2%
25,000 to 49,999	4	5.8%
50,000 or more	2	2.9%
Total	69	100.0%

[1] Does not include the Sacramento Delta.

Source: "California's Greatest Lakes" and "California Lakes," CA Outdoors, 2015.

TABLE III-4

Freshwater Lakes in California Allowing Motor Boats,

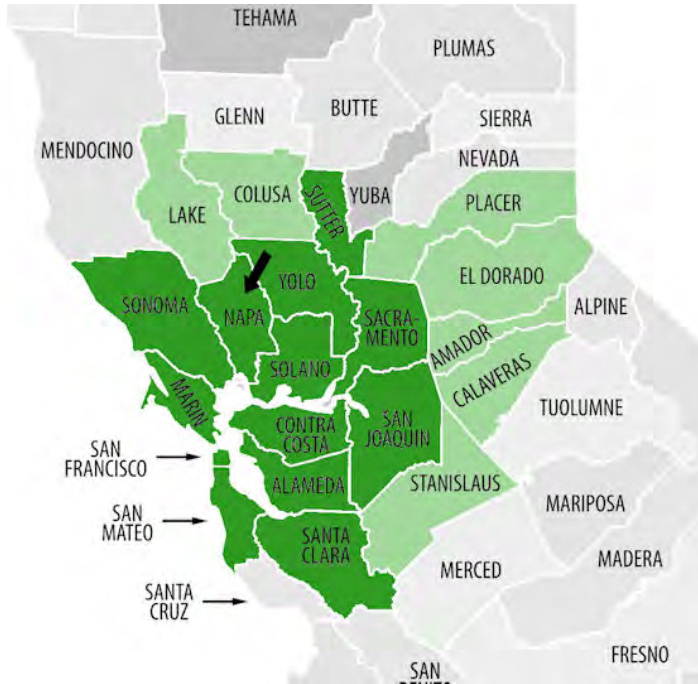
With More Than 15,000 Surface Acres[1]

		Surface	Percent	Miles From:		
Lake	County	Acres	of Total	Sacramento	San Francisco	San Jose
Lake Tahoe	El Dorado	122,000	36.6%	109	204	237
Clear Lake	Lake	43,800	13.1%	101	109	140
Lake Shasta	Shasta	29,740	8.9%	138	225	255
Lake Almanor	Plumas	28,257	8.5%	164	267	299
Lake Pillsbury	Lake	27,000	8.1%	158	150	201
Clear Lake Reservoir	Modoc	24,800	7.4%	317	372	402
Eagle Lake	Lassen	21,500	6.4%	215	317	350
Lake Berryessa	**Napa**	**20,700**	**6.2%**	**65**	**80**	**111**
Lake Oroville	Butte	15,805	4.7%	80	163	195
Total		333,602	100.0%			
Average		37,069		150	208	244

[1] Does not include the Sacramento Delta.

Source: "California's Greatest Lakes" and "California Lakes," CA Outdoors, 2015.

Colusa, Placer, El Dorado, Amador, Calaveras and Stanislaus. This wider area is shown on the map below in lighter green shading.



The additional 15 smaller lakes (along with Lake Berryessa) are listed in Table III-5. They are mentioned because they do provide water-oriented outdoor recreation activities, and perhaps are competition for Lake Berryessa.

The 16 lakes include four in the PMA (including Lake Berryessa itself). Another one is the Sacramento River Delta. While not a lake, it does offer extensive boating, camping and fishing opportunities. The other two are Lake Sonoma in Sonoma County and Folsom Lake in Sacramento County. Both are considerably smaller than Lake Berryessa.

The other 12 lakes with over 2,000 acres are to the north (three in Lake County), east (two in El Dorado County and four in Calaveras County) and to the southeast (three in Stanislaus County). They provide competition to Lake Berryessa, but for the most part, are smaller and more distant from the main population centers.

The 14 true lakes (excluding Lake Berryessa and the Delta) with more than 2,000 acres contain 271,356 total surface acres, for an average of 18,090 (Table III-6). Lake Tahoe with 122,000, Clear Lake with 43,800 and Lake Pillsbury with 27,000 are the only ones larger than Lake Berryessa (20,700). Six contain less than 5,000 surface acres. Within the PMA, Folsom Lake contains 11,450 surface acres, and Lake Sonoma contains 3,600.

The 14 lakes contain 1,135 miles of shoreline, for an average of 76. The Delta is reported to have 1,000 miles of shoreline. Lake Berryessa with 165 miles has more

TABLE III-5

Freshwater Lakes, Allowing Boating, Over 2,000 Surface Acres,

20 Counties Surrounding Lake Berryessa

				Miles From:		
Lake	County	Owner	Operator	Sacramento	San Francisco	San Jose
			A. PMA			
Lake Berryessa	**Napa**	**Bureau of Reclamation**	**Napa County**	**65**	**84**	**109**
Folsom Lake	Sacramento	Bureau of Reclamation	California State Parks	25	112	150
Lake Sonoma	Sonoma	US Army Corps of Engineers	US Army Corps of Engineers	140	97	142
Sacramento River Delta	Sacramento, et al.	n/a	n/a	57	68	100
			B. 7 Surrounding Counties			
Camanche Reservoir	Calaveras	East Bay Municipal Utility District	California Parks Company	30	119	116
Clear Lake	Lake	n/a	n/a	101	90	149
Indian Valley Reservoir	Lake	Bureau of Land Management	Bureau of Land Management	96	152	184
Lake Pillsbury	Lake	US Forest Service	US Forest/Pacific Gas and Electric	158	150	201
Lake Tahoe	El Dorado	n/a	n/a	109	204	237
Modesto Reservoir	Stanislaus	Stanislaus County	Stanislaus County/“concessionaires”	92	112	109
New Hogan Lake	Calaveras	US Army Corps of Engineers	US Army Corps of Engineers	59	118	115
New Melones Reservoir	Calaveras	Bureau of Reclamation	Bureau of Reclamation	85	141	138
Pardee Reservoir	Calaveras	East Bay Municipal Utility District	Pardee Lake Recreation	55	123	121
Turlock Lake	Stanislaus	State of California	American Land and Leisure	96	116	113
Union Valley Reservoir	El Dorado	US National Forest	US Forest Service	82	165	199
Woodward Reservoir	Stanislaus	Stanislaus County	Stanislaus County/“concessionaires”	77	101	98
Average				83	122	143

Source: “California’s Greatest Lakes” and “California Lakes,” CA Outdoors, 2015.

TABLE III-6

Freshwater Lakes, Allowing Boating, Over 2,000 Surface Acres,

20 Counties Surrounding Lake Berryessa

Lake	Surface Acres	Miles of Shoreline	Campground Sites
	A. PMA		
Lake Berryessa	**20,700**	**165**	**--**
Folsom Lake	11,450	74	164
Lake Sonoma	3,600	53	198
Sacramento River Delta	n/a	1,000	575
	B. 7 Surrounding Counties		
Camanche Reservoir	7,700	53	368
Clear Lake	43,800	127	223
Indian Valley Reservoir	4,000	22	6
Lake Pillsbury	27,000	65	39
Lake Tahoe	122,000	71	592
Modesto Reservoir	3,800	160	170
New Hogan Lake	4,410	45	206
New Melones Reservoir	12,500	100	278
Pardee Reservoir	2,134	56	202
Turlock Lake	3,260	26	63
Union Valley Reservoir	2,575	23	222
Woodward Reservoir	2,427	94	220
Total	271,356	1,135	3,526
Average	18,090	76	235

Source: "California's Greatest Lakes" and "California Lakes," CA Outdoors, 2015.

shoreline than any of the others. Only three others have more than 100 miles. Some 10 have less than 75 miles. Folsom Lake has 74 miles, and Lake Sonoma has 53.

There are 3,526 campground sites around the 15 lakes (including the Delta, but excluding Lake Berryessa). Campground sites are found at all 15 lakes. They range in number from only six at Indian Valley Reservoir to 592 at Lake Tahoe. The average is 235. There are 164 at Folsom Lake, 198 at Lake Sonoma and 575 in the Delta.

Table III-7 shows the extent of services available at the 15 water bodies in the 20 counties surrounding Lake Berryessa (excluding Lake Berryessa, but including the

TABLE III-7

Services at Freshwater Lakes, Allowing Boating, Over 2,000 Surface Acres, 20 Counties Surrounding Lake Berryessa

											Defined Areas for:		
Lake	Boat Rentals	Horse-back Riding	Hiking/ Biking/ Walking Trails	Off-Roading	Outdoor Amphi-theatre	Conference Facilities	Food Services	Convenience Store	Organized Bird Watching	Shooting/ Clay Facilities	Motor Boats	Kayaking etc.	Jet Skiing
A. PMA													
Folsom Lake	yes	yes	yes	no	no	no	yes	yes	no	no	yes	yes	yes
Lake Sonoma	yes	yes	yes	no	no	no	no	yes	no	no	yes	yes	yes
Sacramento River Delta	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes	yes	yes
Total	3	3	3	1	0	0	2	3	1	1	3	3	3
B. 7 Surrounding Counties													
Camanche Reservoir	yes	yes	yes	no	yes	yes	yes	yes	no	no	yes	yes	yes
Clear Lake	yes	yes	yes	no	no	no	yes	yes	no	no	yes	yes	yes
Indian Valley Reservoir	no	yes	yes	no	no	no	no	yes	no	no	no	no	no
Lake Pillsbury	yes	yes	yes	yes	no	no	no	yes	no	no	yes	yes	yes
Lake Tahoe	yes	yes	yes	no	no	yes	yes	yes	no	no	yes	yes	yes
Modesto Reservoir	no	no	no	no	no	no	no	no	no	no	yes	yes	yes
New Hogan Lake	no	yes	yes	no	no	no	no	no	no	no	yes	yes	yes
New Melones Reservoir	yes	yes	yes	yes	yes	no	yes	yes	yes	no	yes	yes	yes
Pardee Reservoir	yes	no	no	no	no	no	yes	yes	no	no	no	no	no
Turlock Lake	no	no	no	no	no	no	no	no	no	no	yes	yes	yes
Union Valley Reservoir	no	yes	yes	no	no	no	yes	no	no	no	no	no	no
Woodward Reservoir	no	yes	yes	no	no	no	no	no	no	no	no	no	no
Total	6	9	9	2	2	2	6	7	1	0	8	8	8
Total	9	12	12	3	2	2	8	10	2	1	11	11	11

Source: Telephone survey conducted by Ragatz Associates, March 2017.

Delta). These services could be anywhere around the lakes, and not just in the campgrounds, as discussed in a following section.

All listed services are ones that possibly could be found at Lake Berryessa. Many of the services are infrequently found in the 15 lakes, as summarized below.

service	number of lakes providing the service
horseback riding	12
hiking/biking/walking trails	12
defined areas for different types of boating activities	11
convenience store	10
boat rentals	9
food services	8
off-roading vehicles	3
outdoor amphitheater	2
conference facilities	2
organized bird watching	2
shooting/clay facilities	1

IV. MARINAS

There appear to be 73 “marinas” in the 20 counties surrounding Lake Berryessa (the same 20 counties previously referred to in the section on freshwater lakes allowing motor boats). The term “marina” is not well-defined, but the list of 73 is as accurate as possible. They were determined by reviewing appropriate Yellow Page and internet listings. The listings do not include Lake Berryessa, but do include the Delta. The 73 marinas are shown in Table III-8.

There are only two marinas in the PMA on lakes, including ones on Folsom Lake and Lake Sonoma. However, there are 54 in the Delta, representing about three-quarters of all 73 marinas in the 20-county area. Of the 15 lakes (including the Delta), only seven have a “marina,” although all have boat ramps. Besides the 54 marinas in the Delta, there are another 11 at Lake Tahoe for a total of 65 on just two water bodies, representing 89.0 percent of the total.

TABLE III-8

Listed Marinas, 20 Counties Surrounding Lake Berryessa

			Number of Slips			Annual
Marina	County	Lake	Uncovered-Wet	Covered	Total	Occupancy
A. PMA						
Folsom Lake Marina	Sacramento	Folsom Lake	674	175	849	100%
Lake Sonoma Marina	Sonoma	Lake Sonoma	360	0	360	30%
Alamar Marina	Sacramento, et al.	Delta	40	0	40	95%
Anchor Marina	Sacramento, et al.	Delta	64	20	84	100%
Antioch Marina	Sacramento, et al.	Delta	310	0	310	57%
Arrowhead Marina	Sacramento, et al.	Delta	100	25	125	60%
B&W Resort Marina	Sacramento, et al.	Delta	69	0	69	75%
Bethel Harbor	Sacramento, et al.	Delta	85	450	535	90%
Big Break Marina	Sacramento, et al.	Delta	uk	uk	uk	uk
Boathouse Marina	Sacramento, et al.	Delta	63	48	111	75%
Bullfrog Landing	Sacramento, et al.	Delta	49	0	49	50%
Cliffs Marina	Sacramento, et al.	Delta	120	0	120	40%
Dagmar's Landing	Sacramento, et al.	Delta	30	0	30	75%
Delta Marina	Sacramento, et al.	Delta	250	0	250	95%
Discovery Bay	Sacramento, et al.	Delta	266	200	466	uk
Driftwood Marina	Sacramento, et al.	Delta	212	0	212	75%
Eddos Harbor	Sacramento, et al.	Delta	44	0	44	75%
Emerald Point	Sacramento, et al.	Delta	46	0	46	40%
5-Star Marina	Sacramento, et al.	Delta	0	100	100	60%
Hennis Marina	Sacramento, et al.	Delta	8	209	217	uk
Korth's Pirate Lair	Sacramento, et al.	Delta	212	0	212	97%
Lauritzen Yacht Harbor	Sacramento, et al.	Delta	137	325	462	80%
Lazy M Marina	Sacramento, et al.	Delta	uk	uk	uk	uk
Martin's Sherman Lake	Sacramento, et al.	Delta	42	0	42	50%
New Bridge Marina	Sacramento, et al.	Delta	225	0	225	80%
New Life Marina	Sacramento, et al.	Delta	uk	uk	uk	uk
Owl Harbor Marina	Sacramento, et al.	Delta	200	0	200	92%
Oxbow Marina	Sacramento, et al.	Delta	423	0	423	80%
Paradise Point Marina	Sacramento, et al.	Delta	uk	uk	uk	uk
Perry's Boat Harbor	Sacramento, et al.	Delta	uk	uk	uk	uk
Pittsburg Municipal Marina	Sacramento, et al.	Delta	575	0	575	73%
River View Marina	Sacramento, et al.	Delta	80	0	80	75%
Riverbank Marina	Sacramento, et al.	Delta	175	0	175	67%
Riverboat Marina	Sacramento, et al.	Delta	108	20	128	90%
Riverpointe Landing	Sacramento, et al.	Delta	135	165	300	90%
Rivers End Marina	Sacramento, et al.	Delta	350	0	350	uk
Russo's Marina	Sacramento, et al.	Delta	0	224	224	uk
Sacramento City Marina	Sacramento, et al.	Delta	475	0	475	78%
Sherman Lake Resort	Sacramento, et al.	Delta	42	0	42	50%
Sherwood Harbor Marina	Sacramento, et al.	Delta	130	0	130	95%
Snug Harbor Marina	Sacramento, et al.	Delta	35	15	50	15%

Marina	County	Lake	Number of Slips Uncovered-Wet	Covered	Total	Annual Occupancy
Spindrift Marina	Sacramento, et al.	Delta	130	0	130	50%
Stockton Sailing Club	Sacramento, et al.	Delta	300	20	320	65%
Sugar Barge Marina	Sacramento, et al.	Delta	50	100	150	60%
Suisun City Marina	Sacramento, et al.	Delta	160	0	160	76%
Tiki Lagoon Marina	Sacramento, et al.	Delta	200	0	200	uk
Tower Park Marina	Sacramento, et al.	Delta	282	162	444	80%
Tracy Oasis Marina	Sacramento, et al.	Delta	74	32	106	48%
Turner Cut Resort	Sacramento, et al.	Delta	uk	uk	uk	uk
Viera's Resort	Sacramento, et al.	Delta	90	0	90	90%
Village West Marina	Sacramento, et al.	Delta	680	85	765	73%
Walnut Grove Marina	Sacramento, et al.	Delta	475	110	585	98%
Whiskey Slough Marina	Sacramento, et al.	Delta	0	300	300	100%
Willow Berm Marina	Sacramento, et al.	Delta	350	0	350	91%
Wimpy's Marina	Sacramento, et al.	Delta	20	0	20	20%
Windmill Cove Marina	Sacramento, et al.	Delta	21	0	21	uk
Total			8,966 (+ uk)	2,785 (+ uk)	11,751 (+ uk)	--
Average			179	56	235	72%
		B. 7 Surrounding Counties				
Camp Richardson	El Dorado	Lake Tahoe	66	20	86	75%
Clear Lake Marina	Lake	Clear Lake	9	0	9	70%
Homewood High Marina	El Dorado	Lake Tahoe	uk	uk	uk	uk
Lake Pardee Marina	Calaveras	Pardee Res.	60	15	75	100%
Lake Pillsbury Marina	Lake	Lake Pillsbury	15	0	15	uk
Lakeside Marina	El Dorado	Lake Tahoe	uk	uk	uk	uk
New Melones Lake Marina	Calaveras	New Melones	120	0	120	65%
North Shore Marina	Calaveras	Camanche Res.	40	0	40	50%
North Tahoe Marina	El Dorado	Lake Tahoe	uk	uk	uk	uk
Obexers Boat Company	El Dorado	Lake Tahoe	uk	uk	uk	uk
Sierra Boat Company	El Dorado	Lake Tahoe	120	450	570	100%
Ski Run Marina	El Dorado	Lake Tahoe	uk	uk	uk	uk
South Shore Marina	Calaveras	Camanche Res.	75	0	75	80%
Sunnyside Marina	El Dorado	Lake Tahoe	uk	uk	uk	uk
Tahoe Marina City	El Dorado	Lake Tahoe	81	0	81	95%
Tahoe Keys Marina	El Dorado	Lake Tahoe	280	0	280	20%
Timber Cove Marina	El Dorado	Lake Tahoe	uk	uk	uk	uk
Total			866 (+ uk)	485 (+ uk)	1,351 (+ uk)	--
Average			86	48	134	73%
Total			9,832 (+ uk)	3,270 (+ uk)	13,102 (+ uk)	
Average			164	54	218	72%

Source: Telephone survey conducted by Ragatz Associates, March 2017.

Not all 73 marinas responded to a telephone survey conducted as part of this report. For the 60 who did respond, there were a total of 13,102 slips, including 9,832 "uncovered wet slips" and 3,270 covered slips. The average marina has 218 slips, including 164 wet slips and 54 covered slips. Only 36.7 percent have covered slips, while the vast majority have wet slips.

Some 20.0 percent have less than 50 slips of any type, while 63.3 percent have more than 100, and 31.7 percent have more than 250.

If the average number of slips in the 60 responding marinas is generalized to all 73 marinas, it means that about 15,900 total boat slips are found in the 20 surrounding counties. But, the vast majority are in the Delta or Lake Tahoe. There are only 1,209 slips on actual lakes in the PMA, and roughly 3,500 in the entire 20 counties, including Lake Tahoe.

The estimated 15,900 total boat slips in the 20 counties service 185,517 pleasure boats registered in the PMA, as well as thousands of other boats beyond the PMA.

The average **year-round** occupancy rate in the 53 marinas reporting this information is a good 72 percent. This includes 72 percent in the PMA (including the Delta) and 73 percent in the other seven counties. The year-round occupancy rate was reported to be 80 percent or higher in 41.5 percent of the marinas and below 50 percent in 13.2 percent.

Table III-9 shows selected amenities and services in the 73 marinas. They appear not to be extensive:

- 24.7 percent do not provide fuel service
- 31.5 percent do not have an accompanying boat ramp
- 45.2 percent do not have a convenience store
- 53.4 percent do not provide food service
- 67.1 percent do not provide boat rentals

Only nine marinas provide all five services. Three do not provide any of the five services, and probably should not be considered true "marinas," nor perhaps should the 18 that do not provide fuel service.

TABLE III-9

Characteristics of Marinas, 20 Counties Surrounding Lake Berryessa

Marina	Fuel Service	Boat Rentals	Convenience Store	Food Service	Boat Ramps
		A. PMA			
Folsom Lake Marina	yes	yes	no	no	yes
Lake Sonoma Marina	yes	yes	yes	yes	yes
Alamar Marina	no	no	no	yes	no
Anchor Marina	yes	no	yes	no	yes
Antioch Marina	yes	no	no	no	yes
Arrowhead Marina	no	no	yes	no	yes
B&W Resort Marina	yes	no	yes	no	yes
Bethel Harbor	yes	no	yes	no	yes
Big Break Marina	yes	yes	yes	no	yes
Boathouse Marina	yes	no	no	yes	yes
Bullfrog Landing	yes	no	yes	no	no
Cliffs Marina	yes	no	yes	no	no
Dagmar’s Landing	no	no	yes	no	no
Delta Marina	yes	yes	yes	yes	yes
Discovery Bay	yes	no	no	no	yes
Driftwood Marina	yes	yes	no	no	no
Eddos Harbor	yes	no	yes	yes	yes
Emerald Point	yes	no	yes	no	no
5-Star Marina	no	no	no	no	no
Hennis Marina	no	no	no	no	no
Korth’s Pirate Lair	yes	no	no	yes	yes
Lauritzen Yacht Harbor	yes	no	no	no	yes
Lazy M Marina	yes	no	no	no	yes
Martin’s Sherman Lake	no	no	yes	yes	no
New Bridge Marina	yes	no	no	no	no
New Life Marina	yes	no	no	no	no
Owl Harbor Marina	no	no	no	no	no
Oxbow Marina	yes	no	no	no	yes
Paradise Point Marina	yes	yes	yes	yes	yes
Perry’s Boat Harbor	no	no	no	no	yes
Pittsburg Municipal Marina	yes	yes	no	yes	yes
River View Marina	no	no	no	no	no
Riverbank Marina	no	no	yes	yes	no
Riverboat Marina	no	no	yes	yes	no
Riverpointe Landing	yes	no	no	no	yes
Rivers End Marina	no	no	yes	no	yes
Russo’s Marina	yes	yes	yes	no	yes
Sacramento City Marina	yes	no	yes	no	yes
Sherman Lake Resort	no	no	yes	no	no
Sherwood Harbor Marina	yes	no	yes	yes	no
Snug Harbor Marina	yes	no	yes	no	yes

Marina	Fuel Service	Boat Rentals	Convenience Store	Food Service	Boat Ramps
Spindrift Marina	no	no	yes	yes	no
Stockton Sailing Club	no	no	no	yes	yes
Sugar Barge Marina	yes	yes	yes	yes	yes
Suisun City Marina	yes	no	no	no	yes
Tiki Lagoon Marina	yes	yes	yes	no	yes
Tower Park Marina	yes	yes	yes	yes	yes
Tracy Oasis Marina	yes	no	yes	yes	yes
Turner Cut Resort	yes	no	no	yes	yes
Viera's Resort	yes	no	yes	yes	yes
Village West Marina	yes	no	yes	yes	yes
Walnut Grove Marina	yes	no	yes	no	yes
Whiskey Slough Marina	no	no	no	no	yes
Willow Berm Marina	yes	no	no	no	no
Wimpy's Marina	yes	no	yes	yes	yes
Windmill Cove Marina	no	no	yes	yes	yes
Total	39	11	32	22	37
B. 7 Surrounding Counties					
Camp Richardson	yes	yes	yes	yes	yes
Clear Lake Marina	no	no	no	no	yes
Homewood High Marina	yes	yes	no	yes	yes
Lake Pardee Marina	yes	yes	yes	yes	yes
Lake Pillsbury Marina	yes	yes	yes	no	yes
Lakeside Marina	yes	yes	no	yes	yes
New Melones Lake Marina	yes	yes	yes	no	yes
North Shore Marina	yes	yes	yes	yes	yes
North Tahoe Marina	yes	no	no	yes	yes
Obexers Boat Company	yes	yes	yes	yes	yes
Sierra Boat Company	yes	no	no	no	no
Ski Run Marina	yes	yes	yes	yes	no
South Shore Marina	yes	yes	yes	no	yes
Sunnyside Marina	yes	no	no	yes	no
Tahoe Marina City	yes	yes	no	yes	no
Tahoe Keys Marina	yes	yes	no	yes	yes
Timber Cove Marina	yes	yes	no	yes	yes
Total	16	13	8	12	13
Total	55	24	40	34	50

Source: Various

V. PLEASURE BOAT REGISTRATIONS

There are 182,517 pleasure motor boats registered in the PMA, as shown in Table III-10. This means that 4.9 percent of all households in the area own a motor boat.

The percentage of households owning a motor boat ranges widely among the 13 counties. It is lowest in the most urban counties, e.g., only 0.9 percent in San Francisco County, 3.1 percent in both San Mateo and Santa Clara Counties, and 3.3 percent in Alameda County. On the other hand, it is significantly higher in the more rural counties, e.g., 9.3 percent in Napa County, 9.7 percent in San Joaquin County and 14.7 percent in Sutter County. Almost one-half (47.3 percent) of the 182,517 registrations are in just three counties – San Joaquin with 21,496, Contra Costa with 28,641 and Sacramento with 36,123.

VI. CAMPGROUNDS

Campgrounds in the 20 Surrounding Counties

As previously stated, there are 15 freshwater lakes (excluding Lake Berryessa but including the Delta), with over 2,000 surface acres and allowing motor boats in the 20 surrounding counties. There are 44 campgrounds at the 15 lakes, as shown in Table III-11.

Ten of the 44 are in the PMA, including seven in the Delta. Two are at Folsom Lake, and one is at Lake Sonoma. This means that only three lake-oriented campgrounds are in the PMA (excluding Lake Berryessa).

The other 34 campgrounds are concentrated in three surrounding counties, including Lake County (10) to the north of Lake Berryessa, El Dorado County (14) and Calaveras County (seven) to the east, and Stanislaus County (three) to the south.

There are 3,160 campsites in the 44 campgrounds. The average campground contains 72 sites, including four primitive sites, 61 tent/RV sites without hookups, and only seven sites with RV hookups. Only eight of the 44 have any sites with RV hookups.

TABLE III-10

Pleasure Boat Registrations With State of California Department of Motor Vehicles, PMA, January 2017

County	Pleasure Boat Registrations	Percent of Total	Total Households	Percent of Households
Alameda	18,383	10.1%	560,658	3.3%
Contra Costa	28,641	15.7%	386,862	7.4%
Marin	6,548	3.6%	105,403	6.2%
Napa	4,649	2.5%	50,113	9.3%
Sacramento	36,123	19.8%	526,662	6.9%
San Francisco	3,136	1.7%	353,900	0.9%
San Joaquin	21,496	11.8%	222,146	9.7%
San Mateo	8,086	4.4%	264,701	3.1%
Santa Clara	19,164	10.5%	623,853	3.1%
Solano	12,142	6.7%	144,306	8.4%
Sonoma	14,489	7.9%	189,405	7.6%
Sutter	4,656	2.6%	31,659	14.7%
Yolo	5,004	2.7%	71,709	7.0%
Total	182,517	100.0%	3,531,377	4.9%

Source: "State of California Department of Motor Vehicles Total Vessel Registrations by County as of January 31, 2017," DMV, February 1, 2017, and *Demographics Now.*

Almost half of the campgrounds (45.5 percent) have less than 50 sites, while only 25.0 percent have more than 100.

The 10 campgrounds in the PMA only contain 937 campsites. Some 61.4 percent are in the Delta. There are only 362 campsites on lakes in the PMA, including 164 on Folsom Lake and 198 on Lake Sonoma. Some 32.0 percent of the campsites in the area are in just one campground – Stockton Delta KOA.

Table III-11 shows the scenic ratings for the 44 campgrounds, as designated by *West Coast RV Camping*. The average rating for the 44 campgrounds is 7.5, with 10 being the highest. Some 11 are below 7, while only 12 are at the 9 or 10 level.

TABLE III-11

Number of Campsites in Lake-Oriented Campgrounds, 20 Counties Surrounding Lake Berryessa

Lake	County	Campground	Campsites: Primitive	No Hookups Tents/RVs	Hookups	Total	Scenic Rating
A. PMA							
Folsom Lake	Sacramento	Peninsula	0	100	0	100	6
		Beal's Point	0	44	20	64	6
Lake Sonoma	Sonoma	Lake Sonoma Recreation Area	103	95	0	198	8
Sacramento River Delta	Sacramento	Sandy Beach Regional Park	0	42	0	42	6
		Delta Marina Yacht Harbor and RV Park	0	0	25	25	6
		Brannan Island State Recreation Area	0	90	12	102	7
		Snug Harbor Resort	10	0	40	50	7
		Westgate Landing County Park	0	14	0	14	6
		Stockton Delta KOA	0	0	300	300	6
		Eddos Harbor and RV Park	0	0	42	42	6
B. 7 Surrounding Counties							
Camanche Reservoir	Calaveras	Camanche Lake North	0	219	0	219	7
		Camanche Lake South	0	149	0	149	7
Clear Lake	Lake	Clear Lake State Park	0	147	0	147	9
		Glenhaven Beach	0	0	15	15	6
		Edgewater	0	0	61	61	7
Indian Valley Reservoir	Lake	Blue Oak	0	6	0	6	7
Lake Pillsbury	Lake	Pogie Point	0	50	0	50	7
		Sunset Pointe	0	54	0	54	7
		Oak Flat	0	18	0	18	6
		Navy Camp	0	20	0	20	7

Lake	County	Campground	Campsites				Scenic Rating
			Primitive	No Hookups Tents/RVs	Hookups	Total	
		Fuller Grove	0	30	0	30	7
		Lake Pillsbury Resort	0	39	2	41	6
Lake Tahoe	El Dorado	Lake Forest	0	20	0	20	8
		Tahoe State Recreation Area	0	24	0	29	9
		William Kent	0	81	0	81	8
		Kaspian	0	9	0	9	7
		Ed Z'Berg Sugar Pine	0	125	0	125	10
		Meeks Bay	0	36	0	36	9
		Meeks Bay Resort	0	14	22	36	7
		D.L. Bliss State Park	0	147	0	147	10
		Emerald Bay	20	94	0	114	10
Modesto Reservoir	Stanislaus	Modesto Reservoir Regional Park	0	36	134	170	7
New Hogan Lake	Calaveras	Acorn Camp	30	127	0	157	7
		Oak Knoll	0	49	0	49	7
New Melones Reservoir	Calaveras	Glory Hole	20	122	0	142	7
		Tuttletown	15	156	0	171	7
Pardee Reservoir	Calaveras	Lake Pardee Marina	0	190	12	202	7
Turlock Lake	Stanislaus	Turlock Lake State Recreation Area	0	63	0	63	6
Union Valley Reservoir	El Dorado	West Point	0	8	0	8	9
		Wolf Creek	0	42	0	42	9
		Camino Cove	0	32	0	32	10
		Yellowjacket	0	40	0	40	8
		Wench Creek	0	100	0	100	7
Woodward Reservoir	Stanislaus	Woodward Reservoir State Park	0	180	40	220	7
Total			188	2,666	306	3,160	

Source: *West Coast RV Camping: The Complete Guide to More Than 2,300 RV Parks and Campgrounds in Washington, Oregon and California*. Tom Stienstra, Publishers Group West, 2015.

Amenities at the 44 Campgrounds

Some 31 of the 44 campgrounds are operated by public entities, while 13 are operated by concessionaires for public entities or by private entities (Table III-12).

Amenities are limited:

- Only two have a swimming pool, and only three have a clubhouse.
- Food service is found at only eight, and a store at only 14.
- Only six have cabins for rent. And, the total number of cabins is only 67.
- Boating facilities also are limited. Only 23 have a boat ramp/launch, while 15 report being "near" such a facility. Marinas are found in eight, but for the most part, appear to be small and not highly serviced.

All Campgrounds in the PMA

Within the PMA itself, there are 53 campgrounds of all types. This includes the previously discussed 10 on lakes or the Delta. They contain 4,887 campsites (Table III-13). The average campground has 92 campsites, including 12 primitive sites, 39 tent/RV sites without hookups, and 41 RV sites with hookups. There are 661 primitive sites (13.5 percent), 2,068 tent/RV sites without hookups (42.3 percent), and 2,158 RV sites with hookups (44.2 percent).

A Survey of Campgrounds in the PMA

A telephone survey was conducted of the 53 campgrounds in the PMA. The campgrounds included the ones on the lakes and the Delta, but most were not on lakes. Purposes of the survey were to obtain additional data and insights on campgrounds': (1) recent financial performances; and (2) general reactions toward market conditions. Responses were obtained from 27 campgrounds. Most of the other 26 were not yet open for the season, while several declined to participate.

Respondents were first asked about their occupancy rates in summer and winter. The average summer occupancy was a high 89 percent. Only one reported it to be under 80 percent. Several said it was over 95 percent. The average rate in winter declined to 51 percent. Five said it was under 40 percent, while six said it was over 60 percent.

TABLE III-12

Amenities at Lake-Oriented Campgrounds, 20 Counties Surrounding Lake Berryessa

Lake	Campground	Operator	Swimming Pool	Clubhouse	Food Service	Cabins	Store	Marina	Boat Ramps
				A. PMA					
Folsom	Peninsula	BOR/State	no	no	yes	no	yes	near	near
	Beal's Point	BOR/State	no	no	yes	no	yes	near	near
Lake Sonoma	Lake Sonoma Rec. Area	Army Corps	no	no	no	no	no	no	near
Sacramento River Delta	Sandy Beach	County	no	no	no	no	no	no	yes
	Delta Marina	private	no	no	yes	no	yes	yes	yes
	Brannan Island	State	no	no	no	no	no	no	yes
	Snug Harbor	private	no	no	no	yes	yes	yes	yes
	Westgate Landing	County	no	no	no	no	no	no	no
	Stockton Delta KOA	private	yes	yes	yes	yes	yes	yes	yes
	Eddos Harbor	private	no	no	no	no	yes	no	yes
				B. 7 Surrounding Counties					
Camanche	Camanche Lake North	concession	no	no	yes	15	yes	yes	yes
	Camanche Lake South	concession	no	no	no	7	yes	yes	yes
Clear Lake	Clear Lake State Park	State	no	no	no	8	no	no	near
	Glenhaven Beach	private	no	yes	no	22	yes	yes	yes
	Edgewater	private	yes	yes	no	no	yes	no	yes
Indian Valley	Blue Oak	BLM	no	no	no	no	no	no	yes
Lake Pillsbury	Pogie Point	USFS	no	no	no	no	no	near	near
	Sunset Pointe	USFS	no	no	no	no	no	near	near
	Oak Flat	USFS	no	no	no	no	no	near	near
	Navy Camp	USFS	no	no	no	no	no	near	near
	Fuller Grove	USFS	no	no	no	no	no	near	near

Lake	Campground	Operator	Swimming Pool	Clubhouse	Food Service	Cabins	Store	Marina	Boat Ramps
	Lake Pillsbury Resort	USFS	no	no	no	10	yes	yes	yes
Lake Tahoe	Lake Forest	Tahoe City	no	no	no	no	no	no	near
	Tahoe State Rec. Area	State	no	no	no	no	no	no	near
	William Kent	LTBMU	no	no	no	no	no	no	near
	Kaspian	State	no	no	no	no	no	no	no
	Ed Z'Berg Sugar Pine	State	no	no	no	no	no	no	no
	Meeks Bay	LTBMU	no	no	no	no	no	no	no
	Meeks Bay Resort	private	no	no	yes	5	yes	no	yes
	D.L. Bliss State Park	State	no	no	no	no	no	no	no
	Emerald Bay	State	no	no	no	no	no	no	yes
Modesto	Modesto Res. Reg. Park	MRRP	no	no	no	no	no	no	yes
New Hogan	Acorn Camp	Army Corps	no	no	no	no	no	no	yes
	Oak Knoll	Army Corps	no	no	no	no	no	no	near
New Melones	Glory Hole	BOR	no	no	no	no	no	yes	near
	Tuttletown	BOR	no	no	no	no	no	no	yes
Pardee	Lake Pardee Marina	concession	no	no	yes	no	yes	yes	yes
Turlock Lake	Turlock Lake St. Rec. Area	State	no	no	no	no	no	no	near
Union Valley	West Point	USFS	no	no	no	no	no	no	yes
	Wolf Creek	USFS	no	no	no	no	no	no	no
	Camino Cove	USFS	no	no	no	no	no	no	no
	Yellowjacket	USFS	no	no	no	no	no	no	yes
	Wench Creek	USFS	no	no	no	no	no	no	no
Woodward	Woodward Res. St. Park	County	no	no	no	no	no	no	yes
Total			2	2	8	6 (67)	14	8 in 7 near	23 in 15 near

Source: *West Coast RV Camping: The Complete Guide to More Than 2,300 RV Parks and Campgrounds in Washington, Oregon and California*. Tom Stienstra, Publishers Group West, 2015, and telephone survey conducted by Ragatz Associates, March 2017.

TABLE III-13

Characteristics of Campgrounds, PMA

Campgrounds	Number		
Public operated	33		
Private operated	20		
Total	53		
Campsites	**Number**	**Average**	**Percent of Total**
Type			
Primitive	661	12	13.5%
No hookups	2,068	39	42.3%
RV hookups	2,158	41	44.2%
Total	4,887	92	100.0%

Source: *West Coast RV Camping: The Complete Guide to More Than 2,300 RV Parks and Campgrounds in Washington, Oregon and California*. Tom Stienstra, Publishers Group West, 2015.

The average year-round occupancy rate was 73 percent. About one-half of the campgrounds close in winter.

Table III-14 lists respondents' comments in regard to several qualitative questions. The reader is encouraged to carefully review these comments, as they provide significant insights into the local campground industry and what might be planned for at Lake Berryessa in order to satisfy market demand.

A preamble comment about the campgrounds: It appears most are relatively small, under-funded and not operated by companies with extensive experience in the campground and hospitality industries. As noted in a previous section, amenities and services are limited in the majority of the campgrounds. Even with such limitations, however, their occupancy rate is almost 90 percent in summer and over 70 percent year-round.

TABLE III-14

Results of Survey Conducted of 27 Campgrounds, 20 Counties Surrounding Lake Berryessa

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Beals Point	No recent trends; park is close to town; very lucky with location.	Bay Area, European, Canada, locals/baby boomers and minors, and younger in summer.	Clean sites.	Slow, we are a State Park and there is little to no funding available.	Business to baby boomers increased when we added new RV sites. Would like to add cabins and PODS for customers to sleep in. Running water is a plus.
Bodega Bay RV Park	Customers length of stay has changed. They want shorter stay options of 1 or 2 nights, or want to live here fulltime.	All ages, mostly baby-boomers. Beach attracts younger crowds. Come from Bay Area, Fresno, Canada, and some locals.	Clean sites is a must with easy access to on-site amenities, laundry and activities.		Continue to add more family activities and community feel, maintain existing facilities.
Brannan Island Recreation Area	None	Come from all over. All ages but mainly northern California.	They want access to Delta, hiking, biking. Bird watching is huge.	State run facility, so business is fairly good but never have funds we need for improvements.	Would like to add common play area for kids, like KOA's have. Would help family atmosphere. Boost community feel.
Bullfrog Pond	Customers want more containment, privacy, fences, preserve park.	Weekends/younger crowds, weekdays baby boomers. Come primarily from Bay Area, Sacramento, Windsor, Texas, some European, Canada, and Ukraine.	Clean sites, safe area.	IT advertising has helped promote and is inexpensive. Still not enough $$ to make updates we need consistently. Need more cash-flow. The rain this year has hurt.	Would add dog walking area to trails. Dogs currently not allowed.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Casini Ranch Family Campground	None that come to mind. Maybe larger sites.	Bay Area, Sacramento, Fresno, Canada (winter). All ages represented. Baby boomers come in winter. We have discounts. Summer is more middle-age crowd.	Customers want more access to cottages and cabins than we rent. They are booked consistently. Want to be close to river and water access. Want large wooded areas for shade and privacy.	We consistently have bookings and think we do a good job advertising and repeat customers. Money is always tight especially with repairs this year, rain damage.	Would add more sites with 50 amp hookup. Add basketball, soccer field, more activities for kids/families. Invest in a playground to bring in more age groups.
Delta Marina Yacht Harbor	Customers want larger spaces and higher amp.	We are near I-5 so easy access for people to just show up from Bay Area, Canada, and all over central California. All ages but mainly baby boomers. More kids and families in summer.	More activities for families.	Overall we do quite well with our location, but need more cash flow to add more sites. Repairs are costly and this year has been a strain due to weather. We have good staff but keeping them during winter is tough.	Would add more and larger sites with higher amp. Unfortunately that is not an option with our location but we know customers want it.
Dos Reis County Park	No new trends.	Baby boomers mostly, northern California, Canada, western US. Boomers either want 1 or 2 nights or extended long-term stays.	Clean, safe environment.		Would add more sites. We have to turn customers away. They want access to water. Would provide more access to lake and water related activities like fishing.
Dutcher Creek RV & Campground	No recent trends.	All ages but mostly over 50 crowd from northern California.	Our site is permanent residents so we are 100% full year-round. Our residents want laundry, showers, pet friendly, safe area. We do not offer social events.	We do very well since we only offer long-term 8 month lease and are 1/2 mile from 101. We have to turn people away. We struggle with keeping good employees and maintenance is very expensive. Need to charge more.	Would consider adding mobile homes.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Eddos Harbor and RV	People want to retire in RV parks now.	All ages over western US, but mainly retired and baby boomers.	Want access to fishing and water.	Difficult to keep up with business demands since we have very little time to dedicate and feels like we are always running to repair something. I would say that business is very good since we are close to water. Water is precious commodity.	I would find a buyer and retire. Too many demands here and not enough help. I would improve access on public roads/poor quality.
Gualala Point Regional Park	Everyone wants wi-fractional interest.	Bay Area, Fresno, Windsor, Sacramento (especially in summer), Canada, some European. All age groups but primarily retired and families.	Come for steelhead fishing.	Being close to town is good for business. We offer interactive programs that help our bottom line. People can sign up online. Much of our budget (50%) is dedicated to repairs and maintenance. Staffs have taken pay cuts.	We would add a boat launch, roof-top style for kayaks and canoes. We would add wi-fi, and a better utility sink. Budget is so tight, not able to do this now.
Hilton Park Family Campground	No changes.	Bay Area, Sacramento, all over Central Valley, some Canadians. Most age groups, but many baby boomers.	Want boating, shuttle to city, kayaking and tubing. We don't offer some of these. Customers want wineries.	Being close to water is good for business. Water is such a commodity and really helps our bottom line. We don't have much left over at the end of the month. Most is used for repairs. We have flooded four times this year.	We would expand family services, play areas. Would like more time in the day to clean each site. Need more staff.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Lake Sonoma Recreation Area/Liberty Glen RV Park	No recent trends/continue to want wi-fi.	All ages come here. Families from Bay Area, Sacramento, some Canadian and Europeans passing through.	Want access to hunting, fishing, boating. We have yoga sites, horseback and group sites. These are very popular	This year so far has been difficult. We cannot meet expectations due to flooding and repairs. All of the budget seems to be going to fixing things and we can't implement any of the new integrative programs we'd like. Our location for hunting brings in $$ but with all the rain it's been difficult.	We would like to get the water line fixed and are working on it now. We currently have no access to water.
Marin RV Park	Urban camping, they want high-end.	Every continent really, a lot of European, most spend the night while visiting SF. All ages stay here.	Want access to city, clean environment, showers, laundry.	Don't know, manager would have to answer, but I imagine with our location, amenities, access to city, that our performance is very good. We are full!	Our location is prime 10 miles North of Golden Gate. So can't think of anything we'd add.
Olema RV Resort & Campground	Requesting larger sites.	Bay Area, Canada, some European. All ages represented.	Want access to activities, clean site, shade, water.	We generally do very well and make a profit. 50% of that goes to repairs and upkeep. Staffing is an issue since we can't pay much and it's hard to keep good people. The rain this year has been awful so a lot more repairs needed.	Add a pool, need $$ to do that. Would add more family activities.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Pelican RV Park	Customers want firepits. We cannot offer. Firewood is always requested. Demand for healthier snacks. Customers want long-term stay options.	Mix of all ages, Bay Area, local, European (Germany, UK), Chile. Customers return year after year due to our location.	Want access to beach, pet friendly, wi-fi, propane, beer and wine.	We have new management as of April 2016 and that has helped. They are dedicated to maintaining a great site and offering new services. It's helped our bottom line. Having a beer and wine license helps business and our location near the beach, Pacific Coast Trail is great for business. We have hiking, biking.	Would add a pool. Would add more activities for families in clubhouse, and larger general store.
Porto Bodega Marina & RV	No new trends.	Bay Area. All ages but many retired and baby boomers.	Want access to restaurants, within walking distance. Want more amenities and services. Games, events, things for kids.	Our location is one of the best so we stay booked and business is great. Even with the rain people still camp here. The views are incredible and our location keeps them coming back year after year. There really isn't much we need. Much of our budget does go to repairs and maintenance, but we still make a profit. We should probably increase fees.	Would add dry sites and make full-hookups.
Rancho Seco Recreation Area	Activities for families and kids.	Regular locals, baby boomers, seniors. Come from Lodi, Elk Grove, Sacramento.	Want access to better sites, clean, shade, privacy.	Business is doing well. We have repeat campers and they tell others about us, so that helps a lot. Ads bring in younger ages when we run them. That has helped a lot.	Would add play structure for kids. Add more community events to bring customers together, monitor complaints (have someone dedicated to this), more bonfires. Hire on-site activities director.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Sacramento West/Old Town KOA	No new trends.	Baby boomers stay longer - 3-6 months, or want pull-through sites for a few days. Come from northern California mainly.	Want privacy and secluded sites in winter. In summer they want community activities. We offer ice-cream socials, bingo, campfires, community picnics, shade areas.	Business is doing better since Good Sam took over. It's helped overall occupancy. They take better care of customers and advertise more consistently. Winter business has picked up.	We invested $80,000 in play structure and kids love it. Would continue to add more family activities and larger bandwidth for wi-fi. We would like to see a network for owners across US created that would be a forum where they could ask questions. We would also add 25 more sites because we turn customers away but we are not zoned for this.
Salt Point State Park	No new trends.	In summer come from Bay Area, Seattle, southern California, Germany and Canada as well for overnight stays. All ages, but seniors more in winter and minors in summer months.	Want family activities, privacy.	We do very well due to location. Referrals help our business and we are 100 occupied May - October. We are very concerned how the new administration policies will impact us. Budget is already very tight.	We can't afford showers and would add them. There is a shortage of water. Would also add full-hookup since we do not offer them now. Would add dump stations and laundry facility.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
San Francisco RV Park	No new trends.	Many Europeans, and full-time workers that commute to Bay Area. All age groups.	We do not offer community activities so they mainly want clean, safe area to stay and live.	Business does well since we have full-time tenants who can live here 7 months of the year. We are 100% booked in summer, due to close proximity to city. Our location helps our business and online advertising. Our amenities are very good and also help (heated pool, hot tub, wi-fi, propane, laundry facility.	A shuttle to the city or some kind of transportation.
Sandy Beach Regional Park	Customers want jet-ski rentals (not available) and larger space with 50 amp. Day-use requests have spiked a lot.	Stockton, Sacramento, Richmond. In winter, baby boomers, summer more minor and mid-age.	They want more activities. We have volleyball and bean toss and they are uses a lot. Easy access to water.	Our location is very good near the Delta. We have ample water and that helps business. Most campsites don't have that. Business is good and weekends and summer we are booked and turn people away. Would like more staff to meet maintenance needs and repairs.	Would add play structure, more fire-pits, also a central fire-pit for large groups, more games.
Snug Harbor Resort	Wi-fi, more games.	Boaters from Bay Area, Sacramento, southern California. Mostly 40-50 age range. Lots of families.	Want access to water and boating. That's why they come here.	Location on the Delta helps overall business and bottom line but we still struggle to keep up with demands of customers. They want to 'rough it' and yet want all the comforts of home. We do very well in summer months and stay booked. Referrals are key for us and online advertising.	All inclusive area would be ideal where customer wouldn't have to leave. We would add store, more activities, better play area. Can't afford right now.

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Spring Lake Regional Park	No new trends.	All ages come here from Santa Rosa, Bay Area, Sacramento, some school groups, some homeless.	Want water and laundry.	Business is hurting due to lack of water and very little funding. Difficult to hire staff we need to keep up with demands. It's not getting better, it's only getting worse.	Would add wi-fi, more water access.
Stillwater Cove Regional Park	No new trends.	Primarily baby boomers/retired from Bay Area, Central Valley (want to escape heat in summer), Sacramento, some Canada, Europeans.	Come for access to abalone season, that is the main draw here.		Would add wi-fi, more cell-phone coverage, more programs to educate campers.
Sugarloaf Ridge State Park	No new trends.	All ages come here. Great for families and kids. Northern California, Santa Rosa, out of state (western US).	Come for access to hiking, biking trails. Want clean, safe sites and safe location for families.	Our location and access to hiking, biking really helps business. Families love it here and that is our core business. We could use more staff but overall we are doing well and making a small profit. Could always increase fees but don't want to lose customers.	None, our location is very good and can't think of anything. Less rain would be good!!

Facility	Any Recent Trends	Customer Profile	What Customers Want	How Is Business Performance	What Need To Be More Successful
Vineyard RV Park	No new trends.	All ages from northern California, Stockton, Sacramento, Arizona, Canada.	Come here for family and activities. We offer many, games, horseshoe, campfires and picnics, bean bag, wi-fi.	It's a tough business to be in. Weather plays such a big factor and people expect a lot without wanting to pay extra. We survive but don't make much profit. We would lose customers if we raised rates, but business would be better and we could do a better job on maintenance and repairs.	I would raise fees so I could attract better staff.
Woodward Reservoir County Park	No new trends.	Locals and Bay Area. All ages in summer months and baby boomers in winter.	Access to lake, water activities (kayak, jets ski, boating). That's why they come!! Families.	Business is good. Our access to reservoir is key and keeps us open. We make a profit on rentals and offer full-hookup. That is important. We are 100% full in summer and can't keep up with demands.	I can't think of anything. Business is good right now. The rain has helped the water levels.

Source: Telephone survey conducted by Ragatz Associates, March 2017.

Summarized below are respondents' answers to five qualitative questions.

1. Have you noticed any recent trends in your campground business? Most frequently stated answers:
    - demand for both shorter and longer stays
    - ever-increasing demand for safety, cleanliness, larger spaces, more activities and amenities, and family activities

2. Where do your customers live and what is their profile?
    - mostly from the San Francisco Bay Area and Sacramento area
    - but, very extended market, including elsewhere in California, other states, Canada and Europe
    - mostly baby boomer age
    - seniors in the winter and families in the summer

3. What are your customers seeking? Answers were comparable to the first question:
    - clean sites, more amenities, activities and services, wi-fi connections, cabins, cottages and glamping, safety, showers and laundry facilities, privacy, children's activities, and access to water and boating. In other words, customers appear to want more than provided in most campgrounds in the PMA.

4. How is your business doing?
    - doing well, considering the rain this year
    - could be doing a lot better if had financial sources to offer more amenities, activities and services. This was especially true in campgrounds operated by public agencies.
    - would like to have more funds for marketing
    - potential demand for camping is evidently large, but really need to provide higher quality and more-amenitied facilities before can really take advantage of it

5. What needs to be done in order to increase your business? Answers were comparable to question (4).
    - more resources to satisfy today's campers and to take advantage of an untapped demand

VII. RECREATIONAL VEHICLE REGISTRATIONS

According to the State of California Department of Motor Vehicles, there are 29,975 recreational vehicles registered in the PMA. This includes motor homes, self-contained RVs with a motor, and camper-type RVs pulled behind another vehicle. This number seems low, but DMV assures its accuracy.

The 29,975 registrations represent 18.3 percent of all such registrations in the State of California. It also means that about 0.8 percent of all households in the PMA own an RV, as shown in Table III-15.

The percentage of households owning an RV ranges from 0.1 percent in San Francisco County to 1.6 percent in Napa and Solano Counties. The degree of RV ownership is highest in the more rural counties and lesser in the more urban counties. For example, it is less than one percent in Alameda, Marin, San Francisco, San Mateo and Santa Clara Counties, and 1.5 percent or higher in Napa, Solano, Sonoma and Sutter Counties.

In absolute terms, the largest number of registered RVs in the PMA are in Contra Costa (3,840), Sacramento (5,296), San Joaquin (2,857), Santa Clara (5,118) and Sonoma Counties (2,751). Collectively, these five counties contain 66.3 percent of all registered RVs.

TABLE III-15

Recreational Vehicle Registrations With State of California

Department of Motor Vehicles, PMA, March 2017

County	Recreational Vehicle Registrations	Percent of Total	Total Households	Percent of Households
Alameda	3,384	11.3%	560,658	0.6%
Contra Costa	3,840	12.8%	386,862	1.0%
Marin	649	2.2%	105,403	0.6%
Napa	798	2.7%	50,113	1.6%
Sacramento	5,296	17.7%	526,662	1.0%
San Francisco	530	1.8%	353,900	0.1%
San Joaquin	2,857	9.5%	222,146	1.3%
San Mateo	1,287	4.3%	264,701	0.5%
Santa Clara	5,118	17.1%	623,853	0.8%
Solano	2,311	7.7%	144,306	1.6%
Sonoma	2,751	9.2%	189,405	1.5%
Sutter	470	1.6%	31,659	1.5%
Yolo	684	2.3%	71,709	1.0%
Total	29,975	100.0%	3,531,377	0.8%

Source: "State of California Department of Motor Vehicles Total Recreational Vehicle Registrations by County as
of March 2017," DMV, April 2017, and *Demographics Now*.

VIII. PARTICIPATION RATES IN OUTDOOR RECREATION ACTIVITIES

Tables III-16 and III-17 show the percentage of the population in the PMA who participate in 20 outdoor recreational activities, i.e., "participation rates." All 20 activities are, or could be, found at Lake Berryessa. Table III-16 shows participation rates for each individual county. It also applies the participation rate for each activity to the population over 16 years of age. This process in turn shows the number of people in the PMA over 16 who participate in each activity.

The participation rates were obtained from *Outdoor Recreation for 21st Century America*. The rates are not available for the individual counties but rather, only on a state-wide basis. The state-wide rates were simply generalized to each county. This process is less scientific than preferred, but should provide good estimates.

TABLE III-16

Participation Rates, Selected Outdoor Recreational Activities,

California Rates Generalized to the PMA

County	Total Population Over 16	Participating Population — Camping: Developed Sites: 34.7%	Camping: Primitive Sites: 19.0%	Canoeing: 5.5%	Freshwater Fishing: 20.9%	Jet Skiing: 12.2%	Kayaking: 5.8%
Alameda	1,143,642	396,844	217,292	62,900	239,021	139,524	66,331
Contra Costa	798,189	276,972	151,656	43,900	166,822	97,380	46,295
Marin	190,376	66,060	36,171	10,471	39,789	23,226	11,042
Napa	103,070	35,765	19,583	5,669	21,542	12,575	5,978
Sacramento	1,072,830	372,272	203,838	59,006	224,221	130,885	62,224
San Francisco	606,782	210,554	115,289	33,373	126,817	74,027	35,193
San Joaquin	521,371	180,916	99,060	28,676	108,967	63,607	30,240
San Mateo	543,316	188,530	108,230	29,882	113,553	66,285	31,512
Santa Clara	1,353,860	469,789	257,233	74,462	282,957	165,171	78,524
Solano	309,911	107,539	58,898	17,045	64,771	37,809	17,975
Sonoma	363,600	126,169	69,084	19,998	75,992	44,359	21,263
Sutter	70,356	24,414	13,368	3,870	14,704	8,583	4,081
Yolo	152,220	52,820	28,922	8,372	31,814	18,571	8,829
Total	7,229,524	2,508,645	1,373,610	397,624	1,510,971	882,000	419,312

County	Participating Population — Motor Boating: 21.3%	Sailing: 7.7%	Water Skiing: 7.8%	Bicycling: 44.1%	Driving Off-Road: 18.2%	Mountain Biking: 23.5%	Horseback Riding: 8.6%
Alameda	243,595	88,060	89,204	504,346	208,143	268,756	98,353
Contra Costa	170,014	61,461	62,258	352,001	145,270	187,574	68,644
Marin	40,550	14,658	14,849	83,956	34,648	44,738	16,372

Napa	22,067	7,936	8,039	45,454	18,552	24,221	8,864
Sacramento	228,512	82,608	83,681	473,118	195,255	252,115	92,263
San Francisco	129,245	46,722	47,329	267,591	110,434	142,593	52,191
San Joaquin	111,052	40,146	40,667	229,925	94,890	122,522	44,838
San Mateo	115,726	41,835	42,379	239,602	98,884	127,679	46,725
Santa Clara	288,372	104,247	105,661	597,052	246,403	318,157	116,432
Solano	66,011	23,863	24,173	136,671	56,404	72,829	26,652
Sonoma	77,447	27,997	28,361	160,348	66,175	85,446	31,270
Sutter	14,986	5,417	5,488	31,027	12,805	16,534	6,051
Yolo	32,423	1,172	11,861	67,129	27,704	35,772	1,263
Total	1,539,889	556,673	563,903	3,188,220	1,315,773	1,698,938	621,739

	Participating Population						
County	Hiking: 46.2%	Running/ Jogging: 40.9%	Walking for Pleasure: 85.4%	Attend Outdoor Concerts: 49.7%	Bird Watching: 33.2%	Picnicking: 58.6%	Visit Nature Centers: 63.3%
Alameda	528,336	467,749	976,670	568,390	378,546	670,174	723,926
Contra Costa	368,763	326,459	681,653	396,670	264,999	467,739	505,254
Marin	87,953	77,863	162,530	94,617	63,205	111,560	120,508
Napa	47,771	42,156	88,022	51,226	34,219	60,400	65,243
Sacramento	495,647	438,787	916,197	533,197	356,180	628,678	679,101
San Francisco	280,333	248,174	518,192	301,571	201,452	355,574	384,093
San Joaquin	240,873	213,241	445,251	259,121	173,095	305,523	330,028
San Mateo	251,012	222,216	463,991	270,028	180,049	318,383	343,919
Santa Clara	625,483	553,729	1,156,196	672,868	449,482	793,362	856,993
Solano	143,179	126,753	264,663	154,026	102,891	181,608	196,174
Sonoma	167,983	148,712	310,514	180,709	120,715	213,070	230,159
Sutter	32,504	28,776	60,084	34,967	23,358	41,229	46,646
Yolo	70,326	62,258	129,996	75,653	50,537	89,201	96,355
Total	3,340,040	2,956,875	6,174,013	3,593,073	2,400,262	4,236,501	4,576,098

Source: *Outdoor Recreation for 21st Century America*, Ken Cordell, Venture Publishing, Inc., 2004 and *Demographics Now*.

TABLE III-17

Participation Rates, Selected Outdoor Recreational Activities,

California Rates Generalized to the PMA

Activity	Participation Rate	Participants	Participation Rate	Activity	Participants
Camping: Developed Sites	34.7%	2,508,645	85.4%	Walking for Pleasure	6,174,013
Camping: Primitive Sites	19.0%	1,373,610	63.3%	Visit Nature Centers	4,576,098
Canoeing	5.5%	397,624	58.6%	Picnicking	4,236,501
Freshwater Fishing	20.9%	1,510,971	49.7%	Attend Outdoor Concerts	3,593,073
Jet Skiing	12.2%	882,002	46.3%	Hiking	3,340,040
Kayaking	5.8%	419,312	44.1%	Bicycling	3,188,220
Motor Boating	21.3%	1,539,859	40.9%	Running/Jogging	2,956,875
Sailing	7.7%	556,673	34.7%	Camping: Developed Sites	2,508,645
Water Skiing	7.8%	563,903	33.2%	Bird Watching	2,400,202
Bicycling	44.1%	3,188,220	23.5%	Mountain Biking	1,698,938
Driving Off-Road	18.2%	1,315,773	21.3%	Motor Boating	1,539,859
Mountain Biking	23.5%	1,698,938	20.9%	Freshwater Fishing	1,510,971
Horseback Riding	8.6%	621,739	19.0%	Camping: Primitive Sites	1,373,610
Hiking	46.2%	3,340,040	18.2%	Driving Off-Road	1,315,773
Running/Jogging	40.9%	2,956,875	12.2%	Jet Skiing	882,002
Walking for Pleasure	85.4%	6,174,013	8.6%	Horseback Riding	621,739
Attend Outdoor Concerts	49.7%	3,593,073	7.8%	Water Skiing	563,903
Bird Watching	33.2%	2,400,202	7.7%	Sailing	556,673
Picnicking	58.6%	4,236,501	5.8%	Kayaking	419,312
Visit Nature Centers	63.3%	4,576,098	5.5%	Canoeing	397,624

Source: *Outdoor Recreation for 21st Century America*, Ken Cordell, Venture Publishing, Inc., 2004.

Table III-17 summarizes Table III-16, and shows participation rates and participating population for the PMA as a whole.

Participation rates range from 5.5 percent for canoeing to 85.4 percent for walking for pleasure. If concentrating on the traditionally most important activities at Lake Berryessa, we find the estimated following number of people in the PMA who participate. The totals are impressive.

- 2.5 million camp in developed sites
- 1.5 million motor boat
- 1.5 million freshwater fish

Other significant activities that exist or could exist at Lake Berryessa have potential markets of:

- 4.2 million who picnic
- 3.6 million who attend outdoor concerts
- 3.3 million who hike
- 2.4 million who birdwatch
- 1.7 million who mountain bike
- 0.9 million who jet ski
- 0.6 million who horseback ride
- 0.6 million who water ski
- 0.4 million who kayak
- 0.4 million who canoe

In summary, it is evident that potential demand for outdoor recreational activities that now, or could, exist at Lake Berryessa is very large. For the most part, competition for these activities in the PMA is limited, especially when compared to potential demand.

IX. TOURISM STATISTICS FOR NAPA COUNTY

Introduction

This final section of Part Three of the overall report contains statistics on the tourism industry for Napa County. Part Two of the overall report contained qualitative information on tourism in the County, but no data, i.e., it simply described the many local attractions and why the area immediately surrounding Lake Berryessa is one of the most recognized tourist destinations in the PMA, as well as elsewhere in the United States and beyond.

Economic Impacts

Every other year Visit Napa Valley contracts with Destination Analysts to measure the economic impact of the tourism industry to Napa County ("Economic Impact Report."). Table III-18 shows results for the last three surveys for 2012, 2014 and 2016.

As shown in Table III-18, economic importance of the tourism industry has grown significantly in Napa County in the past four years. During this time:

- visitor volume increased by 19.0 percent, from 2.94 million in 2012 to 3.54 million in 2016
- visitor days spent in the County increased by 26.2 percent, from 4.9 million in 2012 to 6.2 million
- visitor spending increased by 35.7 percent, from $1.4 billion to $1.9 billion
- jobs supported by the tourism industry increased by 28.0 percent, from 10,498 to 13,437
- the visitor industry payroll increased by 29.0 percent, from $300 million to $387 million
- tax revenues generated increased by 55.5 percent, from $51.7 million to $80.4 million

TABLE III-18

Trends in Economic Impacts of Tourism to Napa County, 2012, 2014 and 2016

	Year			Change: 2012 to 2016	
Indicator	2012	2014	2016	Number	Percent
1. Annual Visitor Volume	2.94 million	3.33 million	3.54 million	600,000	20.4%
2. Visitor Days in Napa County	4,894,000	5,482,000	6,177,000	1,283,000	26.2%
3. Visitor Spending in Napa County	$1.4 billion	$1.6 billion	$1.9 billion	$500 million	35.7%
4. Visitor Spending by Type*					
- Lodging	$328,755,000	$375,158,000	$425,170,000	$96,415,000	22.7%
- Restaurants	$301,445,000	$367,400,000	$438,251,000	$136,808,000	45.4%
- Retail	$493,945,000	$648,813,000	$768,314,000	$274,369,000	55.5%
- Entertainment and Sightseeing	$81,087,000	$49,324,000	$88,738,000	$7,651,000	9.4%
- Local Transportation	$21,652,000	$53,476,000	$40,347,000	$18,695,000	86.3%
- Car Rental	$47,078,000	$8,496,000	$26,702,000	-$20,376,000	-43.2%
- Other	$7,300,000	$18,885,000	$34,146,000	$26,846,000	367.8%
- Meeting and Event-Related Spending	$112,921,000	$113,427,000	$99,166,000	-$13,759,000	-12.2%
Total	$1,394,185,000	$1,634,979,000	$1,920,833,000	$526,648,000	37.8%
5. Jobs Supported by Tourism	10,498	11,766	13,437	2,939	28.0%
6. Visitor Industry Payroll	$300 million	$332 million	$387 million	$87 million	29.0%
7. Tax Revenues Generated	$51.7 million	$64.2 million	$80.4 million	$28.7 million	55.5%

Source: "Napa Valley Visitor Industry, 2012, 2014 and 2016 Economic Impact Reports," prepared for Visit Napa Valley by Destination Analysts, Inc.

Following is the Executive Summary from the 2016 study. The material is self-explanatory, and obviously describes a very vibrant tourism industry – one that is ever-increasing in importance to the economic well-being of overall Napa County.

The Hotel Industry

Table III-19 shows annual trends in the performance of the hotel industry in Napa County for the past 17 years from 2000 through 2016. The trends are very positive:

- a 92.3 percent increase in the number of rooms, from about 2,600 to about 5,000

- a 17-year annual occupancy rate of 62.7 percent. The highest rate was in 2000 at 78.5 percent, and the lowest was in 2009 at 55.2 percent.

Section

2

Executive Summary

Key Findings

- **Annual Visitor Volume:** Napa Valley had a total of 3.5 million visitors in 2016, up from 3.3 million two years earlier. The largest component of Napa's visitor volume is day trip visitors, comprising 2.3 million visitors, or 64.5 percent of all visitors. The second largest segment of visitors are persons staying in Napa lodging, at 1.02 million annual visitors. (Figure 4.1, Page 9)

- **Visitor Days in Napa:** Napa Valley's visitors spent 6.2 million total person-days in the destination in 2016. On an average day during the year, there were 16,922 visitors in Napa. Approximately half (50.1%) of these visitor days were comprised of persons staying in a Napa hotel or motel. In total, visitors staying in the county's commercial lodging spent 3.1 million person-days in the county during 2016. (Figure 4.2, Page 10)

- **Visitor Spending in Napa:** The Napa visitor industry generated $1.92 billion in direct visitor spending inside the county in 2016. Most of this spending came from local hotel guests. These visitors were responsible for $1.34 billion in visitor spending, or 69.9 percent of the total. The large share of visitor spending accounted for by hotel guests is driven by their relatively high per-person, per-day spending of $401.59. By comparison, the average day trip visitor to Napa spent $146 per-person, per-day while in the county. (Figure 4.3, Page 11)

- **Visitor Spending by Type:** Napa's visitors spend on a wide range of products and services, including lodging, retail products, food and transportation. The single largest component of visitor spending is on retail, which accounted for 40.0% percent of all spending, or $768 million, in 2016. The second largest component was the $438 million visitors spent in Napa restaurants and food services establishments. This accounted for 23 percent of all 2016 visitor spending in Napa. (Figure 4.4, Page 12)

- **Meeting & Event Expenditures:** Group meetings and events generated $196 million in spending for Napa in 2016. (Figure 4.5, Page 13)

- **Jobs Supported by Napa Visitor Industry:** Napa visitor spending in 2016 supported an estimated 13,437 jobs. (Figure 4.6, Page 14)

- **Visitor Industry Payroll:** In 2016, the 13,437 jobs supported by the Napa visitor industry had an estimated total combined payroll of $387 million. (Figure 4.7, Page 15)

- **Tax Revenues Generated:** Napa's visitor industry generated $80.4 million in tax revenues for governmental entities in Napa Valley in 2016. Taxes directly generated by the visitor industry include revenues from the transient occupancy tax (hotel tax), sales taxes and property and transfer taxes paid on lodging facilities. The hotel industry generates the majority of these revenues, with the combination of transient occupancy tax and property taxes on hotels creating over $68.7 million in income for governmental entities in the county. (Figure 4.8, Page 16)

Section 3

Quick Facts:

The profile below shows a summary of key findings:

	2012	2014	2016	% Change (2014-16)
Total visitors to Napa Valley:	2.94 million	3.3 million	3.5 million	6.3%
Visitors staying in Napa Valley hotels or motels:	857 thousand	951 thousand	1.02 million	7.0%
Visitors staying in private homes (inside Napa Valley):	125 thousand	166 thousand	158 thousand	-4.8%
Day trip visitors to Napa Valley:	1.96 million	2.2 million	2.3 million	3.1%
Total visitor spending in Napa Valley:	$1.39 billion	$1.63 billion	$1.9 billion	17.5%
Spending by visitors staying in Napa Valley hotels, motels or inns:	$1.03 billion	$1.17 billion	$1.32 billion	14.4%
Direct spending on group meetings & events:	$187.7 million	$194.0 million	$196.1 million	2.9%
Spending in Napa by visitors for food and restaurants:	$301 million	$367 million	$438 million	19.3%
Jobs supported by Napa visitor industry:	10,498	11,776	13,437	14.1%
Napa Valley visitor industry payroll:	$300 million	$332 million	$387 million	16.4%
Taxes generated for govt. entities in Napa Valley:	$51.7 million	$64.2 million	$80.4 million	25.2%
Tax revenues generated per Napa household:	1,041	1,304	1,604	23.0%
Visitors in Napa Valley on an average day:	13,409	15,019	16,922	12.8%
Visitor spending in Napa Valley on an average day:	$3.82 million	$4.48 million	$5.26 million	17.5%
Annual visitor spending per Napa resident:	$10,027	$11,741	$13,376	13.9%

TABLE III-19

Hotel Performance Indicators, Napa County, 2000 to 2016

Year	Occupancy Rate	ADR	RevPar
2000	78.5%	$155	$122
2001	66.7%	$148	$99
2002	69.5%	$146	$101
2003	69.6%	$144	$100
2004	67.5%	$147	$99
2005	67.4%	$150	$101
2006	67.6%	$162	$109
2007	65.4%	$183	$120
2008	63.6%	$208	$133
2009	55.2%	$200	$111
2010	58.6%	$216	$127
2011	62.8%	$234	$147
2012	65.3%	$243	$159
2013	68.0%	$262	$178
2014	68.2%	$276	$188
2015	72.2%	$291	$210
2016	73.1%	$306	$224

Source: "Napa County Lodging Industry," STR Inc.

- in 2016, the average was 72.7 percent. This was close to the peak year of 2000, even though there are now about 2,400 more rooms in the County. If omitting the most severe recession years of 2008 through 2011, the 13 year rate would increase to 69.2 percent. The rate has increased for each of the past eight years, even though each year has more rooms than the previous year.

- an Average Daily Rate (ADR) in 2016 of $306, representing one of the highest in the entire country. The ADR has increased by 97.4 percent over the past 17 years, from $155 in 2000 to $306 in 2016. In just the last eight years, it has increased 53.0 percent.

- a RevPar (occupancy rate times ADR) of $224 in 2016, up from $122 in 2000 (83.6 percent) and $111 in 2009 (101.8 percent)

Seasonality of Tourism

Tables III-20 (occupancy rates), III-21 (ADRs), III-22 (RevPars) and III-23 (integrated averages) describe seasonality of the hotel/tourism industries in Napa County. Results for the past three years can be summarized as:

- occupancy rates: average lows for the past three years of 51.9 percent in January and 53.0 percent in February, compared to average highs of 82.4 percent in both September and October

- ADRs: average lows of $201.70 in January and $221.45 in February, compared to average highs of $350.92 in September and $356.01 in October. Even during the lowest months of January and February, the ADRs are higher than for almost all other areas in the country on a year-round basis.

- RevPars: average lows of $104.92 in January and $118.29 in December, compared to average highs of $289.68 in September and $293.68 in October

- integrated averages (Table III-23): When integrating the three seasonality indicators, the following patterns are found:

  - a low season of December through February
  - a shoulder season of March/April and November
  - a high season of May through August
  - a peak season of September through October (grape harvesting time)

  When compared to most tourist destinations around the country, even the low season in Napa County surpasses year-round performance elsewhere.

TABLE III-20

Occupancy Rates, Hotels in Napa County, By Month, 2014 to 2016

Month	Occupancy Rate 2014	2015	2016	Change: 2014 to 2016	Average	Weighted Average
January	46.3%	52.6%	56.8%	10.5%	51.9%	70.3
February	57.2%	62.9%	66.3%	9.1%	62.1%	75.4
March	64.2%	67.8%	68.3%	4.1%	66.8%	81.1
April	72.0%	74.7%	75.5%	3.5%	74.1%	89.9
May	75.2%	77.2%	76.4%	1.2%	76.3%	92.6
June	75.4%	75.8%	78.5%	3.1%	76.6%	93.0
July	77.5%	79.8%	81.6%	4.1%	79.6%	96.6
August	76.9%	82.4%	79.3%	2.4%	79.5%	96.5
September	78.1%	83.9%	85.2%	7.1%	82.4%	100.0
October	78.7%	85.4%	83.1%	4.4%	82.4%	100.0
November	67.2%	69.3%	70.4%	3.2%	69.0%	83.7
December	49.6%	54.5%	55.0%	5.4%	53.0%	64.3
Annual	68.2%	72.2%	73.1%	4.9%	71.2%	

Source: "Destination Reports: Trends Napa County, California," STR, Inc.

TABLE III-21

Average Daily Rates, Hotels in Napa County, By Month, 2014 to 2016

Month	ADR 2014	2015	2016	Change: 2014 to 2016 $	%	Average	Weighted Average
January	$192.91	$205.81	$206.37	$13.46	7.0%	$201.70	56.6
February	$204.12	$225.70	$234.53	$60.41	14.9%	$221.45	62.2
March	$217.98	$232.68	$240.55	$22.57	10.4%	$230.40	64.7
April	$252.04	$269.49	$287.39	$35.33	14.0%	$269.65	75.7
May	$291.28	$318.30	$320.58	$29.33	10.1%	$310.05	87.1
June	$295.16	$312.38	$324.73	$29.57	10.0%	$310.76	87.2
July	$302.07	$319.99	$336.70	$34.63	11.5%	$319.59	89.8
August	$322.02	$325.46	$340.50	$18.48	5.7%	$329.33	92.5
September	$328.92	$349.13	$374.71	$45.79	13.9%	$350.92	98.6
October	$335.48	$357.70	$374.85	$39.37	11.7%	$356.01	100.0
November	$263.98	$272.39	$297.58	$33.60	12.7%	$277.95	78.1
December	$211.61	$217.74	$240.36	$28.75	13.6%	$223.24	62.7
Annual	$275.58	$291.37	$306.24	$30.66	11.1%	$291.06	

Source: "Destination Reports: Trends Napa County, California," STR, Inc.

TABLE III-22

RevPars, Hotels in Napa County, By Month, 2014 to 2016

	RevPar			Change: 2014 to 2016			Weighted
Month	2014	2015	2016	$	%	Average	Average
January	$89.31	$108.23	$117.22	$27.91	31.3%	$104.92	35.7
February	$118.77	$141.80	$155.52	$36.72	30.9%	$138.70	47.2
March	$139.98	$157.82	$164.39	$24.51	17.5%	$154.06	52.5
April	$161.56	$201.36	$216.99	$55.44	34.3%	$193.30	65.8
May	$219.04	$245.75	$252.80	$33.76	15.4%	$239.20	81.4
June	$222.66	$236.67	$254.94	$32.28	14.5%	$238.09	81.1
July	$234.12	$255.36	$274.70	$40.58	17.3%	$254.73	86.7
August	$247.63	$268.09	$270.08	$22.45	9.1%	$261.93	89.2
September	$256.74	$292.95	$319.36	$62.62	24.4%	$289.68	98.6
October	$264.14	$305.58	$311.31	$47.17	17.9%	$293.68	100.0
November	$177.34	$188.87	$209.54	$32.20	18.2%	$191.92	65.4
December	$104.95	$118.77	$132.16	$27.21	25.9%	$118.29	40.3
Annual	$187.87	$210.47	$223.84	$35.97	19.2%	$207.39	

Source: "Destination Reports: Trends Napa County, California," STR, Inc.

TABLE III-23

Weighted Indicators of Seasonal Demand, Napa County, By Month

	Indicator/Weighted Average			
Month	Occupancy Rate	ADR	RevPar	Average
January	70.3	56.6	35.7	54.2
February	75.4	62.2	47.2	61.6
March	81.1	64.7	52.5	66.1
April	89.9	75.7	65.8	77.1
May	92.6	87.1	81.4	87.0
June	93.0	87.2	81.1	87.1
July	96.6	89.8	86.7	91.0
August	96.5	92.5	89.2	92.7
September	100.0	98.6	98.6	99.1
October	100.0	100.0	100.0	100.0
November	83.7	78.1	65.4	75.8
December	64.3	62.7	40.3	55.8

Characteristics of Tourists

The second report Visit Napa Valley sponsors every other year describes characteristics of the visitors ("Napa Valley Visitor Profile"). Selected results for the 2016 survey are shown in Table III-24, and summarized below.

1. 35.5 percent of visitors stay overnight while in Napa County. Of the overnight visitors, 81.1 percent stay in a hotel, motel, inn or bed and breakfast, and 12.6 stay in a private residence (most likely with friends or relatives). The other 64.5 percent are just day visitors.

2. About three-quarters (77.3 percent) visit for weekend getaways or vacations. The significance of the wedding industry is evidenced by the fact that it generates 6.3 percent of the visitors. Another 7.9 percent come for business travel, and 3.3 percent for conferences and meetings.

3. Repeat visitation is high. The average leisure visitor comes to the Valley twice a year.

4. Visitation is concentrated in the Valley communities, with the most popular ones in accord with percent of visitors they attract being Napa (68.7 percent), St. Helena (50.2 percent), Calistoga (30.7 percent) and Yountville (32.6 percent). Some 7.6 percent said they visited Lake Berryessa, even though current availability of services is limited.

5. By far the most frequent activities participated in are wine tasting (72.7 percent), dining in restaurants (52.6 percent), winery tours (39.8 percent) and shopping (36.4 percent).

6. The average daily expenditure per visitor party was $547. Almost one-half (45.7 percent) was spent purchasing wine at a winery ($117) and restaurant dining ($133).

TABLE III-24

Characteristics of Visitors to Napa County, 2016

Characteristic	2014
1. Visitor Volume	
Hotel/motel	1,017,783
Private residence/home share	239,507
Day trip	2,280,226
Total	3,537,516
2. Reason for Visit	
Vacation	49.3%
Weekend getaway	28.0%
Business travel	7.9%
Wedding or special event	6.3%
Other personal travel	4.7%
Conference or group meeting	3.3%
Government travel	0.3%
Other	0.2%
Total	100.0%
3. Average Number of Visits in Past 12 Months	
Leisure or personal	2.4
Business	0.5
Conference or group	0.05
4. Towns Visited	
City of Napa	68.7%
St. Helena	50.2%
Yountville	32.6%
Calistoga	30.7%
Rutherford	23.2%
Oakville	22.5%
American Canyon	12.9%
Carneros area	9.7%
Lake Berryessa	7.6%
Angwin	4.7%
5. Activities Participated In	
Wine tasting room	72.7%
Dining in restaurants	52.6%
Winery tours	39.8%
Shopping	36.4%
Napa Valley Wine Train	14.1%
Spa visit or treatment	10.7%
Art galleries/art walks	9.2%
Bars or nightlife	8.7%
Visit a state or local park	8.1%

Visit a farmer's market	7.8%
Other culinary activities	7.6%
Guided tours	6.1%
Hiking	5.9%
Attend a festival or special event	4.9%
Biking	4.0%
Performing arts	3.2%
Hot air ballooning	2.8%
Golf	1.5%
Canoeing/kayaking	1.1%
Organized athletic event	0.3%

6. Average Per Day Per Party Expenditures

Restaurants	$134.83
Wine (bottles purchased at wineries)	$118.62
Lodging	$97.50
Tasting room fees	$56.20
Entertainment and sightseeing	$33.27
Clothing and jewelry	$31.15
Other retail	$26.45
Wine (retail stores)	$14.91
Gas, parking and transit	$12.13
Car rental	$7.41
All other	$15.25
Total	$547.72

7. What Like Most About Napa Valley

Wine/wine tasting/wineries	24.1%
Beautiful scenery/landscape	23.8%
Food/restaurants	16.1%
Weather	6.6%
Everything	4.1%
Friendly/hospitable people	2.5%
Spa/pools	1.1%
Great B&B/inn/hotel	1.0%

8. What Would Enhance Napa Valley

Alleviate traffic	11.7%
More food, restaurant options	4.7%
Make the area more affordable	4.4%
More activities	4.3%
Roads	2.8%
Offer bike tours	2.6%
Improve customer service	2.3%
More kid-friendly	2.1%
Free bottles or samples	1.7%
Better road signage	1.5%
Nothing	40.4%

9. Likelihood of Returning

Very likely	53.2%
Likely	38.8%
Neutral	5.2%
Unlikely	1.6%
Very unlikely	0.5%
Don't know	0.6%
Total	100.0%

10. Age of Visitors

Under 20	0.8%
20 to 34	29.7%
35 to 44	23.9%
45 to 54	18.4%
55 to 64	14.6%
65 or above	8.5%
Won't answer	4.0%
Total	100.0%
Mean age	42.7

11. Household Income

Over $500,000	3.9%
$200,001 to $500,000	13.2%
$150,001 to $200,000	16.0%
$100,001 to $150,000	19.9%
$50,001 to $100,000	15.2%
Less than $50,000	5.0%
Won't answer	26.7%
Total	100.0%
Mean income	$161,229

12. Education

Completed graduate school	29.4%
Bachelor's degree	45.4%
Attended some college	10.3%
High school graduate	2.5%
Some high school or less	0.4%
Won't answer	11.9%
Total	100.0%

13. Household

Single	29.8%
Couple	70.2%
Total	100.0%

14. Origin

United States	79.2%
International	20.8%
Total	100.0%

15. Domestic Feeder Market	
San Francisco-Oakland-San Jose	38.5%
Sacramento-Yolo	4.5%
Los Angeles-Riverside-Orange County	4.2%
San Diego	2.6%
Chicago and upper Midwest	2.3%
Dallas	2.1%
New York-Long Island-NJ-CT-PA	1.5%
Atlanta	1.1%
Philadelphia	1.1%
Seattle	1.0%
Elsewhere	41.1%
Total	100.0%

Source: "2016 Napa Valley Visitor Profile," prepared for Visit Napa Valley by Destination Analysts.

7. By far the two most liked items about Napa Valley were the wine/wine tasting/wineries (24.1 percent) and the scenery (23.8 percent).

8. Visitors had very few recommendations for enhancing Napa Valley.

9. An extremely high 53.2 percent said their likelihood of returning to Napa Valley was "very likely." Another 38.8 percent said "likely."

10. Average demographics were roughly 43 years of age and $160,000 annual household income; about three-quarters with at least a Bachelor's degree, and over one-quarter representing a single person household.

11. Some 79.2 percent come from the U.S., including 38.5 percent from the San Francisco Bay Area and 4.5 percent from the Sacramento area.

PART FOUR

RESULTS OF A CONSUMER SURVEY

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RESULTS OF A CONSUMER SURVEY

I. INTRODUCTION

Methodology

The purpose of this part of the overall report is to describe results of a consumer survey conducted specifically for Lake Berryessa. Primary objectives of the survey were to determine: (1) past familiarity with, and reactions to, Lake Berryessa before the closings occurred in 2009; (2) degree of future potential interest in visiting Lake Berryessa; (3) the types and extent of recreational activities and accommodations that would be most instrumental in increasing visitation patterns; and (4) the type of household with the highest propensity to visit in the future.

The survey was conducted by Ragatz Associates, which is the market research branch of Ragatz Sedgwick Realty. Ragatz Associates is an international consulting firm that has offered services to the resort real estate industry for over 40 years. The firm has undertaken over 2,500 assignments in 73 countries. It has conducted several hundred consumer surveys comparable to the one at-hand for all types of resort-oriented developments and products.

Ragatz Associates was responsible for preparing the survey instrument and final report. The questions were reviewed both by BOR and the Napa County Executive Office. Three other entities assisted in the logistics associated with actually conducting the survey. Data processing was done by Zoho, an international company headquartered in Pleasanton, California. TapResearch, headquartered in Palatine, Illinois was responsible for providing 1,000 appropriate respondents for the survey. The survey also was announced in the *Napa County Register* and the *Lake Berryessa News* newspapers, with access information for completing the survey included. Such announcement resulted in another 2,211 responses.

The survey was initially distributed on March 2, 2017. By the cut-off date of March 24, a very large number of responses were received – 3,211. This number is very significant relative to the vast majority of consumer surveys, and as such, speaks well about validity of the results.

TapResearch was instructed to obtain their 1,000 responses from households in northern California who participate in lake-oriented recreational activities, such as boating, camping, etc. Most likely, those responding to the announcements in the *Napa County Register* and *Lake Berryessa News* also participate in such activities, as well as most likely already being acquainted with Lake Berryessa itself. Thus, some intended bias exists with the chosen sample – people interested in lake-oriented recreational activities and acquainted with Lake Berryessa. This obviously means that results should not be generalized to **all** households in the PMA.

Organization of This Part

Following this introductory chapter (Chapter I), this part of the overall document contains five additional chapters. Chapter II describes respondents' familiarity with, and reactions to, Napa County and Lake Berryessa. Chapter III concerns questions relating to respondents' interest in visiting Lake Berryessa in the future, and what type of activities, amenities and services would impact their interest. The purpose of Chapter IV is to describe respondents' actual intended use patterns in the future. The last chapter (Chapter V) describes characteristics of the respondents.

The survey contained 24 questions. The following approach used to describe the results is exactly the same for each question:

1. stating the question at the top of the page, in verbatim as found in the actual questionnaire
2. a pie chart or bar graph
3. a table containing numerical responses
4. an explanatory text further describing the results

Results are described for several individual “respondent-groups,” along with “all” respondents. The respondent-groups are listed below, along with the percentage of all respondents represented in each group. There are 10 different groups, although not all groups are shown for each question. The groups include:

1. “all” respondents

2. grouped **age** intervals, with the following terminology:

age intervals	terminology	percent of all respondents
under 40	“younger”	34.2%
40’s and 50’s	“middle”	44.8%
60 and over	“older”	21.0%
total		100.0%

3. grouped **household income** intervals, with the following terminology:

income intervals	terminology	percent of all respondents
under $75,000	“lower”	26.4%
$75,000 to $149,999	“middle”	44.7%
$150,000 or more	“higher”	28.9%
total		100.0%

4.

grouped place of residence	percent of all respondents
Napa County	16.0%
North Bay[1]	27.6%
South Bay[2]	33.9%
Delta[3]	9.6%
other (not shown, and not in the PMA)	12.9%
total	100.0%

[1] Includes Marin, Solano, Sonoma, Sutter and Yolo Counties.
[2] Includes Alameda, Contra Costa, San Francisco, San Mateo and Santa Clara Counties.
[3] Includes Sacramento and San Joaquin Counties.

Four additional preamble comments:

1. Answers shown in the tables for the various respondent-groups are designated in **bold** font if varying more than 5.0 percent from answers by all respondents.
2. The reader is encouraged to fully review the specific wording of each question before looking at the graphs, tables and narratives.
3. Implications of the results are mostly described in the final part of the overall report rather than in this part itself.
4. The survey instrument started with the following introduction before the actual questions.

Dear Sir/Madam:

Our firm has contracted with the County of Napa Executive Office to assist in planning new outdoor recreational facilities at Lake Berryessa in the northeast section of the County. It is one of the largest manmade lakes in California. Starting in 1959, several individual boating and camping-oriented resorts were developed at Lake Berryessa. The U.S. Bureau of Reclamation (BOR), closed most of the resorts in 2009. All remnants of the developments were removed, and the properties have remained vacant ever since.

The County of Napa, in conjunction with BOR, is now contemplating re-development of five of the properties for new well-managed resorts open for public use. Our firm is assisting in the planning process. The five properties are now referred to as Berryessa Point (formerly Berryessa Marina), Monticello Shores (formerly Rancho Monticello), Putah Canyon (formerly Putah Creek), Spanish Flat, and Steele Canyon (formerly Steele Park).

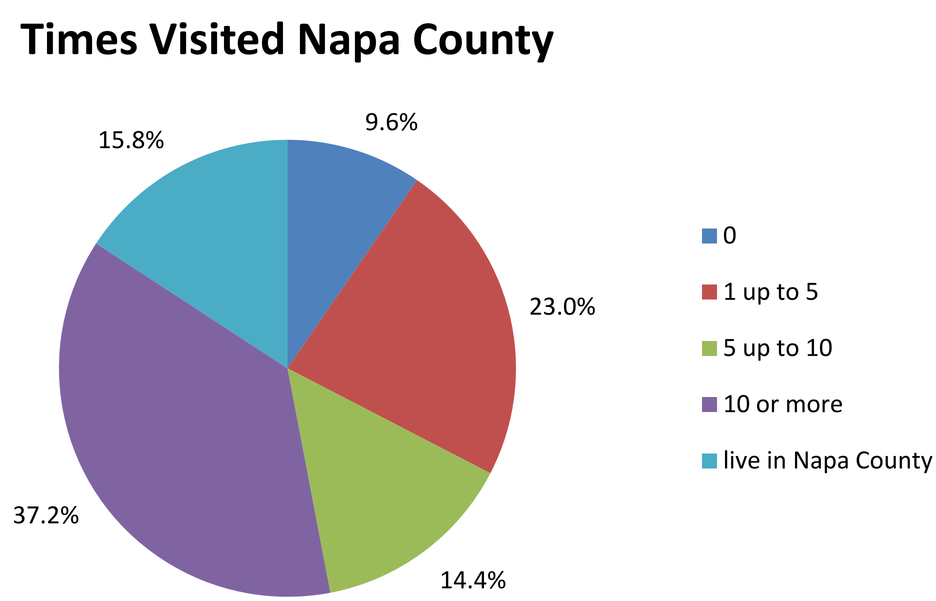
A first step in the planning process is to determine the most appropriate and desirable uses for the five properties. In this regard, we are requesting your assistance by completing the following survey. The survey should take only a few minutes, as all questions require simple check-off answers. Results will be extremely valuable for ensuring that Lake Berryessa becomes a destination boating, camping and outdoor recreation area for families throughout northern California and beyond that ensures a balance between recreation services and environmental stewardship.

All answers will be used in aggregate form only. Your questionnaire should be completed within the next two weeks. Thank you very much for your cooperation.

II. QUESTIONS PERTAINING TO FAMILIARITY WITH NAPA COUNTY AND LAKE BERRYESSA

YOUR FAMILIARITY WITH NAPA COUNTY AND LAKE BERRYESSA

QUESTION 1. How many times have you visited Napa County in the last 5 years for leisure-recreational purposes?



times visited Napa County in last 5 years	all respondents	age: younger	age: middle	age: older
0	9.6%	12.6%	6.3%	8.6%
1 up to 5	23.2%	**30.3%**	21.7%	**16.4%**
5 up to 10	14.4%	18.1%	13.0%	12.9%
10 or more	37.2%	**28.6%**	**42.4%**	40.5%
live in Napa County	**16.0%**	**10.4%**	16.6%	**21.6%**
total	100.0%	100.0%	100.0%	100.0%
est. average	5.5 times			

times visited Napa	income			residence			
County in last 5 years	lower	middle	higher	Napa	North Bay	South Bay	Delta
0	**16.4%**	7.0%	5.7%	**0.0%**	5.2%	11.6%	**21.0%**
1 up to 5	**28.4%**	25.6%	**17.7%**	**0.0%**	**16.0%**	**37.9%**	**37.8%**
5 up to 10	13.1%	17.0%	13.7%	**0.0%**	15.7%	**21.9%**	19.3%
10 or more	**27.3%**	36.0%	**46.8%**	**0.0%**	**63.1%**	**28.6%**	**21.9%**
live in Napa County	14.8%	14.4%	16.1%	**100.0%**	**0.0%**	**0.0%**	**0.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Over 90 percent of all respondents have visited Napa County in the last five years for leisure-recreational purposes. This includes the 16.0 percent who live in the County. Some 51.6 percent have done so five or more times, and 37.2 percent have done so 10 or more times. These figures do not include Napa County residents.

The answers are biased, and cannot be generalized to all households in the PMA. This is because people with some past familiarity with the topic being researched tend to have a higher likelihood of responding than do those without. It also means that results of the survey are more likely to be accurate since the vast majority of respondents are responding to a topic they know something about rather than in an informational void.

Past visitation patterns varied among the different respondent-groups, as summarized below.

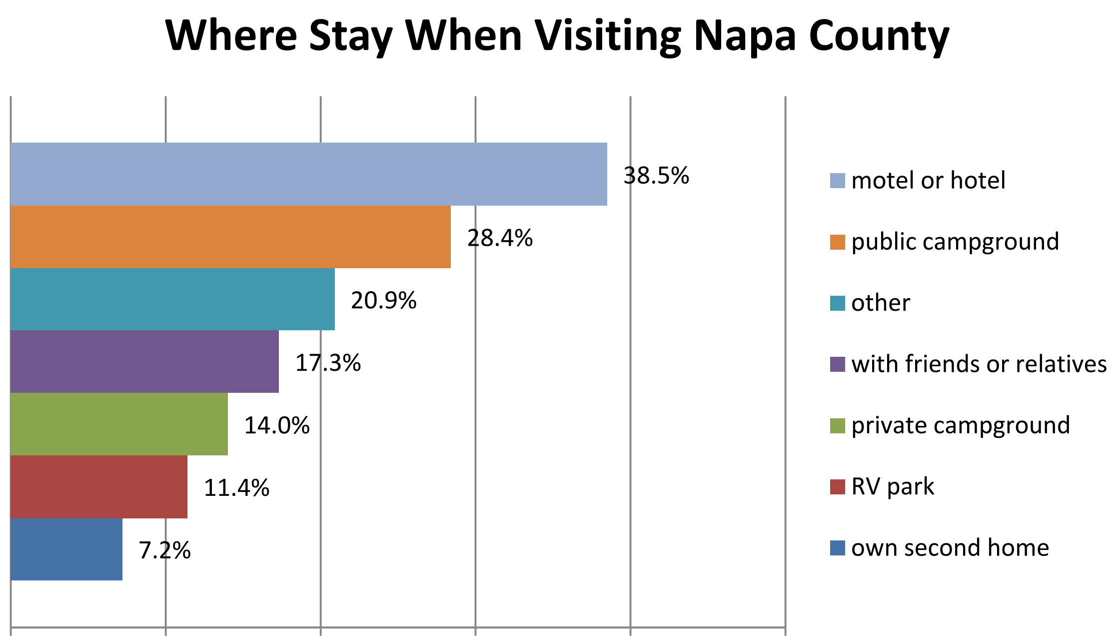
times visited in last 5 years			
none		10 or more	
group	percent	group	percent
all	9.6%	all	37.2%
age		age	
younger	12.6%	younger	28.6%
middle	6.3%	middle	42.4%
older	8.6%	older	40.5%
income		income	
lower	16.4%	lower	27.3%
middle	7.0%	middle	36.0%
higher	5.7%	higher	46.8%
residence		residence	
Delta	21.0%	North Bay	63.1%
South Bay	11.6%	South Bay	28.6%
North Bay	5.2%	Delta	21.9%

Frequency of visit is by far the highest among middle age and older respondents, middle and higher income respondents, and those residing in the North Bay. It is lowest among younger and lower income respondents, and those residing in the Delta.

As some examples: (1) 63.1 percent of those living in the North Bay have visited Napa County 10 or more times in the last five years, compared to only 21.9 percent of those in the Delta; (2) 46.8 percent of the higher income have visited 10 or more times, compared to only 27.3 percent of the lower income; and (3) 16.4 percent of the lower income have not visited, compared to only 5.7 percent of the higher income.

In summary, propensity to visit Napa County for leisure purposes increases with age, income and proximity.

QUESTION 2. If and when you stay overnight in Napa County for leisure-recreational purposes, where do you stay?



where stay	all respondents	age: younger	age: middle	age: older
motel or hotel	38.5%	**48.8%**	36.9%	**28.8%**
public campground	28.4%	29.9%	30.4%	**20.5%**
with friends or relatives	17.3%	**23.7%**	13.5%	13.9%
private campground	14.0%	**29.9%**	14.0%	10.8%
RV park	11.4%	11.4%	12.4%	10.8%
own second home	7.2%	6.5%	7.6%	9.6%
other	20.9%	16.6%	21.5%	**27.6%**

where stay	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
motel or hotel	37.3%	40.1%	43.1%	n/a	31.9%	**60.9%**	**52.8%**
public campground	29.1%	30.4%	24.6%	n/a	**37.7%**	**19.7%**	**19.6%**
with friends or relatives	**22.4%**	17.7%	12.1%	n/a	13.9%	18.5%	**26.0%**
private campground	12.6%	14.8%	14.0%	n/a	15.7%	10.6%	10.2%
RV park	9.3%	13.9%	11.1%	n/a	13.4%	10.1%	12.8%
own second home	5.4%	6.6%	10.3%	n/a	4.6%	9.9%	9.4%
other	21.6%	19.2%	21.1%	n/a	20.1%	**13.4%**	**15.3%**

Over one-half (53.8 percent) of respondents stay in camping facilities when staying overnight in Napa County while visiting for leisure-recreational purposes. This includes 28.4 percent who use public campgrounds, 14.0 percent who use private campgrounds, and 11.4 percent who use RV parks. There was again respondent bias in this question, since mailing lists for the samples were skewed toward the camping community. It also is noted that respondents could check more than one answer to this questions, so the total does not add to 100.0 percent.

The percentage of campers was highest among:

- younger respondents at 71.2 percent, compared to only 42.1 percent of the older
- lower income respondents at 51.0 percent
- North Bay residents at 66.8 percent, compared to only 40.4 percent of those in the South Bay and 42.6 percent of those in the Delta.

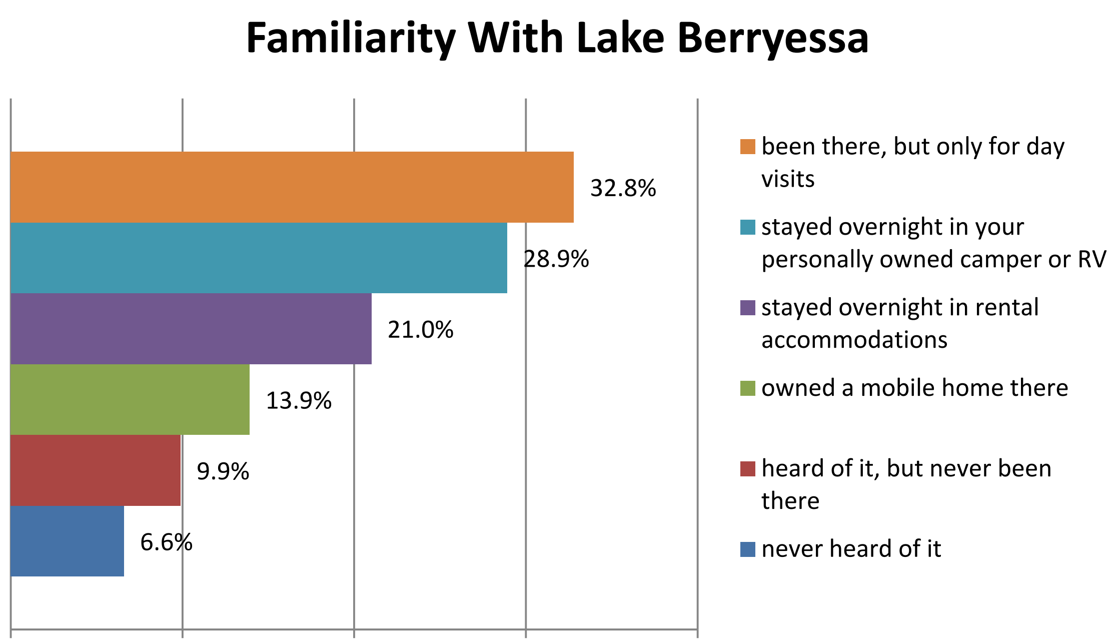
Variation was limited among the various income groups.

Of all respondents, 38.5 percent stay in a motel or hotel. This proportion was highest among the younger at 48.8 percent, the higher income at 43.1 percent, and residents of the South Bay at 60.9 percent.

Some 17.3 percent stay with friends or relatives. This was highest among the younger at 23.7 percent, the lower income at 22.4 percent, and residents of the Delta at 26.0 percent.

Finally, 7.2 percent stay in their own second home, being highest among the older at 9.6 percent, the higher income at 10.3 percent, and residents of the South Bay at 9.9 percent.

QUESTION 3. How familiar are you with Lake Berryessa in Napa County?



familiarity	all respondents	age: younger	age: middle	age: older
never heard of it	6.6%	11.3%	3.8%	2.7%
heard of, but never been	9.9%	14.5%	7.7%	5.3%
been, but only day visits	32.8%	31.5%	33.0%	34.4%
stayed overnight in rentals	21.0%	**26.3%**	20.9%	**14.8%**
stayed overnight in own camper/RV	28.9%	**23.2%**	32.9%	31.4%
owned mobile home there	13.9%	10.4%	14.9%	18.6%

familiarity	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
never heard of it	10.9%	5.3%	4.0%	**0.5%**	3.2%	9.9%	**13.3%**
heard of, but never been	14.1%	9.5%	6.8%	**1.8%**	4.7%	**17.1%**	**21.3%**
been, but only day visits	30.9%	32.4%	34.9%	34.5%	36.9%	31.9%	31.7%
stayed overnight in rentals	18.1%	22.7%	24.0%	17.2%	20.7%	**26.0%**	20.8%
stayed overnight in own camper/RV	25.6%	31.7%	27.7%	**41.5%**	**35.6%**	**15.9%**	**21.7%**
owned mobile home there	12.2%	12.6%	16.7%	18.8%	11.5%	13.7%	**7.1%**

Only 6.6 percent of all respondents have never heard of Lake Berryessa. There was considerable variation among the respondent-groups, however: 11.3 percent of the younger, compared to only 2.7 percent of the older; 10.9 percent of the lower income, compared to only 4.0 percent of the higher income; and 13.3 percent of the Delta residents, compared to only 0.5 percent of the Napa residents (as might be expected) and 3.2 percent of the North Bay residents.

Another 9.9 percent have heard of Lake Berryessa, but have never been there. When combined with the 6.6 percent who have never heard of it, it means that the vast majority (83.5 percent) of all respondents actually have been there. As in the two previous questions, this high participation rate: (1) reflects intended bias in the survey; and (2) validity of the results due to high familiarity with the topic.

Some 32.8 percent have visited Lake Berryessa, but only for day visits without staying overnight. Another 21.0 percent have stayed overnight in rental accommodations; 28.9 percent have stayed overnight in their own camper or RV; and the remaining 13.9 percent actually owned a mobile home there.

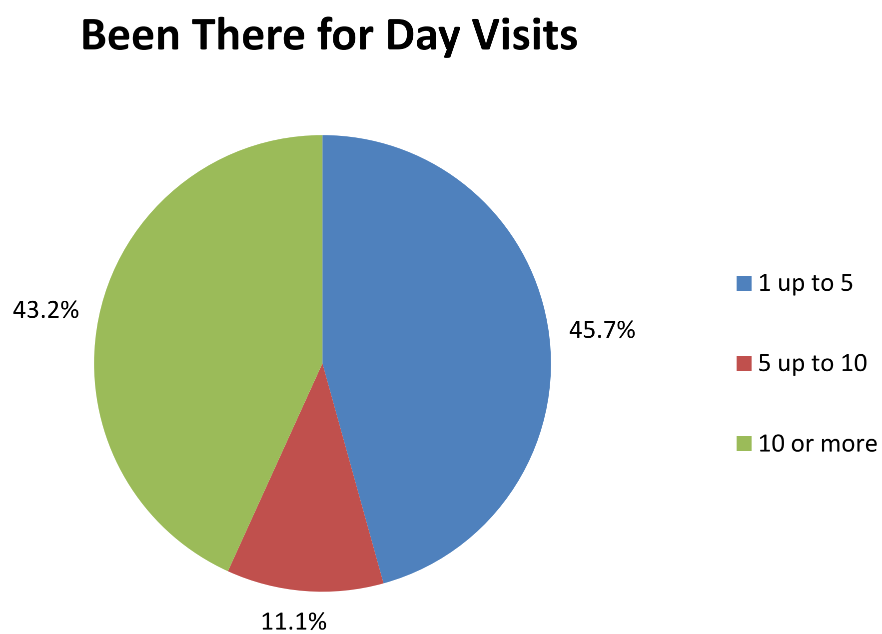
Shown below are how the various respondent-groups rank in their different experiences with Lake Berryessa. As noted in the introduction, groups varying more than 5.0 percent from all respondents are shown in **bold** font.

never heard of it		heard of it, but never been there		visited for day visit(s)	
group	percent	group	percent	group	percent
Delta	**13.3%**	Delta	**21.3%**	North Bay	36.9%
younger	11.3%	South Bay	**17.1%**	higher income	34.9%
lower income	10.9%	younger	14.5%	Napa County	34.5%
South Bay	9.9%	lower income	14.1%	older	34.4%
all	6.6%	all	9.9%	middle age	33.0%
middle income	5.3%	middle income	9.5%	all	32.8%
higher income	4.0%	middle age	7.7%	middle income	32.4%
middle age	3.8%	higher income	6.8%	South Bay	31.9%
North Bay	3.2%	older	5.3%	Delta	31.7%
older	2.7%	North Bay	**4.7%**	younger	31.5%
Napa County	**0.5%**	Napa County	**1.8%**	lower income	30.9%

stayed overnight in rental accommodations		stayed overnight in own camper or RV		owned a mobile home	
group	percent	group	percent	group	percent
younger	**26.3%**	Napa County	**41.8%**	Napa County	18.8%
South Bay	**26.0%**	North Bay	**35.6%**	older	18.6%
higher income	24.0%	middle age	32.9%	higher income	16.7%
middle income	22.7%	middle income	31.7%	middle age	14.9%
all	21.0%	older	31.4%	all	13.9%
middle age	20.9%	all	28.9%	South Bay	13.7%
Delta	20.8%	higher income	27.7%	middle income	12.6%
North Bay	20.7%	lower income	25.6%	lower income	12.2%
lower income	18.1%	younger	**23.2%**	North Bay	11.5%
Napa County	17.2%	Delta	**21.7%**	younger	10.4%
older	**14.8%**	South Bay	**15.9%**	Delta	**7.1%**

In summary, the proportion of respondents not having visited Lake Berryessa is highest among residents of the Delta followed by the South Bay, and the younger and lower income. Owners of their own camper or RV is highest among residents of Napa County and the North Bay, and the middle age and income. There is little variation among day visitors or mobile home owners. Overnight campers using their own accommodations is much higher among residents of Napa County and the North Bay, and much lower among residents of the Delta and the South Bay.

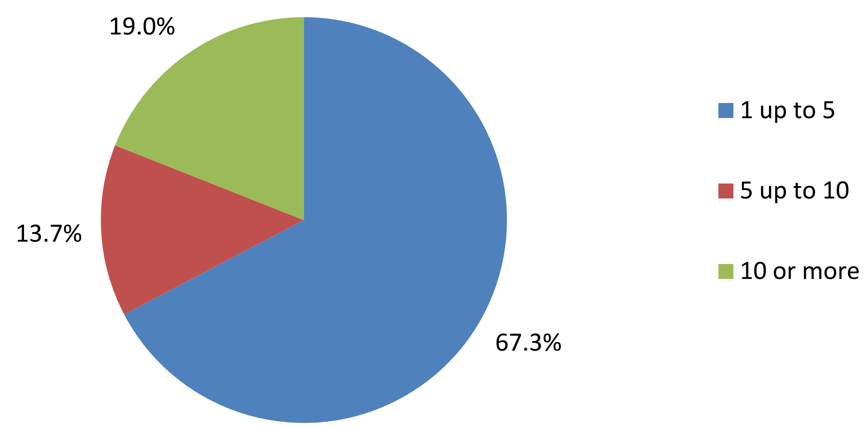
QUESTION 4. If you have visited Lake Berryessa, how many times have you:



type of visit/times been there for day visits?	all respondents	age: younger	age: middle	age: older
1 up to 5	45.7%	**56.1%**	**40.8%**	**32.9%**
5 up to 10	11.1%	14.5%	10.0%	11.1%
10 or more	43.2%	**29.4%**	**49.1%**	**56.0%**
total	100.0%	100.0%	100.0%	100.0%
est. average	7.5	4.0	10.0	9.5

type of visit/times been there for day visits?	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
1 up to 5	**53.1%**	46.1%	**35.5%**	**24.2%**	**36.8%**	**60.7%**	**62.2%**
5 up to 10	11.5%	11.7%	12.4%	8.3%	10.4%	**16.6%**	**20.7%**
10 or more	**35.4%**	42.2%	**52.1%**	**67.6%**	**52.9%**	**22.7%**	**17.1%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	4.0	7.5	10.0	15.0	9.0	3.0	2.5

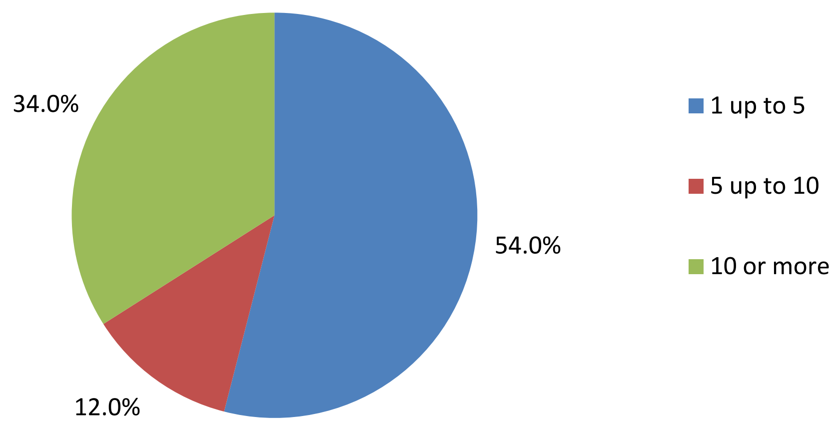
Stayed Overnight in Rental Accommodations



type of visit/times stayed overnight in rental accommodations?	all respondents	age: younger	age: middle	age: older
1 up to 5	67.3%	66.9%	66.0%	65.0%
5 up to 10	13.7%	15.7%	12.8%	14.4%
10 or more	19.0%	17.4%	21.2%	20.6%
total	100.0%	100.0%	100.0%	100.0%
est. average		2.0	2.0	2.0

type of visit/times stayed overnight in rental accommodations?	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
1 up to 5	72.1%	67.1%	**59.2%**	**59.1%**	68.3%	70.0%	71.4%
5 up to 10	12.1%	15.6%	14.6%	11.9%	13.0%	16.6%	**19.4%**
10 or more	15.8%	17.2%	**26.2%**	**29.0%**	18.7%	**13.4%**	**9.2%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	1.5	2.0	3.0	3.0	2.0	2.0	1.5

Stayed Overnight in Your Personally Owned Camper or RV



type of visit/times stayed overnight in own camper or RV?	all respondents	age: younger	middle	older
1 up to 5	54.0%	58.8%	54.4%	**38.6%**
5 up to 10	12.0%	14.7%	12.2%	13.0%
10 or more	34.0%	**26.5%**	33.5%	**48.4%**
total	100.0%	100.0%	100.0%	100.0%
est. average		3.5	4.0	5.0

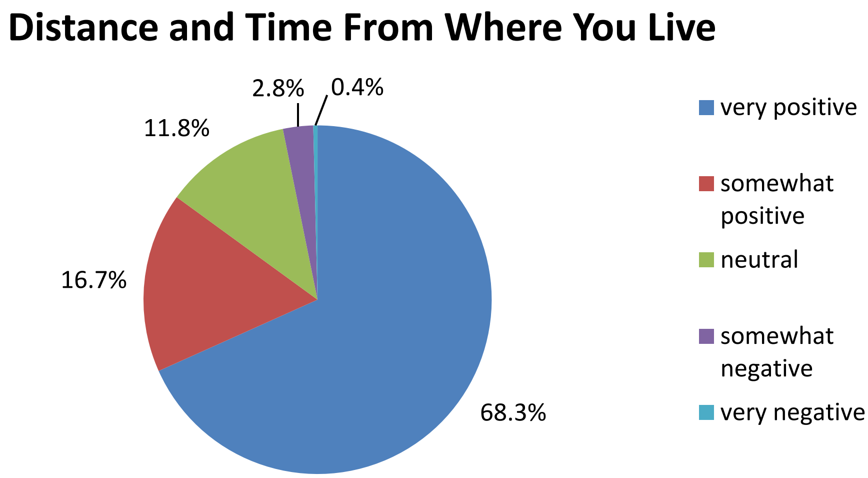
type of visit/times stayed overnight in own camper or RV?	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
1 up to 5	**65.0%**	49.1%	**48.1%**	**43.8%**	54.5%	57.5%	**62.4%**
5 up to 10	10.3%	15.8%	12.6%	10.7%	12.2%	15.0%	**22.8%**
10 or more	**24.7%**	**35.1%**	**39.3%**	**45.5%**	33.2%	**27.5%**	**14.8%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	2.0	5.0	5.0	8.0	4.0	3.5	2.5

It is apparent that respondents living in Napa County were/are frequent users of Lake Berryessa. For instance, of those who have visited Lake Berryessa, 67.6 percent have been there 10 or more times for day visits, 29.0 percent have stayed in overnight rentals 10 or more times, and 45.5 percent have stayed overnight 10 or more times in their own camper or RV. Among all respondents, these proportions are only 43.2 percent, 19.0 percent and 34.0 percent, respectively.

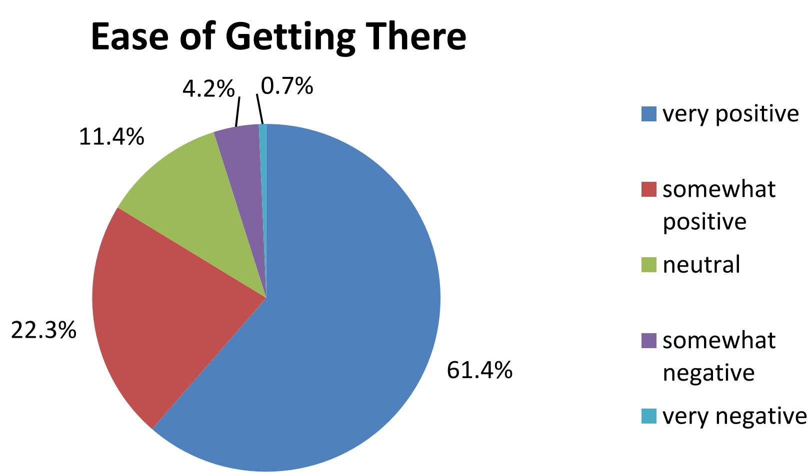
As with the previous question, frequency of visits to Lake Berryessa, whether it be for day visits or overnight stays, is highest among Napa County and North Bay residents and older and higher income. Conversely, it is lowest among residents of the South Bay and the Delta, and the younger and lower income.

Results suggest that greater marketing of Lake Berryessa may be worth the effort in the South Bay and Delta. It also appears that distance may be an issue with South Bay residents. For Delta residents, it may be an issue of having nearby opportunities in the Delta waterways and Lake Tahoe. Greater diversity of activities may assist in being more attractive to the younger and lower income.

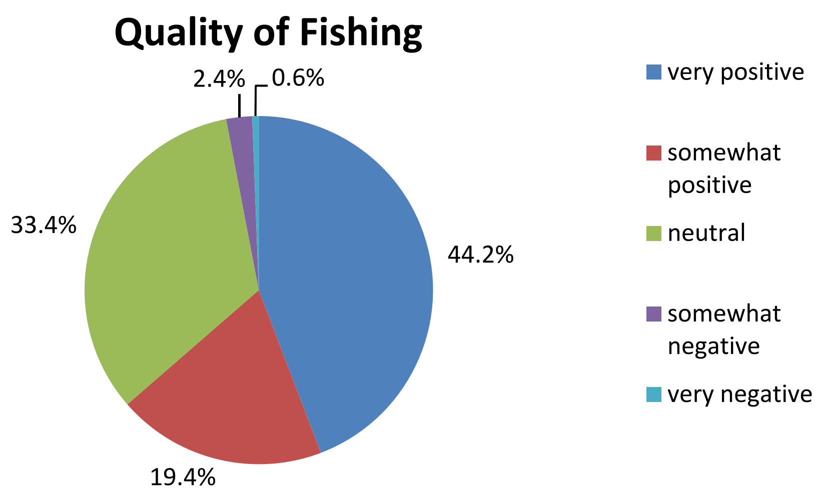
QUESTION 5. If you visited Lake Berryessa prior to 2010, what were your opinions of each of the following?



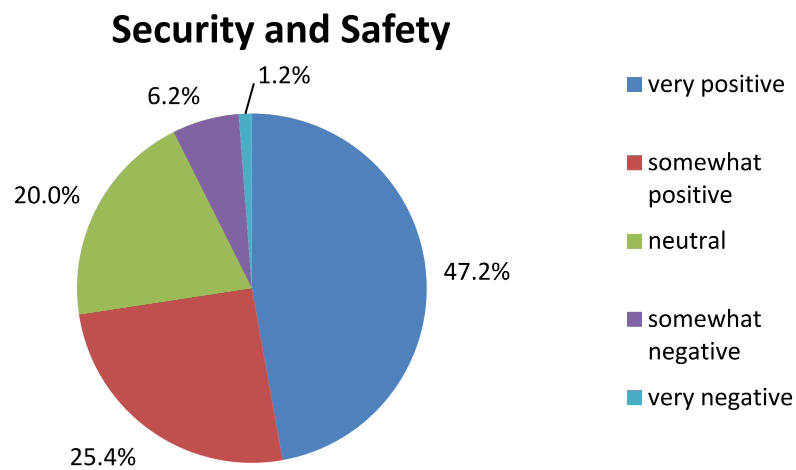
1. distance and time from where you live	all respondents	residence Napa	North Bay	South Bay	Delta
very positive	68.3%	**76.5%**	**76.1%**	**54.4%**	**52.1%**
somewhat positive	16.7%	12.3%	14.5%	**24.2%**	**23.3%**
neutral	11.8%	9.5%	7.5%	15.1%	**20.4%**
somewhat negative	2.8%	1.1%	1.4%	6.0%	4.2%
very negative	0.4%	0.5%	0.5%	0.3%	0.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%



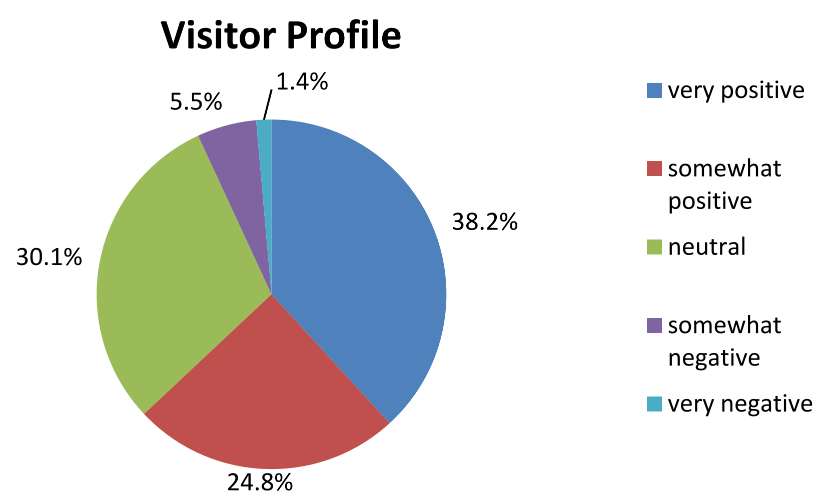
2. ease of getting there	all respondents	residence Napa	North Bay	South Bay	Delta
very positive	61.4%	63.7%	**67.0%**	**50.0%**	**50.3%**
somewhat positive	22.3%	21.7%	21.5%	**29.1%**	25.8%
neutral	11.4%	9.1%	7.9%	15.2%	**20.4%**
somewhat negative	4.2%	4.0%	3.2%	5.5%	3.6%
very negative	0.7%	1.4%	0.5%	0.3%	0.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%



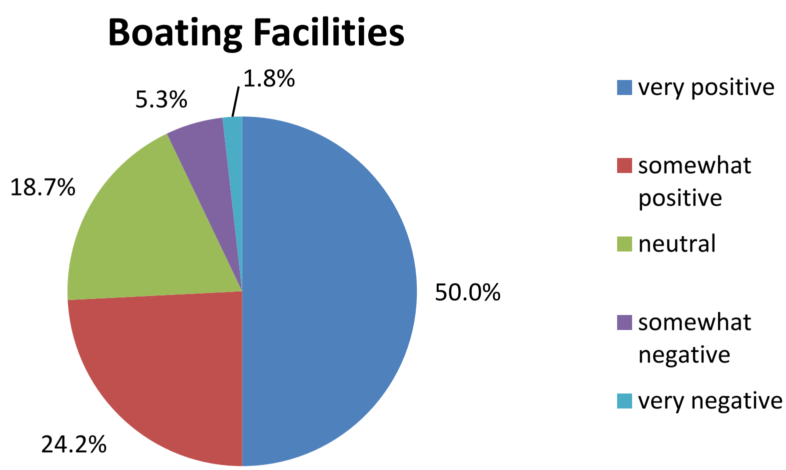
3. quality of fishing	all respondents	residence Napa	North Bay	South Bay	Delta
very positive	44.2%	47.4%	42.9%	41.3%	46.7%
somewhat positive	19.4%	18.2%	19.3%	21.7%	18.0%
neutral	33.4%	31.4%	35.4%	33.9%	32.0%
somewhat negative	2.4%	2.1%	2.0%	2.8%	3.3%
very negative	0.6%	0.9%	0.4%	0.3%	0.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%



4. security and safety	all respondents	Napa	North Bay	South Bay	Delta
		residence			
very positive	47.2%	**41.9%**	44.7%	49.0%	45.7%
somewhat positive	25.4%	24.7%	26.1%	28.9%	25.5%
neutral	20.0%	20.5%	22.4%	18.0%	21.6%
somewhat negative	6.2%	9.9%	6.1%	4.1%	5.9%
very negative	1.2%	3.0%	0.8%	0.0%	1.3%
total	100.0%	100.0%	100.0%	100.0%	100.0%

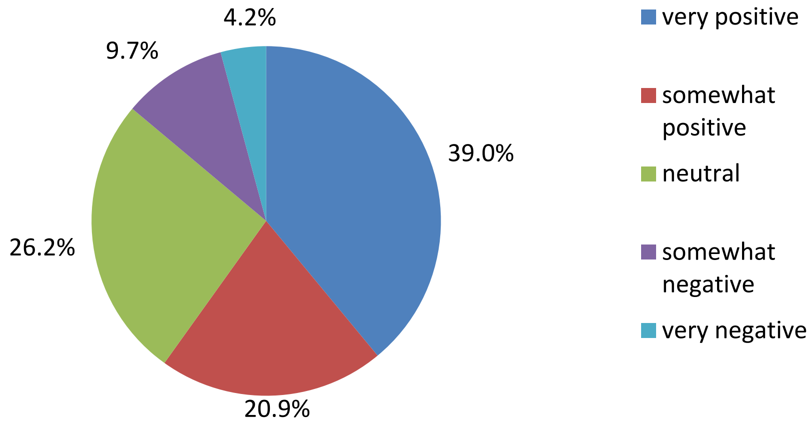


5. visitor profile	all respondents	residence Napa	North Bay	South Bay	Delta
very positive	38.2%	**33.1%**	35.8%	38.7%	**43.2%**
somewhat positive	24.8%	22.1%	25.4%	**30.0%**	23.7%
neutral	30.1%	32.1%	32.2%	25.2%	29.5%
somewhat negative	5.5%	9.3%	5.6%	5.5%	2.2%
very negative	1.4%	3.4%	1.0%	0.6%	1.4%
total	100.0%	100.0%	100.0%	100.0%	100.0%



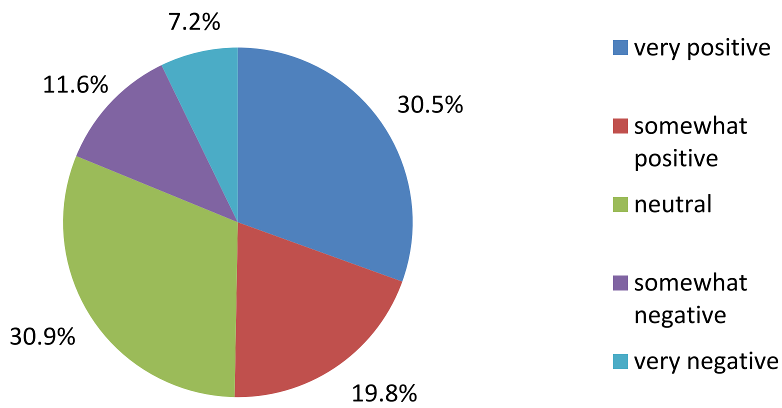
6. boating facilities	all respondents	residence Napa	North Bay	South Bay	Delta
very positive	50.0%	49.5%	48.9%	45.6%	**40.0%**
somewhat positive	24.2%	22.3%	24.8%	**30.5%**	24.0%
neutral	18.7%	17.9%	18.1%	19.5%	**28.7%**
somewhat negative	5.3%	6.7%	6.8%	3.5%	5.3%
very negative	1.8%	3.5%	1.4%	0.9%	2.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Camping and RV Facilities

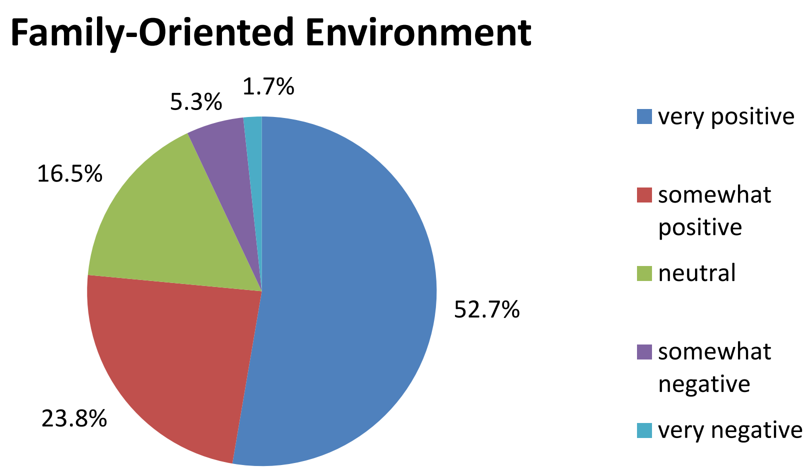


7. camping and RV facilities	all respondents	residence: Napa	North Bay	South Bay	Delta
very positive	39.0%	36.3%	36.2%	34.4%	38.4%
somewhat positive	20.9%	17.1%	22.3%	24.4%	21.9%
neutral	26.2%	26.5%	24.8%	**31.9%**	28.8%
somewhat negative	9.7%	14.0%	10.9%	7.5%	6.8%
very negative	4.2%	6.1%	5.8%	1.9%	4.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%

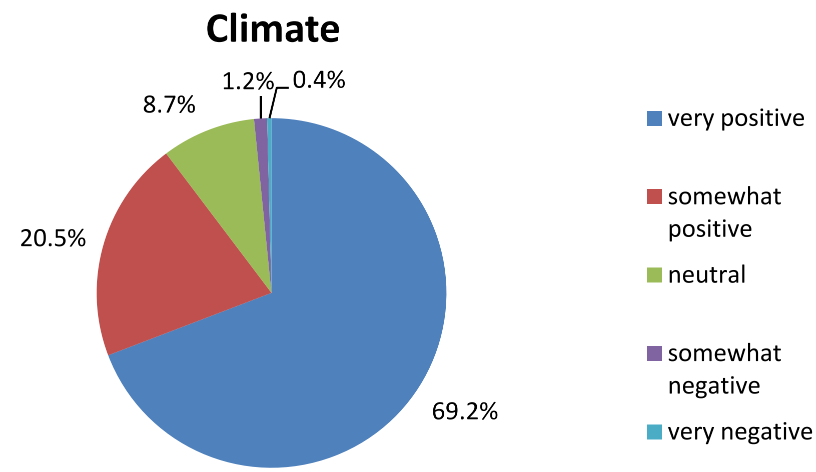
Lodging and Other Overnight Accommodations



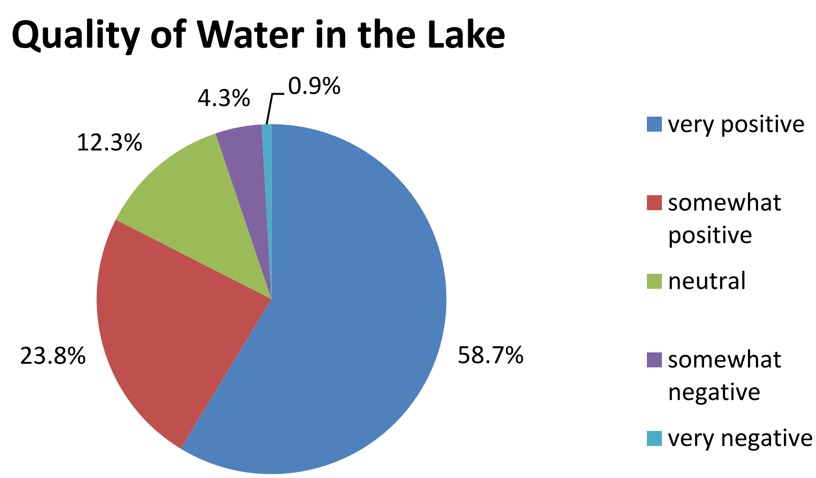
8. lodging and other overnight accommodations	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	30.5%	27.4%	25.1%	32.8%	35.4%
somewhat positive	19.8%	13.2%	18.3%	**26.4%**	**24.3%**
neutral	30.9%	28.4%	33.8%	31.5%	29.2%
somewhat negative	11.6%	**19.7%**	13.8%	**5.8%**	**5.6%**
very negative	7.2%	11.3%	9.0%	3.5%	5.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%



9. family-oriented environment	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	52.7%	**47.1%**	50.9%	50.9%	**44.8%**
somewhat positive	23.8%	24.4%	24.6%	**29.2%**	**29.2%**
neutral	16.5%	16.5%	16.4%	16.5%	20.1%
somewhat negative	5.3%	8.5%	6.1%	2.9%	5.2%
very negative	1.7%	3.5%	2.0%	0.6%	0.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%

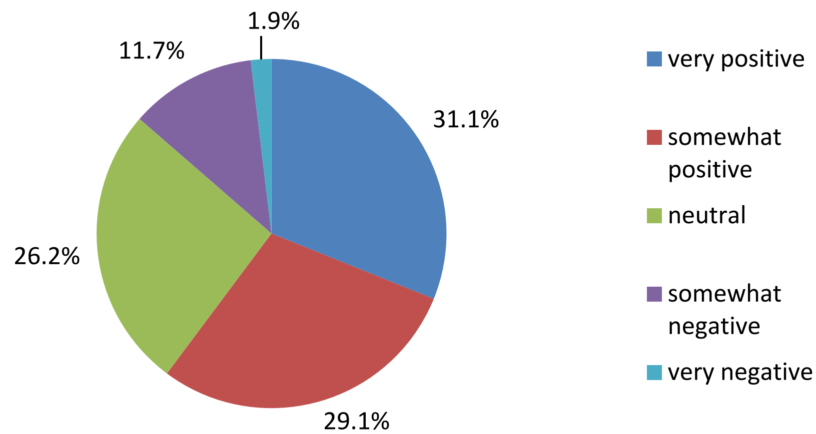


10. climate	all respondents	residence Napa	North Bay	South Bay	Delta
very positive	69.2%	71.9%	70.5%	**60.6%**	**55.6%**
somewhat positive	20.5%	21.1%	21.8%	**26.7%**	23.1%
neutral	8.7%	6.1%	6.3%	10.3%	**18.1%**
somewhat negative	1.2%	0.6%	1.0%	2.3%	2.5%
very negative	0.4%	0.3%	0.4%	0.0%	0.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%



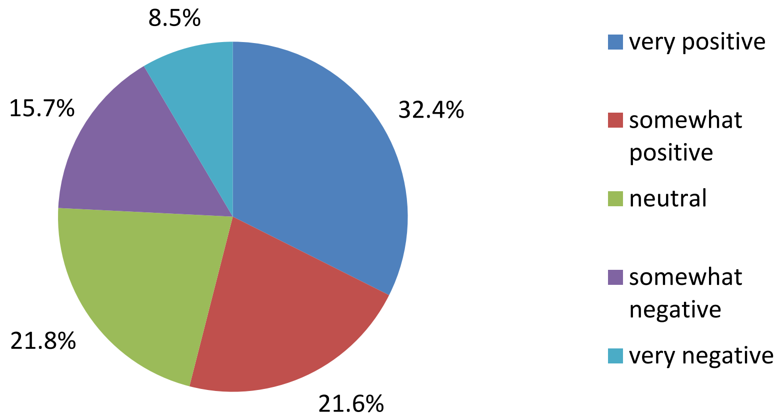
11. quality of water in the lake	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	58.7%	59.9%	61.4%	55.6%	**45.1%**
somewhat positive	23.8%	22.2%	23.9%	26.8%	**29.4%**
neutral	12.3%	9.4%	10.0%	13.1%	**22.2%**
somewhat negative	4.3%	6.7%	3.7%	4.3%	3.3%
very negative	0.9%	1.7%	1.0%	0.3%	0.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Consistency of Water Level in the Lake



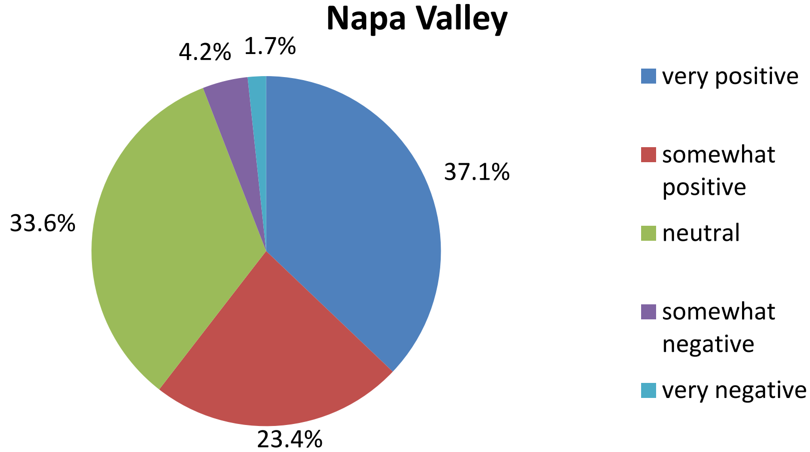
12. consistency of water level in the lake	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	31.1%	**22.7%**	29.4%	32.6%	35.2%
somewhat positive	29.1%	32.9%	29.8%	29.9%	27.6%
neutral	26.2%	25.5%	27.3%	25.5%	29.0%
somewhat negative	11.7%	14.1%	12.2%	11.4%	8.3%
very negative	1.9%	4.8%	1.4%	0.6%	0.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Convenience Stores, Restaurants and Taverns

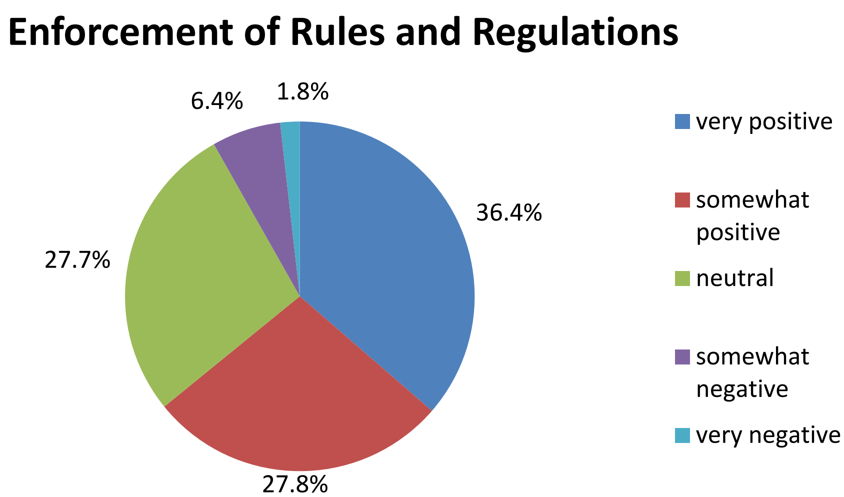


13. convenience stores, restaurants and taverns	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	32.4%	30.4%	**26.4%**	33.7%	32.6%
somewhat positive	21.6%	**14.5%**	23.2%	**26.8%**	24.5%
neutral	21.8%	17.2%	22.6%	22.5%	**31.3%**
somewhat negative	15.7%	**24.1%**	17.3%	11.9%	**7.5%**
very negative	8.5%	**13.8%**	10.4%	5.2%	4.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%

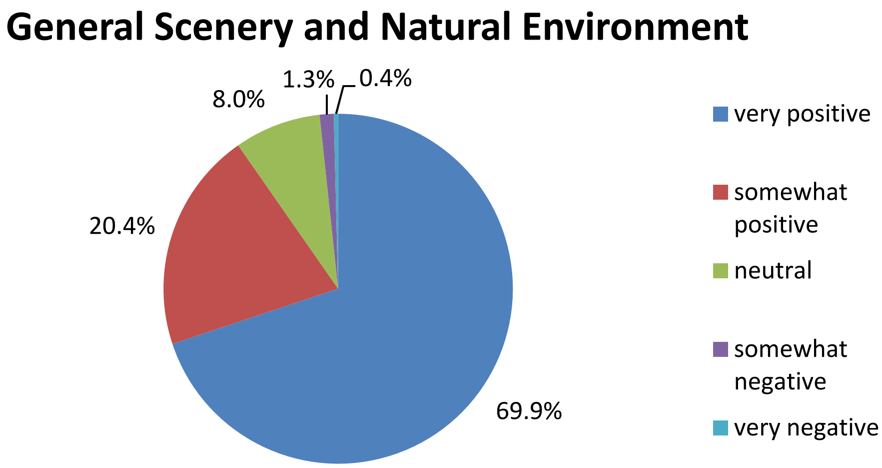
Proximity to Wineries and Other Attractions of Napa Valley



14. proximity to wineries and other attractions of Napa Valley	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	37.1%	**31.9%**	**30.3%**	41.6%	41.3%
somewhat positive	23.4%	**18.0%**	23.9%	**30.1%**	26.7%
neutral	33.6%	**39.7%**	**41.0%**	**23.8%**	**28.0%**
somewhat negative	4.2%	5.0%	3.7%	4.5%	2.7%
very negative	1.7%	5.4%	1.2%	0.0%	1.3%
total	100.0%	100.0%	100.0%	100.0%	100.0%



15. enforcement of rules and regulations	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very positive	36.4%	36.5%	**30.9%**	37.3%	37.1%
somewhat positive	27.8%	23.7%	28.9%	**32.9%**	29.3%
neutral	27.7%	28.4%	31.5%	23.0%	25.0%
somewhat negative	6.4%	8.1%	6.7%	5.6%	6.4%
very negative	1.8%	3.1%	1.9%	1.2%	2.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%



16. general scenery and natural environment	all respondents	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very positive	69.9%	71.4%	70.8%	**64.7%**	**62.3%**
somewhat positive	20.4%	19.9%	21.9%	21.9%	23.9%
neutral	8.0%	6.4%	6.2%	11.1%	11.9%
somewhat negative	1.3%	1.9%	0.9%	1.7%	1.9%
very negative	0.4%	0.3%	0.3%	0.6%	0.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Respondents were asked their opinions about 16 different items at Lake Berryessa if they had visited it prior to the closures in 2009. Shown below are all responses, ranked under the headings of "very positive" and "negative." "Somewhat positive" and "neutral" responses are not shown.

"very positive"

item	percent
scenery and natural environment	69.9%
climate	69.2%
distance and time from where you live	68.3%
ease of getting there	61.4%
quality of water in the Lake	58.7%
family-oriented environment	52.7%
boating facilities	50.0%
security and safety	47.2%
quality of fishing	44.2%
camping and RV facilities	39.0%

"negative"

item	percent
convenience stores, restaurants and taverns	24.2%
lodging and other overnight accommodations	18.8%
camping and RV facilities	13.9%
consistency of water level in the Lake	13.6%
enforcement of rules and regulations	8.2%
security and safety	7.4%
boating facilities	7.1%
family-oriented environment	7.0%
visitor profile	6.9%
proximity to wineries and Napa Valley	6.9%

visitor profile	38.2%	quality of water in the Lake	5.2%
proximity to wineries and Napa Valley	37.1%	ease of getting there	4.9%
enforcement of rules and regulations	36.4%	distance and time from where you live	3.2%
convenience stores, restaurants and taverns	32.4%	quality of fishing	3.0%
consistency of water level in the Lake	31.1%	general scenery and natural environment	1.7%
lodging and other overnight accommodations	30.5%	climate	1.6%

For the most part, results were quite positive. This is especially true in regard to the natural features, e.g., "very positive" responses of 69.9 percent for "scenery and natural environment," 69.2 percent for "climate," and 58.7 percent for "quality of water in the Lake."

"Very positive" responses for "boating facilities" were also high at 50.0 percent. On the other hand, they were relatively low for other manmade items, e.g., only 39.0 percent for "camping and RV facilities," 32.4 percent for "convenience stores, restaurants and taverns," and 30.5 percent for "lodging and other overnight accommodations." Correspondingly, the three items with the highest proportion of "negative" responses were "convenience stores, restaurants and taverns" at 24.2 percent, "lodging and other overnight accommodations" at 18.8 percent, and "camping and RV facilities" at 13.9 percent. The only other item with more than 10 percent negative responses was "consistency of water level in the Lake" at 13.6 percent.

Other items with relatively high proportions of "very positive" responses were "family-oriented environment" at 52.7 percent, "security and safety" at 47.2 percent, and "quality of fishing" at 44.2 percent. An important item with relatively low "very positive" responses was "enforcement of rules and regulations" at only 36.4 percent.

Shown below are variations in the proportion of "very positive" answers among the four geographical areas of residence. Results show that the greater the degree of past use of, and familiarity with, Lake Berryessa, the more positive were the responses.

item/ "very positive" responses	
residence	percent
distance and time from where you live (68.3%)	
Napa County	**76.5%**
North Bay	**76.1%**
South Bay	**54.4%**
Delta	**52.1%**

item/ "very positive" responses	
residence	percent
ease of getting there (61.4%)	
Napa County	63.7%
North Bay	**67.0%**
South Bay	**50.0%**
Delta	**50.3%**

quality of fishing (44.2%)	
Napa County	47.4%
North Bay	42.9%
South Bay	41.3%
Delta	46.7%

security and safety (42.2%)	
Napa County	**41.9%**
North Bay	44.7%
South Bay	49.0%
Delta	45.7%

visitor profile (38.2%)	
Napa County	**33.1%**
North Bay	35.8%
South Bay	38.7%
Delta	**43.7%**

boating facilities (50.0%)	
Napa County	49.5%
North Bay	48.9%
South Bay	45.6%
Delta	**40.0%**

camping and RV facilities (39.0%)	
Napa County	36.3%
North Bay	36.2%
South Bay	34.4%
Delta	38.4%

lodging and overnight accommodations (30.5%)	
Napa County	27.4%
North Bay	25.1%
South Bay	32.8%
Delta	35.4%

family-oriented environment (52.7%)	
Napa County	**47.1%**
North Bay	50.9%
South Bay	50.9%
Delta	**44.8%**

climate (69.2%)	
Napa County	71.9%
North Bay	70.5%
South Bay	**60.6%**
Delta	**55.6%**

quality of water in the Lake (58.7%)	
Napa County	59.9%
North Bay	61.4%
South Bay	55.6%
Delta	**45.1%**

consistency of water level in Lake (31.1%)	
Napa County	**22.7%**
North Bay	29.4%
South Bay	32.6%
Delta	35.2%

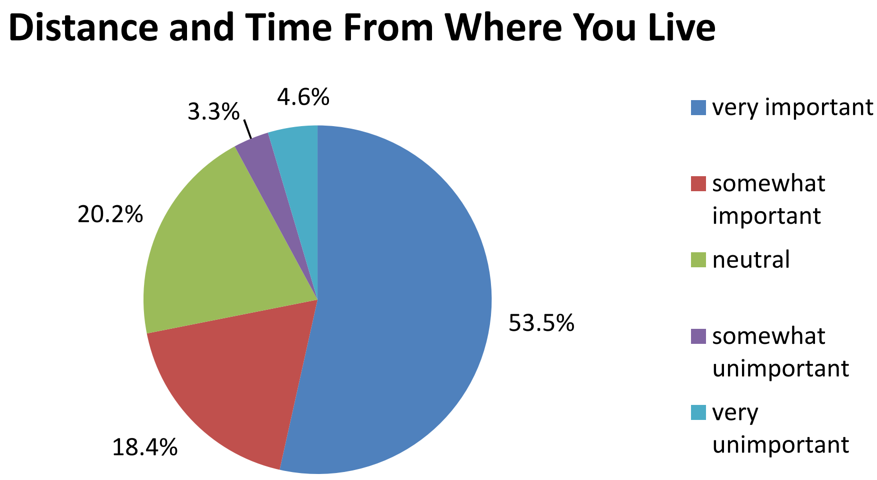
convenience stores, restaurants and taverns (32.4%)	
Napa County	30.4%
North Bay	**26.4%**
South Bay	33.7%
Delta	32.6%

proximity to wineries, etc. (37.1%)	
Napa County	**31.9%**
North Bay	**30.3%**
South Bay	41.6%
Delta	41.3%

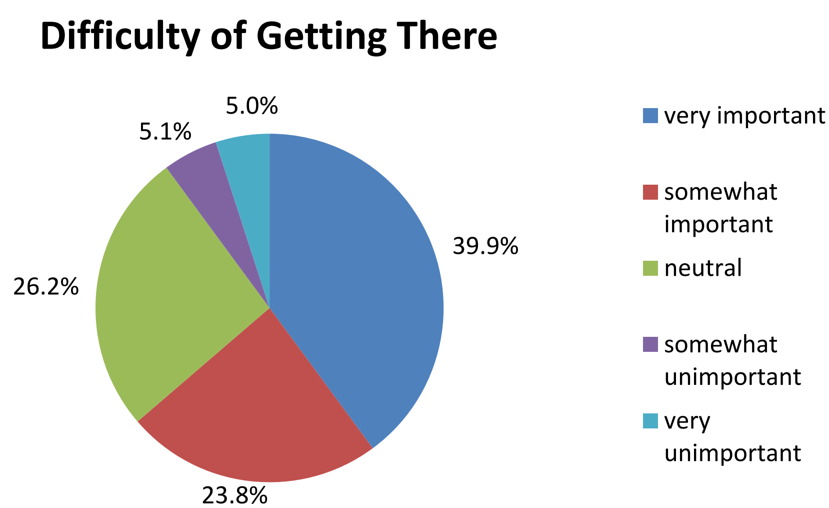
enforcement of rules (36.4%)	
Napa County	36.5%
North Bay	**30.9%**
South Bay	37.3%
Delta	37.1%

general scenery (69.9%)	
Napa County	71.4%
North Bay	70.8%
South Bay	**64.7%**
Delta	**62.3%**

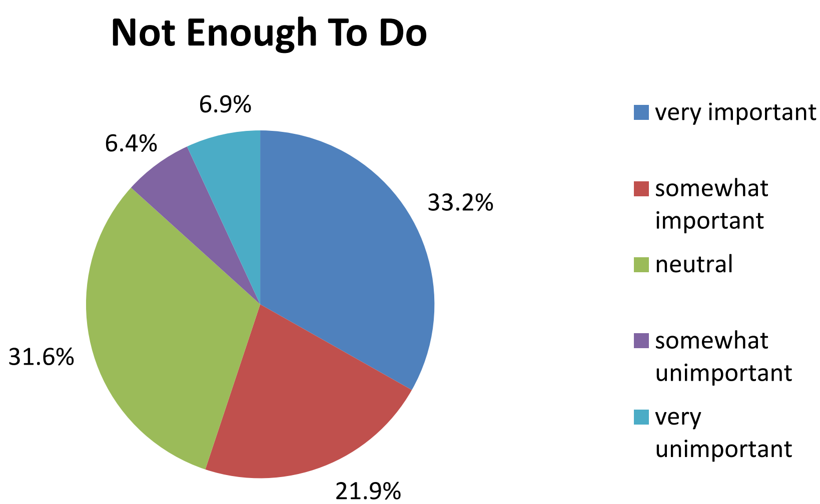
QUESTION 6. If you heard of Lake Berryessa prior to 2010, but never visited it, how important were each of the following reasons?



1. distance and time from where you live	all respondents	residence Napa	North Bay	South Bay	Delta
very important	53.5%	**43.1%**	51.6%	57.9%	**48.3%**
somewhat important	18.4%	18.4%	17.1%	20.9%	**24.5%**
neutral	20.2%	**28.4%**	22.0%	**14.3%**	21.1%
somewhat unimportant	3.3%	2.8%	3.3%	1.5%	3.4%
very unimportant	4.6%	7.3%	5.9%	5.4%	2.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%

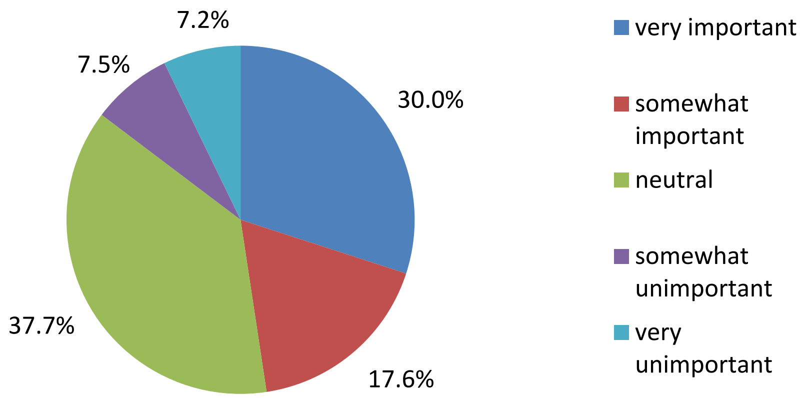


2. difficulty of getting there	all respondents	residence Napa	North Bay	South Bay	Delta
very important	39.9%	**28.7%**	37.4%	42.4%	38.1%
somewhat important	23.8%	25.7%	20.6%	**30.4%**	27.8%
neutral	26.2%	**33.7%**	29.1%	**18.8%**	26.2%
somewhat unimportant	5.1%	5.9%	6.9%	3.6%	4.8%
very unimportant	5.0%	5.9%	6.1%	4.9%	3.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%



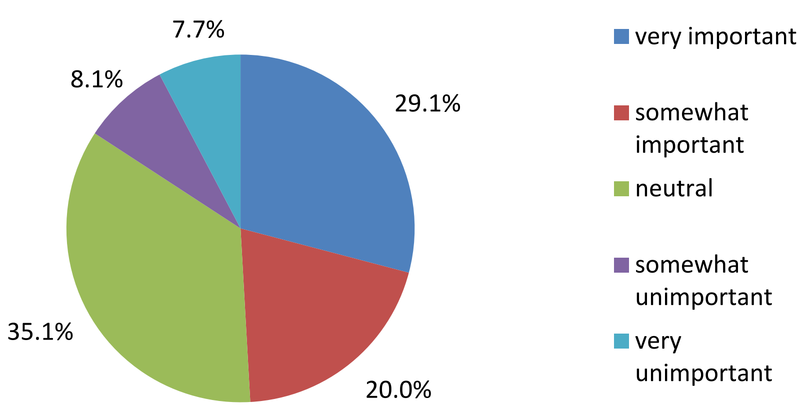
3. not enough to do	all respondents	residence Napa	North Bay	South Bay	Delta
very important	33.2%	35.6%	31.7%	30.2%	**40.0%**
somewhat important	21.9%	**16.8%**	20.5%	**27.4%**	23.3%
neutral	31.6%	30.7%	34.4%	29.3%	27.5%
somewhat unimportant	6.4%	6.9%	6.2%	7.1%	6.7%
very unimportant	6.9%	9.9%	7.3%	6.1%	2.5%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Heard Was Too Rowdy

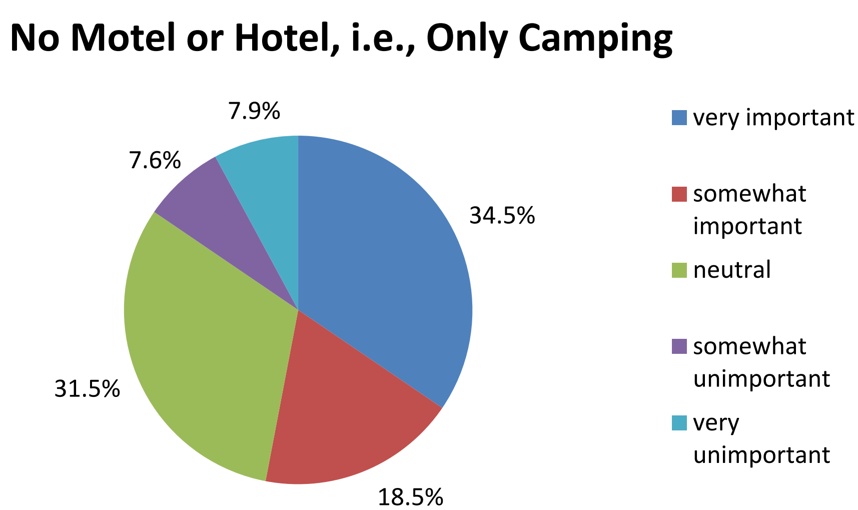


4. heard was too rowdy	all respondents	residence Napa	North Bay	South Bay	Delta
very important	30.0%	31.3%	30.2%	29.1%	32.5%
somewhat important	17.6%	17.7%	16.7%	20.0%	**25.6%**
neutral	37.7%	38.5%	37.7%	39.0%	**30.8%**
somewhat unimportant	7.5%	5.2%	7.1%	6.2%	7.7%
very unimportant	7.2%	7.3%	8.3%	5.7%	3.4%
total	100.0%	100.0%	100.0%	100.0%	100.0%

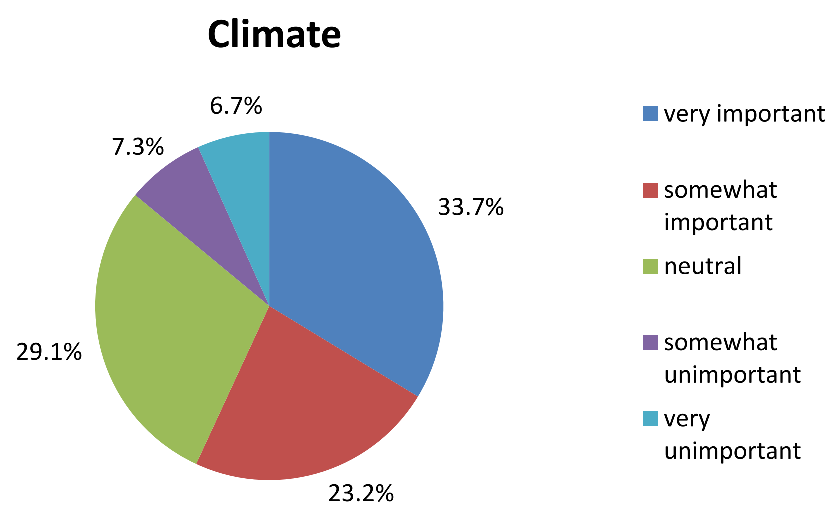
Didn't Seem High Quality Enough



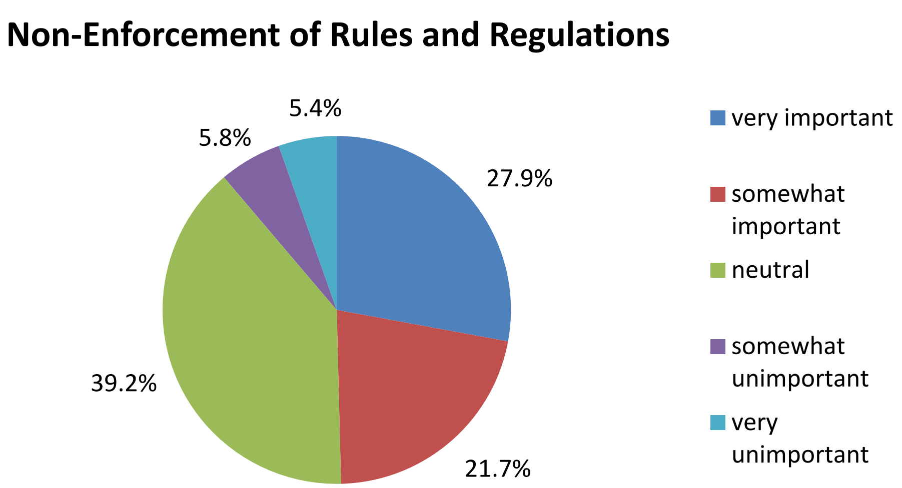
5. didn't seem high quality enough	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	29.1%	**34.7%**	28.2%	24.3%	**34.5%**
somewhat important	20.0%	16.3%	20.8%	**26.2%**	17.7%
neutral	35.1%	35.7%	36.5%	33.8%	32.7%
somewhat unimportant	8.1%	5.1%	5.9%	9.1%	9.7%
very unimportant	7.7%	8.1%	8.6%	6.7%	5.3%
total	100.0%	100.0%	100.0%	100.0%	100.0%



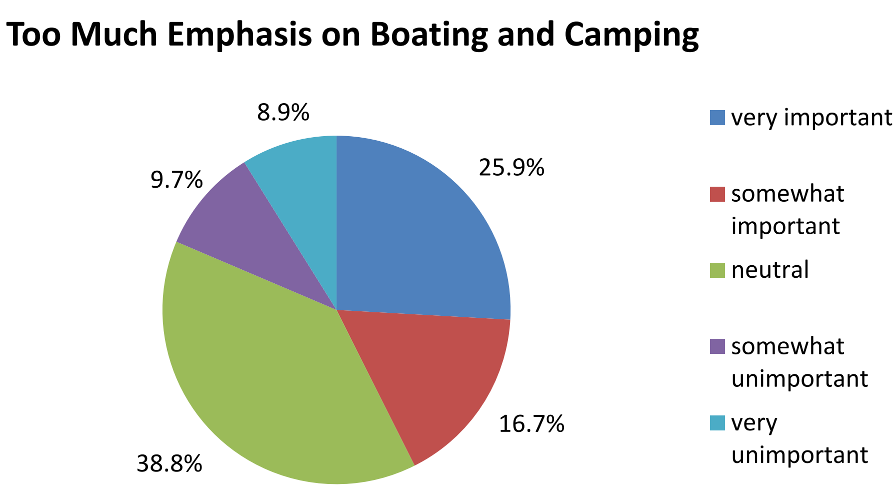
6. no motel or hotel, i.e., only camping	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	34.5%	37.6%	30.9%	31.1%	38.3%
somewhat important	18.5%	**12.8%**	17.2%	**24.5%**	19.2%
neutral	31.5%	34.9%	32.8%	29.7%	30.0%
somewhat unimportant	7.6%	4.6%	7.8%	8.5%	7.5%
very unimportant	7.9%	10.1%	11.3%	6.1%	5.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%



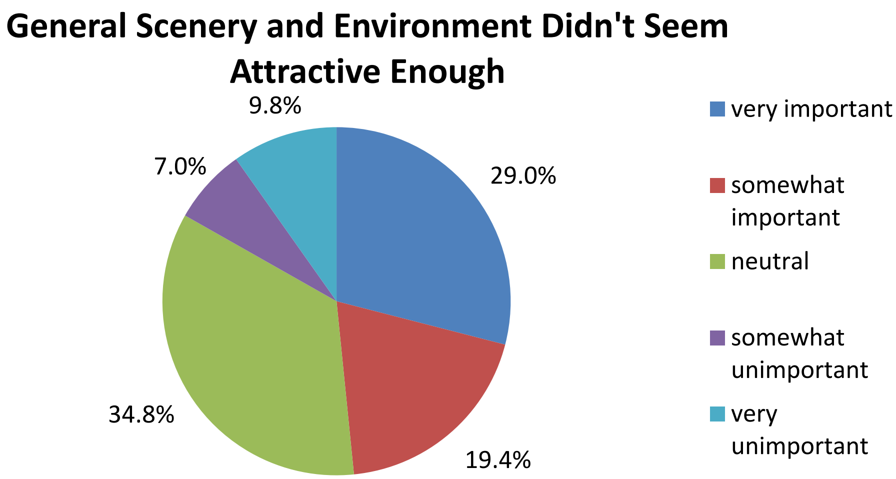
7. climate	all respondents	Napa	North Bay	South Bay	Delta
		residence			
very important	33.7%	34.4%	30.6%	32.4%	35.6%
somewhat important	23.2%	**15.6%**	20.7%	**29.0%**	**28.8%**
neutral	29.1%	30.2%	31.8%	27.1%	27.1%
somewhat unimportant	7.3%	8.3%	7.4%	7.7%	5.1%
very unimportant	6.7%	11.4%	9.5%	3.9%	3.4%
total	100.0%	100.0%	100.0%	100.0%	100.0%



8. non-enforcement of rules and regulations	all respondents	residence Napa	North Bay	South Bay	Delta
very important	27.9%	**22.8%**	27.2%	28.9%	26.1%
somewhat important	21.7%	26.1%	20.3%	24.5%	26.1%
neutral	39.2%	42.4%	41.1%	34.3%	38.3%
somewhat unimportant	5.8%	2.2%	4.9%	8.3%	5.2%
very unimportant	5.4%	6.5%	6.5%	3.9%	4.4%
total	100.0%	100.0%	100.0%	100.0%	100.0%



9. too much emphasis on boating and camping	all respondents	residence Napa	North Bay	South Bay	Delta
very important	25.9%	**18.9%**	24.8%	29.6%	27.5%
somewhat important	16.7%	18.9%	12.8%	**21.1%**	**21.7%**
neutral	38.8%	40.0%	39.6%	**33.3%**	38.3%
somewhat unimportant	9.7%	8.4%	12.0%	8.5%	8.3%
very unimportant	8.9%	13.7%	10.8%	7.5%	4.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%



10. general scenery and environment didn't seem attractive enough	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	29.0%	25.3%	30.1%	25.1%	30.8%
somewhat important	19.4%	15.1%	15.0%	**24.6%**	**30.8%**
neutral	34.8%	31.3%	38.2%	33.7%	33.3%
somewhat unimportant	7.0%	9.1%	6.1%	9.0%	2.6%
very unimportant	9.8%	**19.2%**	10.6%	7.6%	**2.5%**
total	100.0%	100.0%	100.0%	100.0%	100.0%

As noted in a previous question, only 9.9 percent of all respondents had heard of Lake Berryessa before the closings in 2009, but had never visited it. These respondents gave the following ranked proportion of "very important" **and** "somewhat important" answers when asked why in fact they did not visit the Lake. Also shown are responses only from Napa County residents.

reason for not visiting	percent of "very important" and "somewhat important" answers: all respondents	Napa County residents
distance and time from where you live	71.9%	61.5%
difficulty of getting there	63.7%	54.4%
climate	56.9%	50.0%
not enough to do	55.1%	52.4%
no motel or hotel, i.e., only camping	53.0%	50.4%

non-enforcement of rules and regulations	49.6%	48.9%
didn't seem high quality enough	49.1%	51.0%
general scenery and environment didn't seem attractive enough	48.7%	40.4%
heard was too rowdy	47.6%	49.0%
too much emphasis on boating and camping	42.6%	37.8%

This question may have been difficult to answer because respondents were asked to remember their decision-making process from several years ago, as well as never having seen the place. At any rate, the two most important reasons for not visiting among all respondents related to distance from home and ease of getting there. These reasons were significantly less important for Napa County residents, as would be expected.

Limited variation was found among the other reasons for both all respondents and Napa County residents. But, also as might be expected due to the composition of the sample, "too much emphasis on boating and camping" was by far the least important reason for not visiting.

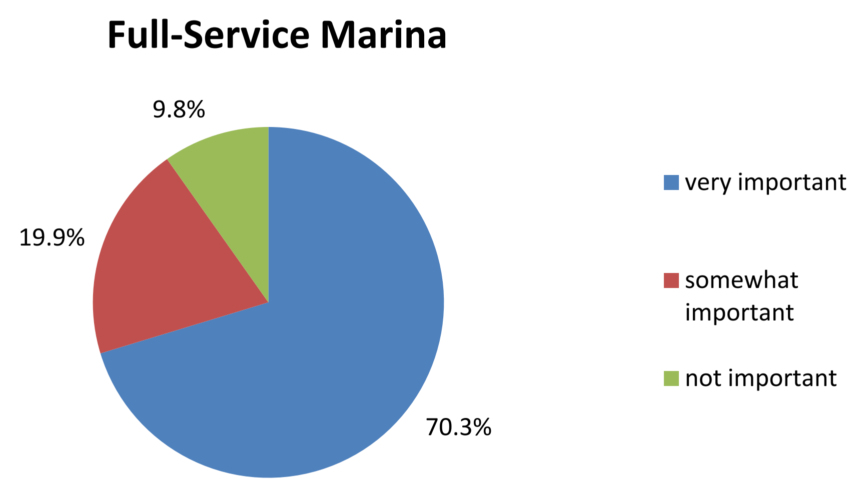
III. QUESTIONS PERTAINING TO THE FUTURE OF LAKE BERRYESSA

THE FUTURE OF LAKE BERRYESSA

As noted in the introduction, Lake Berryessa is a popular and well-known boating and camping destination for millions of visitors. Seven concession areas provided an array of services throughout the Lake from 1959 to 2009. It is now possible that several new resorts will be re-created at Lake Berryessa for visitor services. They will be well-managed and oriented to outdoor recreationists throughout northern California and beyond.

The following set of questions are asked in order to help Napa County and **future** concessionaires design and implement the most appropriate and desirable resort facilities for public use possible.

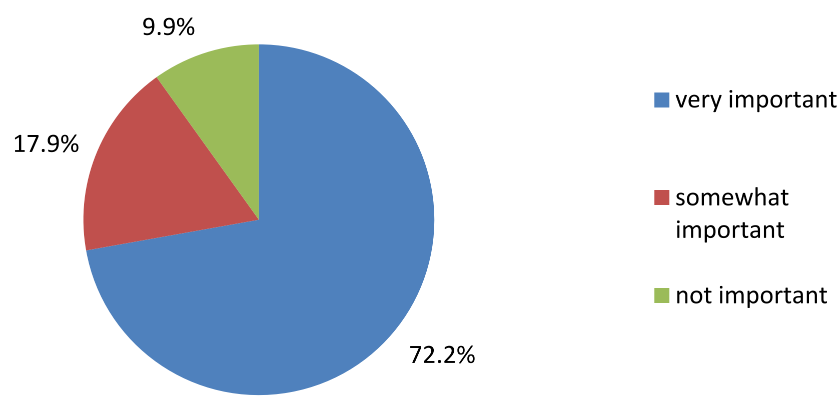
QUESTION 7. How important would each of the following boat-oriented items be in your decision to boat at Lake Berryessa?



1. full-service marina	all respondents	age: younger	middle	older
very important	70.3%	67.6%	71.6%	71.9%
somewhat important	19.9%	22.6%	18.5%	16.9%
not important	9.8%	9.8%	9.8%	11.2%
total	100.0%	100.0%	100.0%	100.0%

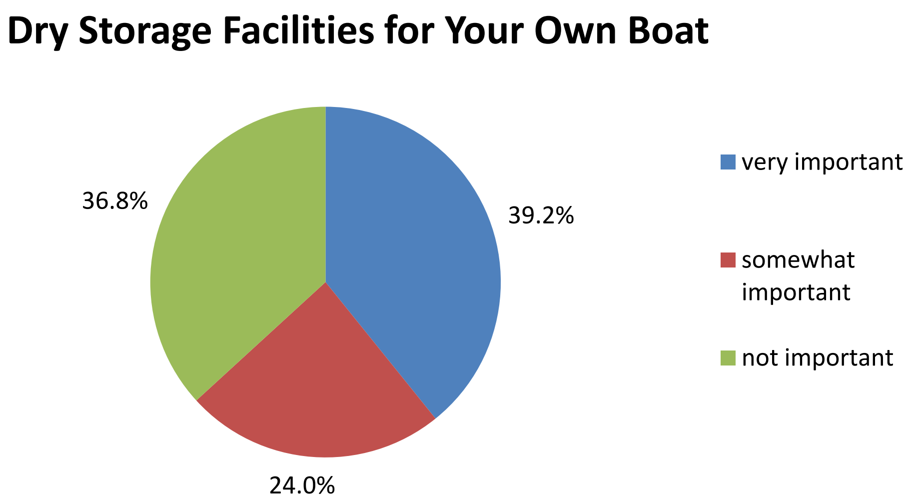
1. full-service marina	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	66.4%	69.0%	**75.3%**	74.1%	71.4%	67.4%	**64.7%**
somewhat important	22.2%	20.1%	16.8%	17.1%	18.7%	20.8%	**25.5%**
not important	11.4%	10.9%	7.9%	8.8%	9.9%	11.8%	9.8%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Improved Boat Launching Facilities



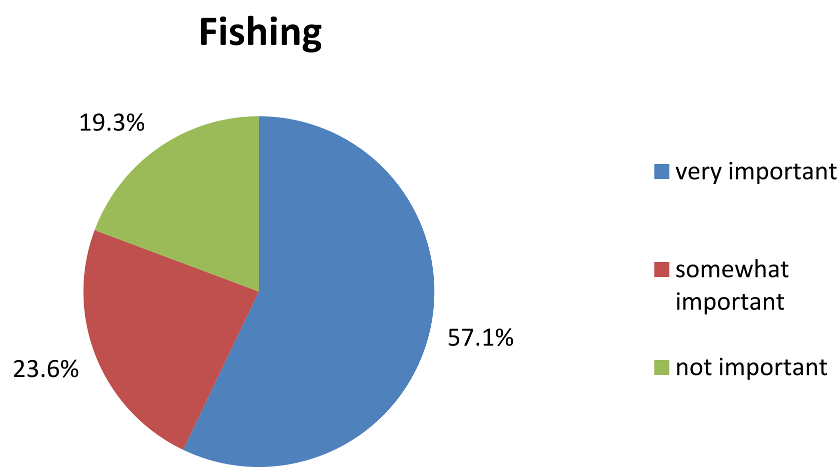
2. improved boat launching facilities	all respondents	age		
		younger	middle	older
very important	72.2%	**65.2%**	74.8%	77.0%
somewhat important	17.9%	**23.2%**	16.9%	13.0%
not important	9.9%	11.6%	8.3%	10.0%
total	100.0%	100.0%	100.0%	100.0%

2. improved boat launching facilities	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	67.3%	70.6%	**78.2%**	**80.7%**	76.2%	**62.4%**	**60.6%**
somewhat important	20.2%	20.2%	13.5%	**11.9%**	14.8%	**25.9%**	**26.8%**
not important	12.5%	9.2%	8.3%	7.3%	9.0%	11.7%	12.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



3. dry storage facilities for your own boat	all respondents	age: younger	middle	older
very important	39.2%	43.9%	38.9%	**32.0%**
somewhat important	24.0%	23.8%	23.3%	24.3%
not important	36.8%	32.3%	37.8%	**43.7%**
total	100.0%	100.0%	100.0%	100.0%

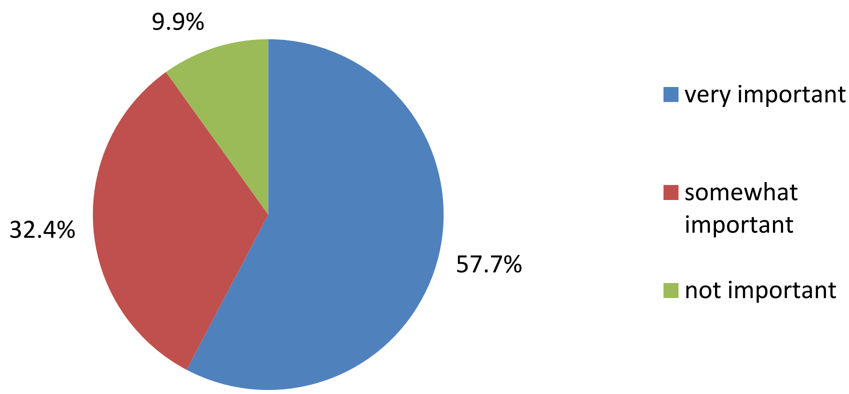
3. dry storage facilities for your own boat	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	40.4%	37.8%	40.9%	**46.0%**	**32.2%**	43.9%	40.5%
somewhat important	25.2%	25.5%	20.0%	21.1%	23.9%	22.9%	25.9%
not important	34.4%	36.6%	39.1%	32.9%	**44.1%**	33.2%	33.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



4. fishing	all respondents	age: younger	age: middle	age: older
very important	57.1%	59.1%	54.3%	57.5%
somewhat important	23.6%	24.1%	24.3%	21.2%
not important	19.3%	16.8%	21.4%	21.3%
total	100.0%	100.0%	100.0%	100.0%

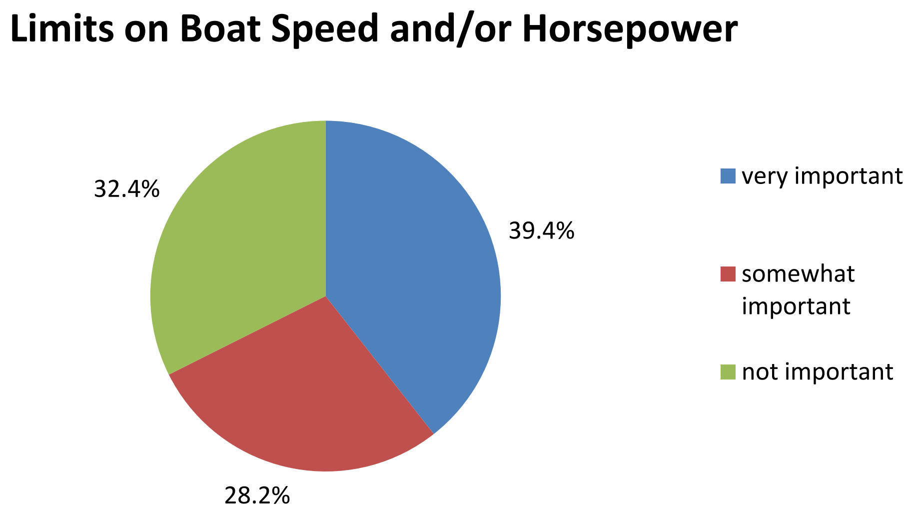
4. fishing	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**63.0%**	58.1%	**48.9%**	**63.8%**	56.2%	**48.5%**	**62.7%**
somewhat important	19.1%	24.1%	26.5%	20.1%	24.0%	26.1%	22.9%
not important	17.9%	17.8%	**24.6%**	16.1%	19.9%	**25.4%**	14.4%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Lake Patrolling and Regulation of Boats



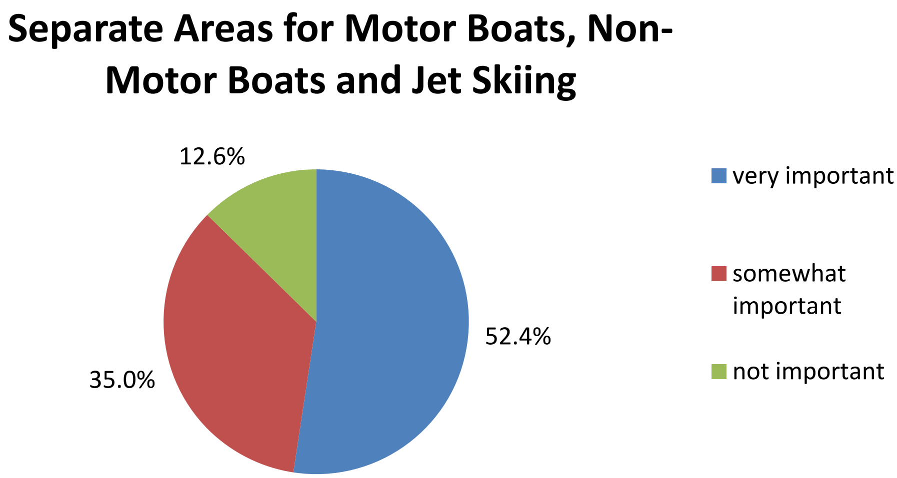
5. lake patrolling and regulation of boats	all respondents	age		
		younger	middle	older
very important	57.7%	51.3%	58.3%	**63.8%**
somewhat important	32.4%	36.0%	32.3%	29.2%
not important	9.9%	12.7%	9.4%	7.0%
total	100.0%	100.0%	100.0%	100.0%

5. lake patrolling and regulation of boats	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	58.6%	59.5%	52.9%	**63.5%**	59.2%	52.2%	**51.8%**
somewhat important	31.6%	31.4%	35.3%	28.3%	32.4%	36.4%	32.3%
not important	9.8%	9.1%	11.8%	8.2%	8.4%	11.5%	15.9%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



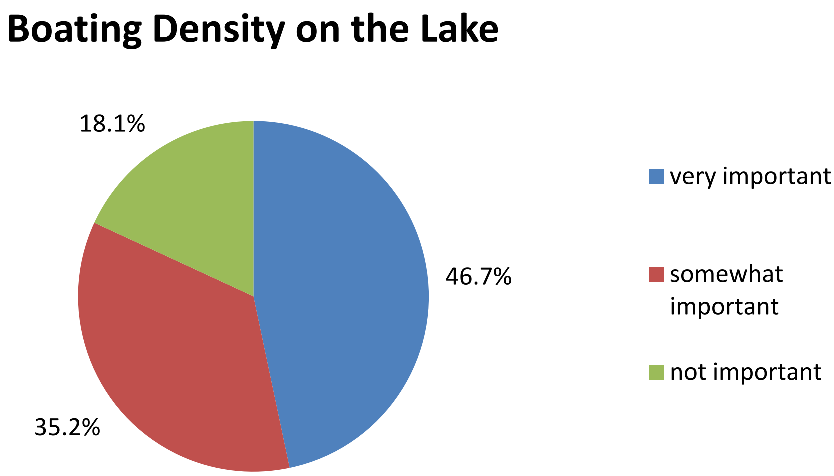
6. limits on boat speed and/or horsepower	all respondents	age: younger	age: middle	age: older
very important	39.4%	36.5%	37.0%	**44.4%**
somewhat important	28.2%	**34.5%**	27.0%	**22.4%**
not important	32.4%	29.0%	36.0%	33.2%
total	100.0%	100.0%	100.0%	100.0%

6. limits on boat speed and/or horsepower	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**48.2%**	39.5%	**29.2%**	41.9%	36.8%	37.7%	43.1%
somewhat important	28.6%	27.7%	29.7%	**17.7%**	27.8%	**35.7%**	**34.0%**
not important	**23.2%**	32.8%	**41.1%**	**40.4%**	35.4%	**26.6%**	**22.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



7. separate areas for motor boats, non-motor boats and jet skiing	all respondents	age		
		younger	middle	older
very important	40.6%	43.8%	36.8%	42.6%
somewhat important	27.1%	26.3%	26.5%	26.7%
not important	32.3%	29.9%	36.7%	30.7%
total	100.0%	100.0%	100.0%	100.0%

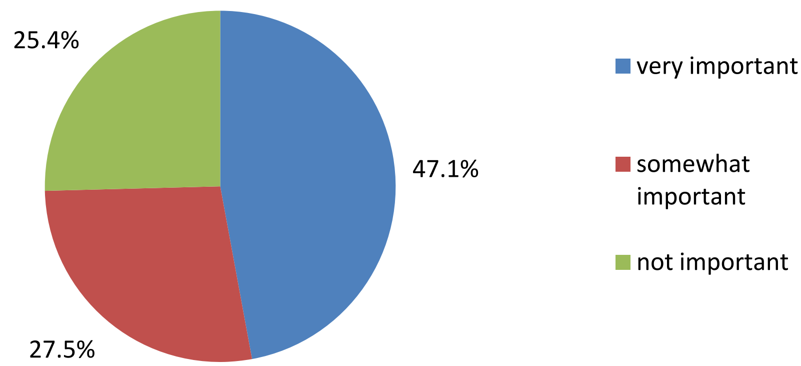
7. separate areas for motor boats, non-motor boats and jet skiing	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	**48.6%**	41.4%	**32.7%**	37.0%	39.4%	44.3%	**47.4%**
somewhat important	23.6%	27.4%	26.9%	**21.7%**	24.4%	30.0%	**33.8%**
not important	27.8%	31.2%	**40.3%**	**41.3%**	36.2%	**25.7%**	**18.8%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



8. boating density on the Lake	all respondents	age: younger	middle	older
very important	46.7%	46.5%	44.5%	48.6%
somewhat important	35.2%	36.7%	36.6%	31.2%
not important	18.1%	16.8%	19.0%	20.2%
total	100.0%	100.0%	100.0%	100.0%

8. boating density on the Lake	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**51.8%**	45.5%	42.8%	44.8%	43.5%	**51.6%**	46.8%
somewhat important	32.5%	36.5%	36.2%	**28.9%**	38.2%	34.3%	**41.9%**
not important	15.7%	18.0%	21.0%	**26.3%**	18.4%	14.1%	**11.3%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Availability of Rental Boats



9. availability of rental boats	all respondents	age: younger	age: middle	age: older
very important	47.1%	**57.3%**	43.3%	**35.8%**
somewhat important	27.5%	24.2%	27.0%	**33.8%**
not important	25.4%	**18.5%**	29.7%	**30.4%**
total	100.0%	100.0%	100.0%	100.0%

9. availability of rental boats	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**52.9%**	46.4%	42.6%	**41.6%**	**41.0%**	**55.2%**	**56.9%**
somewhat important	27.3%	27.4%	26.5%	30.9%	26.8%	28.3%	25.0%
not important	**19.8%**	26.2%	**30.9%**	27.5%	**32.2%**	**16.5%**	**18.1%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The next series of questions are especially critical since they address respondents' reactions to the future of Lake Berryessa. The first question asked about the importance of several boat-related items in respondents' decision to boat in the future at the Lake. Ranked below are "very important" answers for all respondents.

boat-related items	percent of: "very important" responses	percent of: "not important" responses
improved boat-launching facilities	72.2%	9.9%
full-service marina	70.3%	9.8%
lake patrolling and regulations of boats	57.7%	9.9%

fishing	57.1%	19.3%
availability of rental boats	47.1%	25.4%
boating density on the Lake	46.7%	18.1%
separate areas for motor boats, non-motor boats and jet skiing	40.6%	32.3%
limits on boat speed and horsepower	39.4%	32.4%
dry storage facilities for your own boat	39.2%	36.8%

By far the two most important items relate to getting one's boat into the water, e.g., "improved boat-launching facilities" at 72.2 percent ("very important") and "full-service marina" at 70.3 percent. It also appears that proper regulations are important – "lake patrolling and regulation of boats" at 57.7 percent. Less than 10 percent of all respondents said these three items would not be important in their future decision to boat at Lake Berryessa.

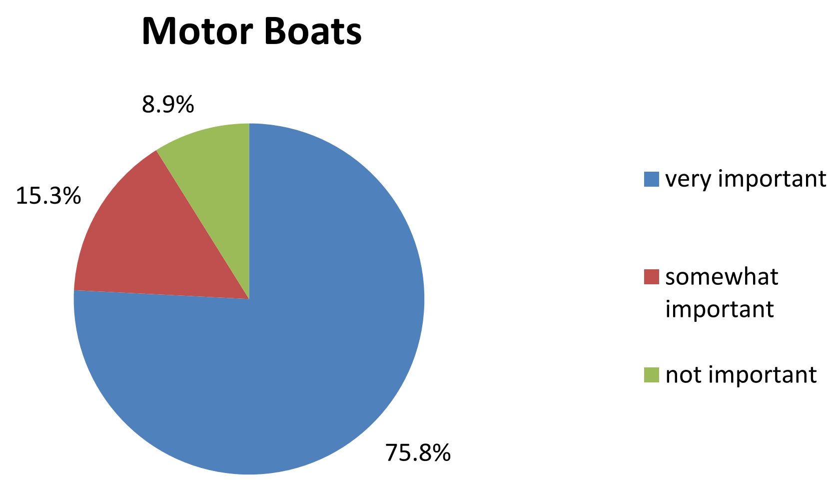
Also ranking relatively high were "fishing" (57.1 percent "very important") and "availability of rental boats" (47.1 percent). Three other items relating to boat regulation appear less important, but were still checked as being "very important" by more than one-third of respondents – "boat density on the Lake" at 46.7 percent, "separate areas for motor boats, non-motor boats and jet skiing" at 40.6 percent and "limits on boat speed and horsepower" at 39.4 percent. "Dry storage facilities for your own boat" was last at 39.2 percent, but also checked as being "very important" by more than one-third of respondents. As shown in the above list, four items were checked as not being important by more than 25 percent of respondents.

Results clearly indicate the need for proper boat-into-the-water facilities, and patrolling and regulations. It also appears demand would exist for rental boats, and to a lesser degree, dry storage facilities. Results indicate the need for a balancing act between proper regulation and over-regulation in regard to boat density, speed and horsepower, and separating motor boats, non-motor boats and jet skiing.

There were variations among the different respondent-groups, but not extensive. Shown below are respondent-groups with especially high and low "very important" answers for the nine different boat-related items (more than five percent from the norm).

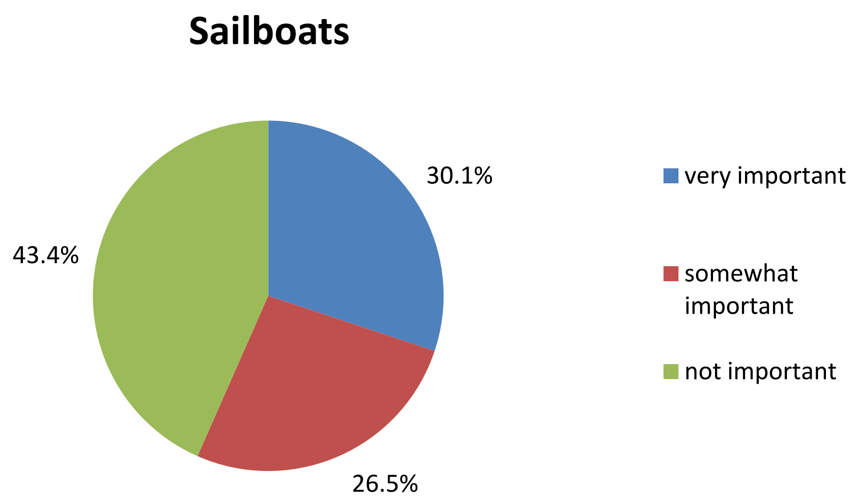
	respondent-groups with especially:	
item (all)	high "very important" responses	low "very important" responses
improved boat-launching facilities (72.2%)	Napa County at 80.7% higher income at 78.2%	South Bay at 62.4% Delta at 60.6% younger at 65.2%
full-service marina (70.3%)	high income at 75.3%	Delta at 64.7%
lake patrolling and regulations of boats (57.7%)	older at 63.8% Napa County at 63.5%	Delta at 51.8%
fishing (57.1%)	Napa County at 63.8% lower income at 63.0% Delta at 62.7%	South Bay at 48.5% higher income at 48.9%
availability of rental boats (47.1%)	younger at 57.3% Delta at 56.9% South Bat at 55.2% lower income at 52.9%	older at 35.8%
boating density on the Lake (46.7%)	lower income at 51.8% South Bay at 51.6%	
separate areas for motor boats, non-motor boats and jet skiing (40.6%)	lower income at 48.6% Delta at 47.4%	higher income at 32.7%
limits on boat speed and horsepower (39.4%)	lower income at 48.2% older at 44.4%	higher income at 29.2%
dry storage facilities for your own boat (39.2%)	Napa County at 46.0%	older at 32.0% North Bay at 32.2%

QUESTION 8. How important would each of the following types of boating be in your decision to visit Lake Berryessa?



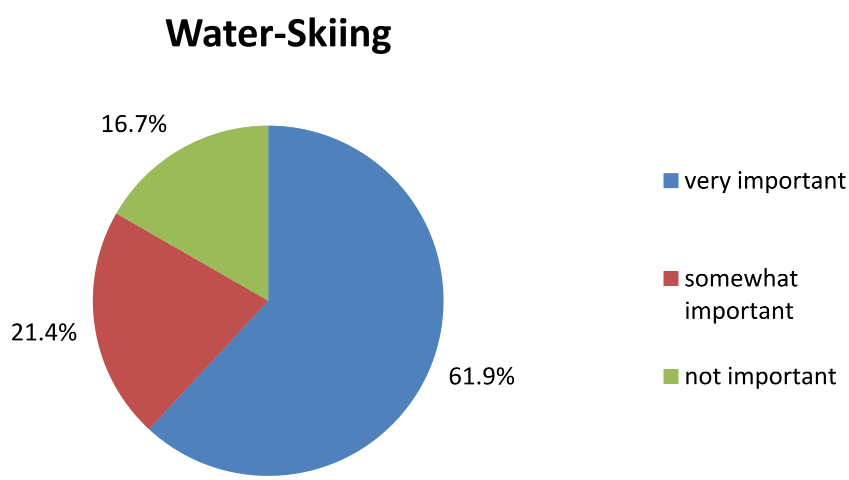
1. motor boats	all respondents	age: younger	middle	older
very important	75.8%	71.7%	78.6%	76.1%
somewhat important	15.3%	19.4%	13.3%	12.0%
not important	8.9%	8.9%	8.1%	11.9%
total	100.0%	100.0%	100.0%	100.0%

1. motor boats	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**69.1%**	74.4%	**83.1%**	**80.9%**	78.6%	**69.2%**	**63.2%**
somewhat important	19.4%	16.8%	**9.5%**	10.6%	13.4%	19.7%	**25.8%**
not important	11.5%	8.8%	7.4%	8.5%	8.1%	11.1%	11.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



2. sailboats	all respondents	age: younger	middle	older
very important	30.1%	**35.7%**	27.1%	25.9%
somewhat important	26.5%	26.7%	24.5%	29.6%
not important	43.4%	**37.6%**	**48.4%**	44.5%
total	100.0%	100.0%	100.0%	100.0%

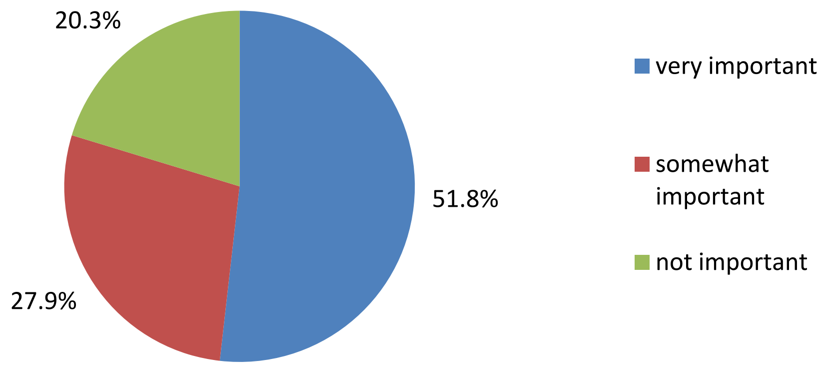
2. sailboats	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**35.6%**	30.7%	**23.9%**	**35.4%**	**24.3%**	32.5%	**36.8%**
somewhat important	30.4%	27.5%	**21.5%**	24.2%	23.4%	**32.5%**	28.4%
not important	**34.0%**	41.8%	**54.6%**	40.4%	**52.3%**	**35.0%**	34.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



3. water-skiing	all respondents	age: younger	age: middle	age: older
very important	61.9%	60.4%	64.7%	**56.5%**
somewhat important	21.4%	24.3%	19.9%	21.2%
not important	16.7%	15.3%	15.4%	**22.3%**
total	100.0%	100.0%	100.0%	100.0%

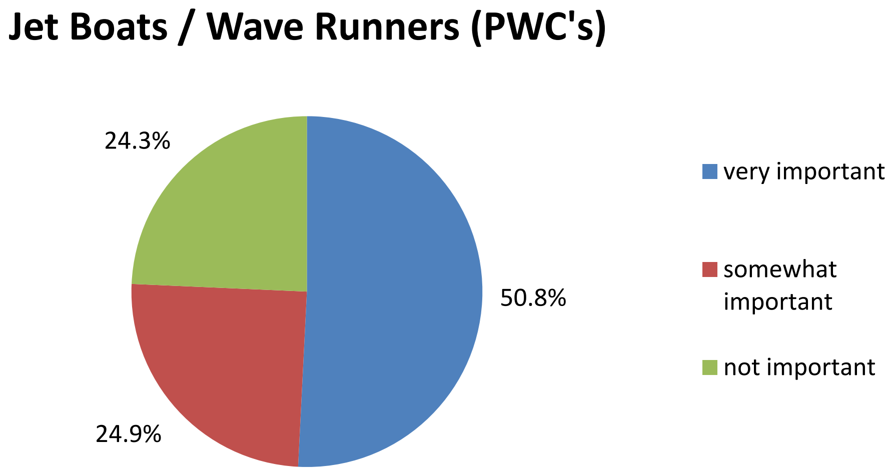
3. water-skiing	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	57.1%	59.3%	**67.7%**	**71.6%**	62.0%	**54.6%**	**53.1%**
somewhat important	25.3%	23.0%	18.0%	**14.6%**	21.3%	26.3%	**29.2%**
not important	17.6%	17.7%	14.3%	13.8%	16.8%	19.1%	17.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Kayaking, Windsurfing, Rowing, Canoeing



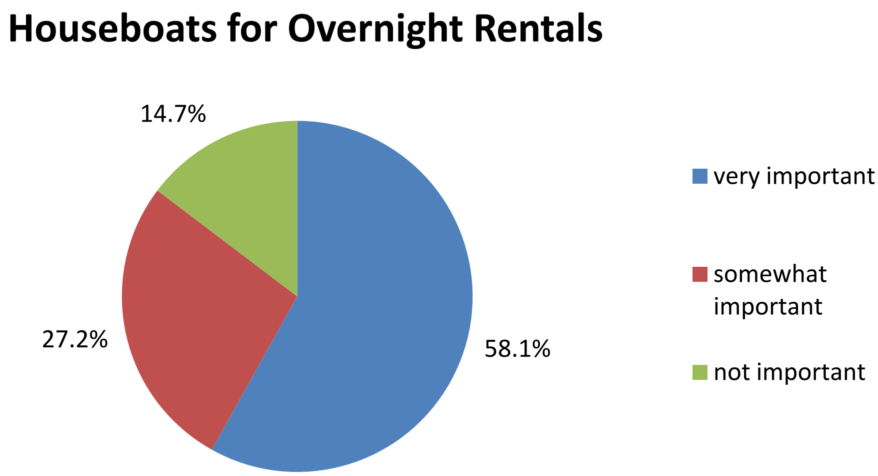
4. kayaking, windsurfing, rowing, canoeing	all respondents	age: younger	age: middle	age: older
very important	51.8%	55.9%	50.5%	**45.0%**
somewhat important	27.9%	28.0%	27.7%	29.5%
not important	20.3%	16.1%	21.8%	**25.5%**
total	100.0%	100.0%	100.0%	100.0%

4. kayaking, windsurfing, rowing, canoeing	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	54.7%	52.0%	47.1%	**57.4%**	49.9%	47.9%	52.2%
somewhat important	29.4%	28.6%	26.9%	23.7%	27.6%	**33.3%**	31.3%
not important	15.9%	19.4%	**25.9%**	18.9%	22.5%	18.8%	16.4%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



5. jet boats/ wave runners (PWC's)	all respondents	age: younger	age: middle	age: older
very important	50.8%	**58.1%**	50.8%	**37.4%**
somewhat important	24.9%	24.6%	24.6%	27.3%
not important	24.3%	**17.3%**	24.6%	**35.2%**
total	100.0%	100.0%	100.0%	100.0%

5. jet boats/ wave runners (PWC's)	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	54.5%	49.9%	48.6%	54.3%	48.3%	47.1%	52.6%
somewhat important	23.4%	25.9%	25.0%	**19.7%**	26.2%	29.5%	25.3%
not important	22.1%	24.2%	26.4%	26.0%	25.5%	23.4%	22.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



6. houseboats for overnight rentals	all respondents	age: younger	age: middle	age: older
very important	58.1%	62.1%	57.9%	**50.7%**
somewhat important	27.2%	24.2%	28.3%	31.2%
not important	14.7%	13.7%	13.8%	18.1%
total	100.0%	100.0%	100.0%	100.0%

6. houseboats for overnight rentals	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	60.7%	55.0%	60.0%	60.9%	57.5%	55.0%	54.7%
somewhat important	26.0%	29.7%	25.7%	25.6%	29.2%	28.8%	30.4%
not important	13.3%	15.3%	14.3%	13.5%	13.3%	16.2%	14.9%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

It appears that future visitors to Lake Berryessa would be interested in a wide variety of boating. Ranked below are "very important" answers for the type of boating respondents would do.

type of boat	percent of: "very important" answers	percent of: "not important" answers
motor boats	75.8%	8.9%
water-skiing	61.9%	16.7%
houseboats for overnight rentals	58.1%	14.7%
kayaking, windsurfing, rowing, canoeing	51.8%	20.3%

jetboats/wave runners	50.8%	24.3%
sailboats	30.1%	43.4%

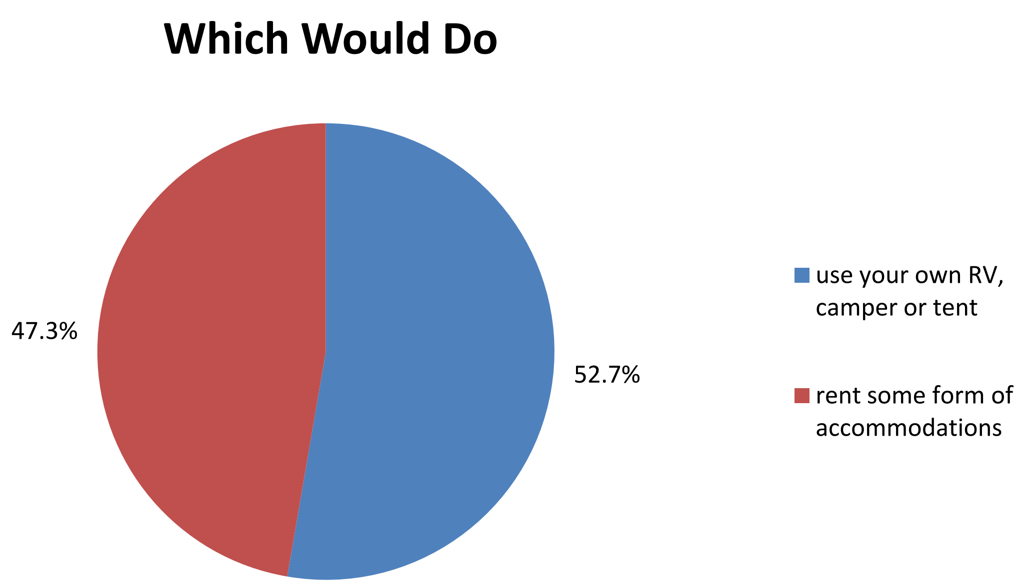
Only one type of boating was checked by less than 50 percent of respondents as being "very important" – sailboats at 30.1 percent. But, even this type was checked as being "very important" by almost one-third of all respondents.

The most popular type was motor-boating at 75.8 percent as "very important." This was followed by water-skiing at 61.9 percent. A high 58.1 percent said having "houseboats for overnights" would be "very important." Two disparate types of boating were checked as being "very important" by almost the same proportion of respondents – "kayaking, windsurfing, rowing, canoeing" at 51.8 percent and "jetboats/wave runners" at 50.8 percent, again suggesting the need/opportunity to properly incorporate a wide variety of boating experiences at Lake Berryessa and not just those involving a motor.

There were a few variations among the various respondent-groups, as shown below.

	respondent-groups with especially:	
type of boating (all)	high "very important" responses	low "very important" responses
motor boats (75.8%)	higher income at 83.1% Napa County at 80.9%	Delta at 63.2% lower income at 69.1% South Bay at 69.2%
water-skiing (61.9%)	Napa County at 71.6% higher income at 67.7%	Delta at 53.1% South Bay at 54.6%
houseboats for overnight rentals (58.1%)	limited differences	
kayaking, windsurfing, rowing, canoeing (51.8%)	Napa County at 57.4%	
jetboats/wave runners (50.8%)	younger at 58.1%	older at 37.4%
sailboats (30.1%)	Delta at 36.8% younger at 35.7% lower income at 35.6% Napa County at 35.4%	higher income at 23.9% North Bay at 24.3%

QUESTION 9. If you were to stay overnight at Lake Berryessa, which would you typically do?

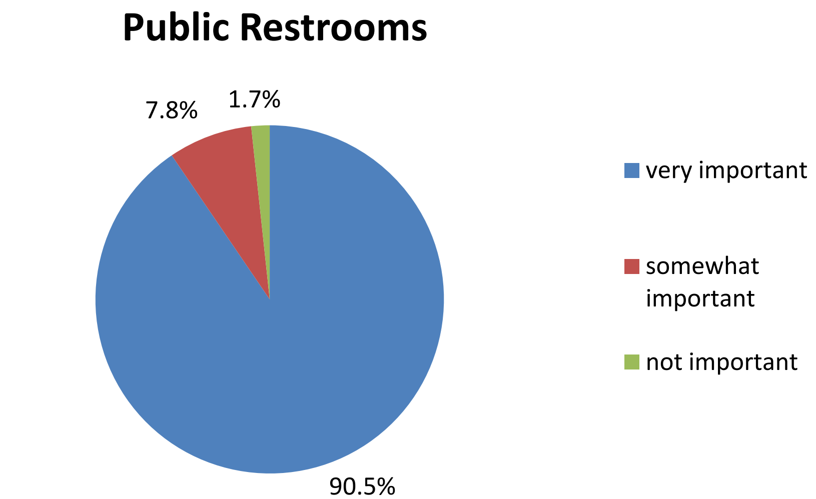


which would do	all respondents	age: younger	age: middle	age: older
use your own RV, camper or tent	52.7%	49.6%	**57.8%**	47.8%
rent some form of accommodations	47.3%	50.4%	**42.2%**	52.2%
total	100.0%	100.0%	100.0%	100.0%

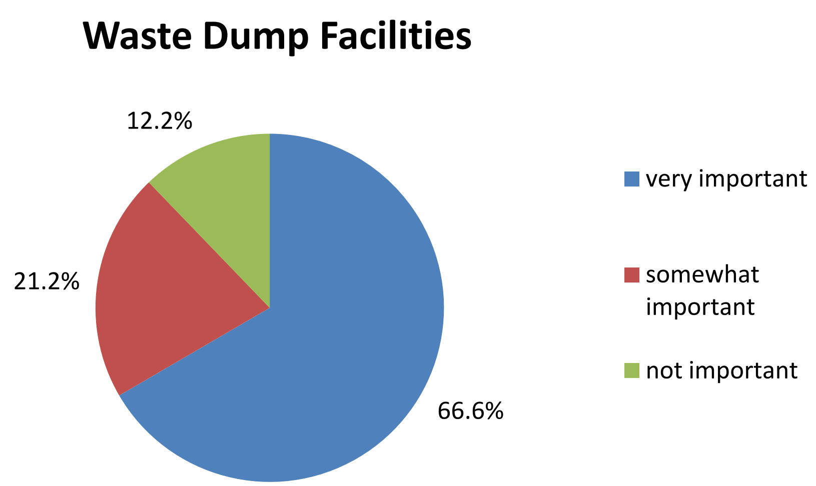
which would do	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
use your own RV, camper or tent	56.6%	56.0%	**44.6%**	**61.5%**	**60.1%**	**37.2%**	47.9%
rent some form of accommodations	43.4%	44.0%	**55.4%**	**38.5%**	**39.9%**	**62.8%**	52.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

About one-half (52.7 percent) of all respondents would use their own RV, camper or tent if staying overnight at Lake Berryessa. This proportion was significantly higher among residents of Napa County (61.5 percent) and the North Bay (60.1 percent). The other 47.3 percent would prefer renting some type of accommodation. This proportion was especially high among residents of the South Bay (62.8 percent) and the higher income (55.4 percent).

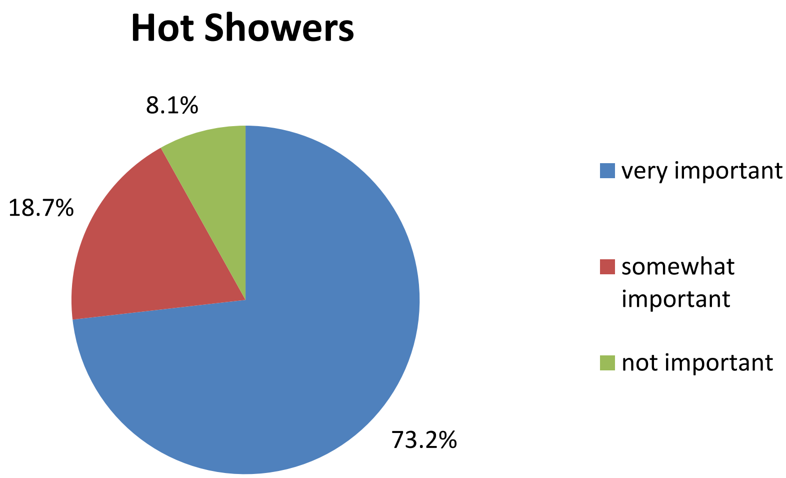
QUESTION 10. How important would each of the following camping-oriented items be in your decision to camp at Lake Berryessa?



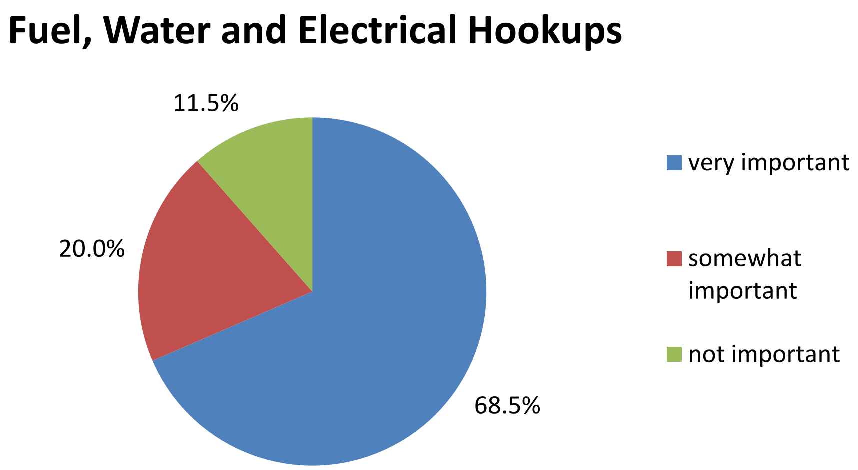
1. public restrooms	all respondents	residence Napa	North Bay	South Bay	Delta
very important	90.5%	92.8%	91.8%	88.0%	87.9%
somewhat important	7.8%	6.9%	6.8%	9.6%	9.5%
not unimportant	1.7%	0.3%	1.4%	2.4%	2.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%



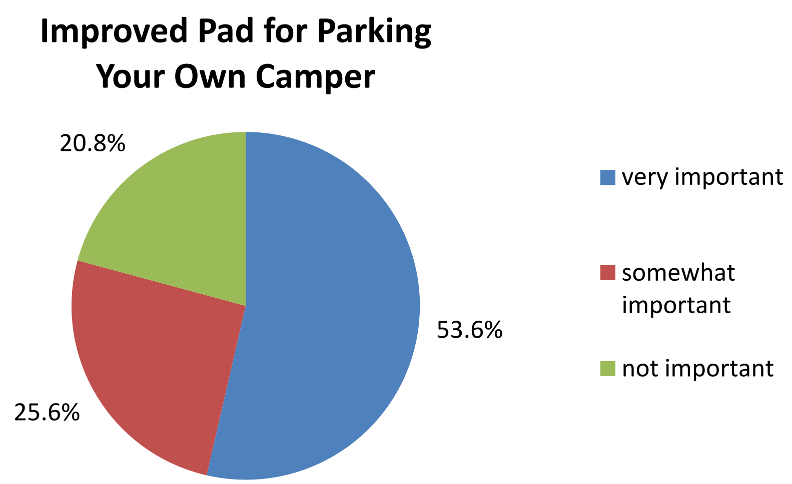
2. waste dump facilities	all respondents	residence Napa	North Bay	South Bay	Delta
very important	66.6%	71.3%	64.8%	65.4%	64.4%
somewhat important	21.2%	16.9%	21.2%	22.8%	26.7%
not unimportant	12.2%	11.8%	14.0%	11.9%	8.9%
total	100.0%	100.0%	100.0%	100.0%	100.0%



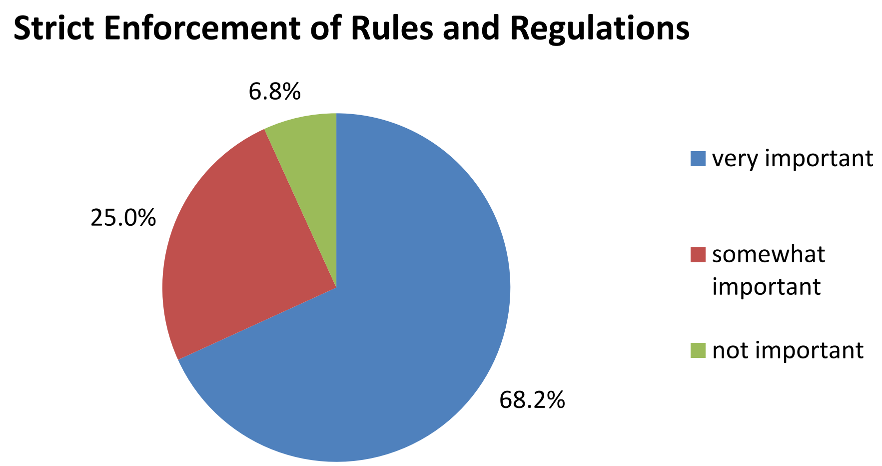
3. hot showers	all respondents	residence Napa	North Bay	South Bay	Delta
very important	73.2%	74.2%	71.9%	71.6%	73.1%
somewhat important	18.7%	19.2%	18.9%	20.9%	20.1%
not unimportant	8.1%	6.6%	9.3%	7.5%	6.8%
total	100.0%	100.0%	100.0%	100.0%	100.0%



4. fuel, water and electrical hookups	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	68.5%	72.0%	68.1%	64.9%	65.0%
somewhat important	20.0%	17.7%	19.1%	22.0%	24.0%
not unimportant	11.5%	10.3%	12.8%	13.0%	11.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%



5. improved pad for parking your own camper	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	53.6%	58.9%	53.4%	**46.8%**	53.1%
somewhat important	25.6%	25.2%	24.2%	29.6%	25.3%
not unimportant	20.8%	15.9%	22.4%	23.6%	21.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%



6. strict enforcement of rules and regulations, e.g., noise and cleanliness	all respondents	residence: Napa	North Bay	South Bay	Delta
very important	68.2%	72.8%	69.7%	66.1%	64.7%
somewhat important	25.0%	21.2%	23.7%	26.9%	26.1%
not unimportant	6.8%	6.0%	6.6%	7.0%	9.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Ranked below are the "very important" and "not important" answers among all respondents in regard to six different camping-oriented items, assuming they would camp at Lake Berryessa.

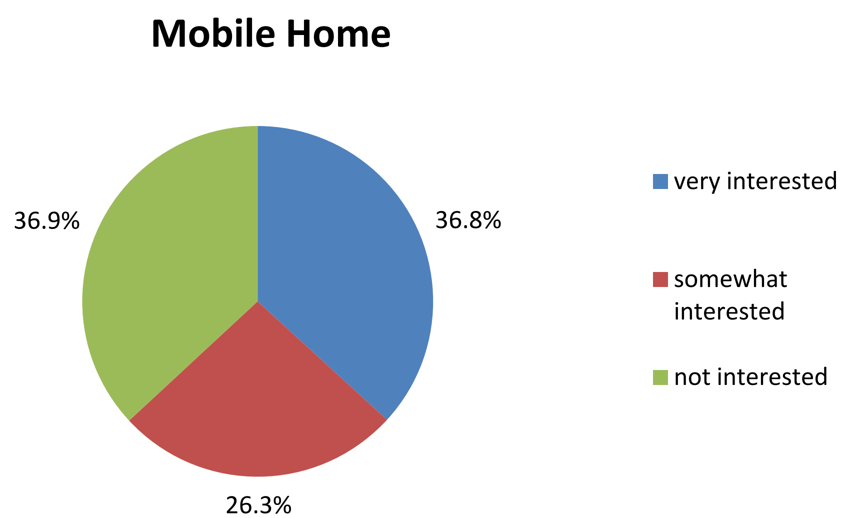
camping-oriented items	percent of: "very important" answers	"not important" answers
public restrooms	90.5%	1.7%
hot showers	73.2%	8.1%
fuel, water and electrical hookups	68.5%	11.5%
strict enforcement of rules and regulations, e.g., noise and cleanliness	68.2%	6.8%
waste dump facilities	66.6%	12.2%
improved pad for parking your own camper	53.6%	20.8%

It is evident that the vast majority of respondents want camping facilities that represent more than tent camping on the ground in the wilderness. All but one item was checked as being “very important” by more than two-thirds of the respondents. The 53.6 percent who checked “improved pad for parking your own camper” reflect the 52.7 percent in the previous question who said they would “use their own RV, camper or tent” when staying overnight at Lake Berryessa.

It also is interesting to note that 68.2 percent checked “strict enforcement of rules and regulations, e.g., noise and cleanliness” as being “very important,” again reflecting demand for a properly controlled environment.

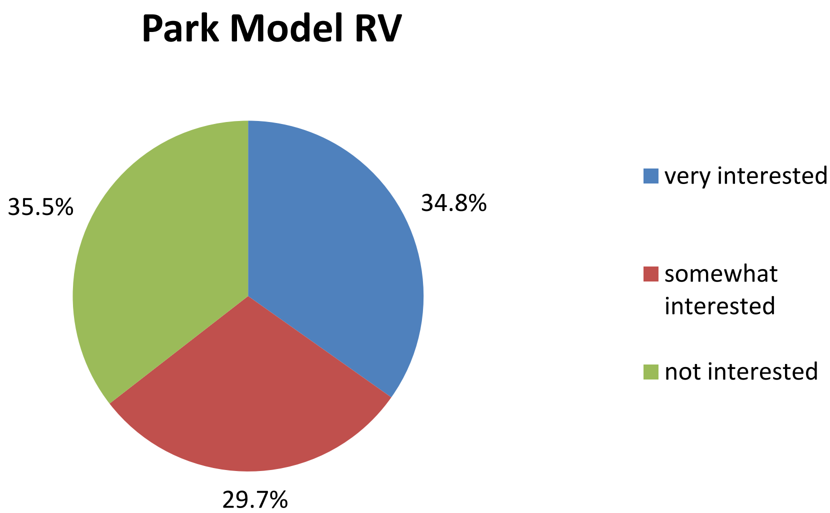
There was no significant variation in answers among the different respondent-groups for any of the six items.

QUESTION 11. Various types of overnight accommodations could exist at Lake Berryessa in addition to using one's own personal camper or tent. How interested would you be in renting each of the following?



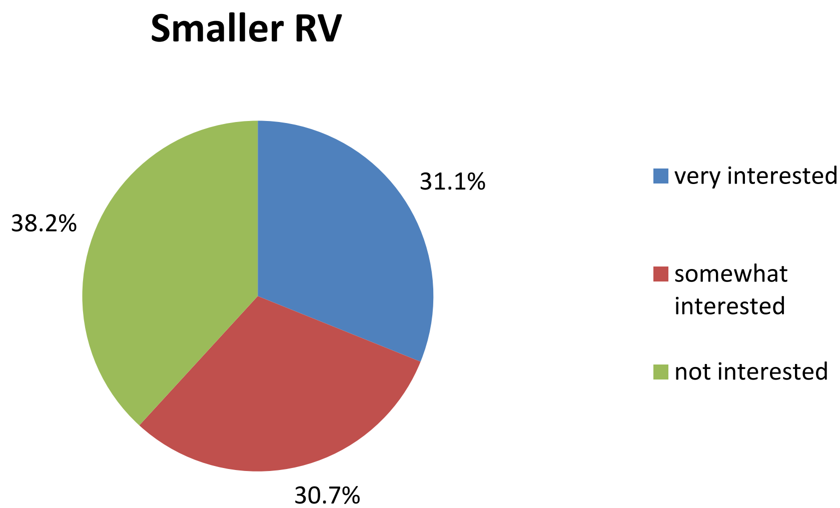
1. mobile home	all respondents	age: younger	middle	older
very interested	36.8%	41.2%	34.9%	**31.5%**
somewhat interested	26.3%	26.9%	26.5%	25.8%
not interested	36.9%	31.9%	38.6%	**42.7%**
total	100.0%	100.0%	100.0%	100.0%

1. mobile home	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very interested	40.8%	36.4%	33.6%	**30.9%**	**31.0%**	**42.4%**	**44.9%**
somewhat interested	26.6%	28.1%	24.4%	20.4%	27.9%	28.9%	27.3%
not interested	32.5%	35.5%	**42.0%**	**48.8%**	41.1%	**28.7%**	**27.8%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



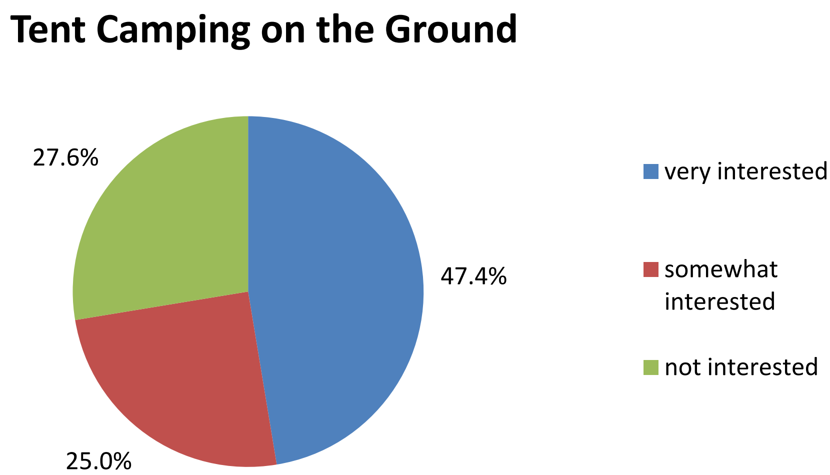
2. park model RV	all respondents	age: younger	middle	older
very interested	34.8%	36.5%	35.0%	**29.1%**
somewhat interested	29.7%	31.2%	28.6%	31.1%
not interested	35.5%	32.3%	36.4%	39.8%
total	100.0%	100.0%	100.0%	100.0%

2. park model RV	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very interested	36.5%	36.4%	**29.3%**	35.5%	31.0%	34.6%	39.2%
somewhat interested	32.7%	30.0%	29.0%	23.2%	30.2%	33.1%	34.5%
not interested	30.8%	33.6%	**41.7%**	**41.3%**	38.9%	32.3%	**26.3%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



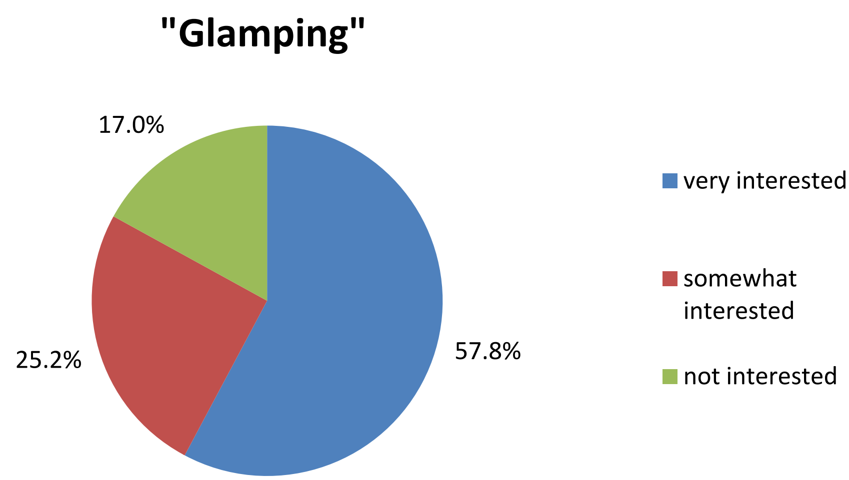
3. smaller RV	all respondents	age: younger	middle	older
very interested	31.1%	33.4%	31.6%	**23.7%**
somewhat interested	30.7%	32.6%	29.6%	31.3%
not interested	38.2%	34.0%	38.8%	**45.0%**
total	100.0%	100.0%	100.0%	100.0%

3. smaller RV	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very interested	35.7%	31.2%	**24.9%**	31.8%	29.0%	28.0%	**36.2%**
somewhat interested	30.3%	31.9%	30.8%	26.4%	31.2%	34.6%	33.5%
not interested	34.0%	36.9%	**44.3%**	41.8%	39.8%	37.4%	**30.3%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



4. tent camping on the ground	all respondents	age: younger	middle	older
very interested	47.4%	**56.3%**	46.7%	**31.5%**
somewhat interested	25.0%	27.1%	23.4%	26.7%
not interested	27.6%	**16.6%**	29.9%	**41.8%**
total	100.0%	100.0%	100.0%	100.0%

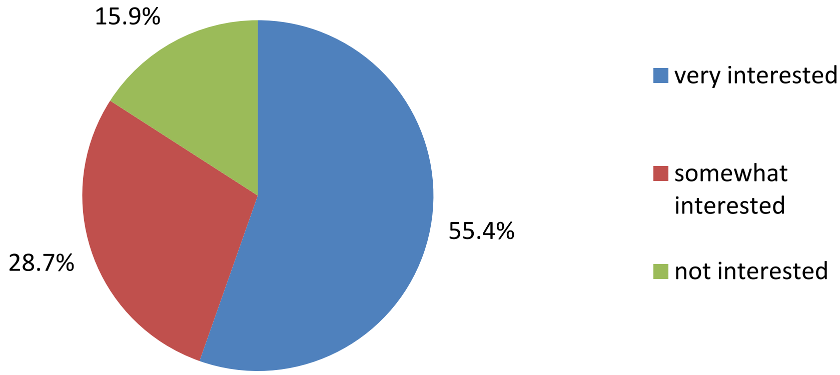
4. tent camping on the ground	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very interested	**55.8%**	47.8%	**38.1%**	49.6%	46.1%	44.3%	52.2%
somewhat interested	24.3%	25.9%	26.5%	22.3%	24.8%	**31.0%**	26.9%
not interested	**19.9%**	26.3%	**35.4%**	28.1%	29.1%	24.7%	**20.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



5. “glamping,” i.e., a unique high-quality canvas tent on a platform with kitchen, restroom with shower, all utilities, and separate bedroom(s)	all respondents	age		
		younger	middle	older
very interested	57.8%	**64.5%**	56.6%	**46.8%**
somewhat interested	25.2%	22.3%	26.3%	29.4%
not interested	17.0%	13.2%	17.1%	**23.8%**
total	100.0%	100.0%	100.0%	100.0%

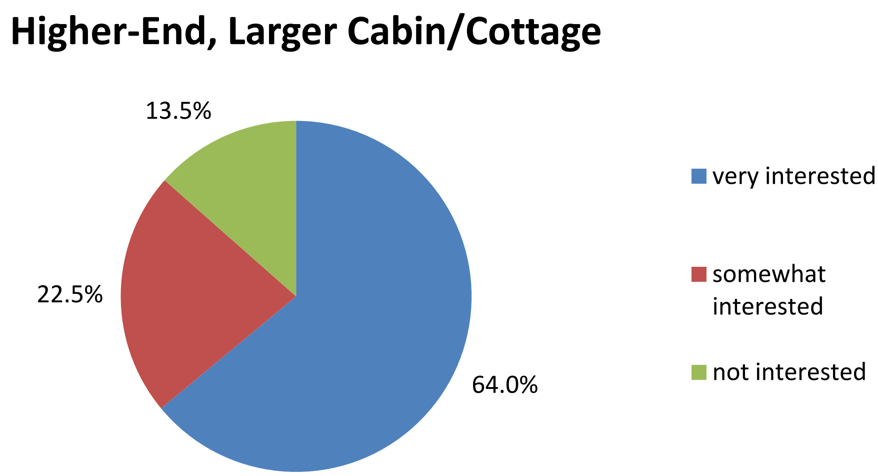
5. “glamping,” i.e., a unique high-quality canvas tent on a platform with kitchen, restroom with shower, all utilities, and separate bedroom(s)	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very interested	58.9%	59.1%	54.8%	54.5%	53.2%	**65.8%**	58.1%
somewhat interested	24.3%	24.3%	28.2%	24.3%	27.7%	23.3%	26.1%
not interested	16.8%	16.6%	17.0%	21.2%	19.1%	**10.9%**	15.8%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Small Rustic Cabin/Cottage



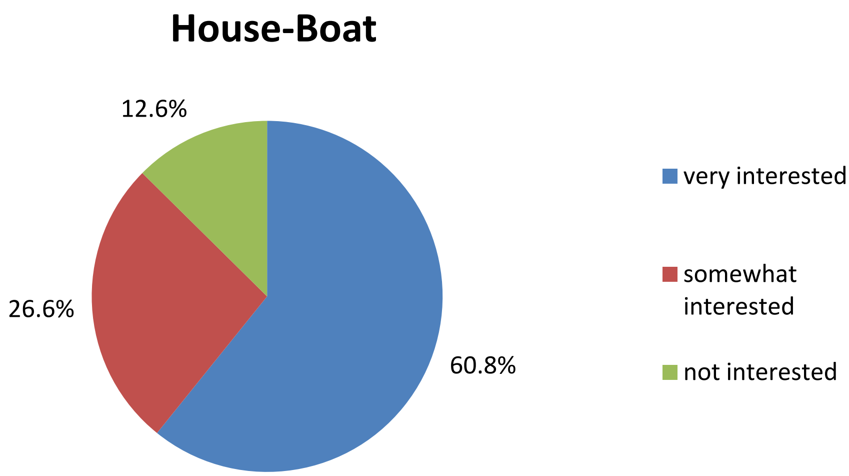
6. small rustic cabin/cottage without utilities, but near to hot showers and toilets	all respondents	age: younger	middle	older
very interested	55.4%	**62.8%**	55.4%	**41.3%**
somewhat interested	28.7%	26.7%	28.4%	**34.8%**
not interested	15.9%	10.5%	16.3%	**23.9%**
total	100.0%	100.0%	100.0%	100.0%

6. small rustic cabin/cottage without utilities, but near to hot showers and toilets	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very interested	**60.5%**	54.3%	51.8%	55.6%	54.0%	58.3%	56.9%
somewhat interested	25.9%	30.4%	29.6%	30.2%	30.0%	26.0%	28.9%
not interested	13.6%	15.3%	18.6%	14.2%	16.0%	15.7%	14.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



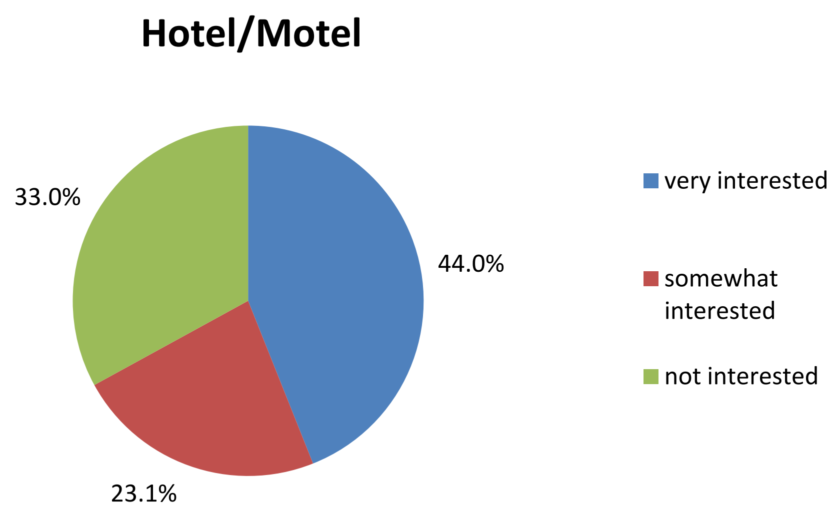
7. higher-end, larger cabin/cottage with kitchen, restroom with shower, all utilities and separate bedrooms(s)	all respondents	age: younger	age: middle	age: older
very interested	64.0%	66.0%	63.6%	**58.2%**
somewhat interested	22.5%	22.5%	22.6%	25.5%
not interested	13.5%	11.5%	13.8%	16.3%
total	100.0%	100.0%	100.0%	100.0%

7. higher-end, larger cabin/cottage with kitchen, restroom with shower, all utilities and separate bedrooms(s)	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very interested	59.7%	61.9%	68.5%	59.0%	60.6%	**69.2%**	61.5%
somewhat interested	24.9%	25.8%	18.6%	23.0%	24.4%	21.6%	27.0%
not interested	15.4%	12.3%	12.9%	18.0%	15.0%	9.2%	11.5%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



8. house-boat	all respondents	age: younger	age: middle	age: older
very interested	60.8%	62.8%	62.2%	**51.9%**
somewhat interested	26.6%	24.9%	27.1%	31.0%
not interested	12.6%	12.3%	10.7%	17.1%
total	100.0%	100.0%	100.0%	100.0%

8. house-boat	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very interested	61.2%	58.2%	62.9%	62.8%	61.0%	56.4%	61.7%
somewhat interested	25.9%	28.8%	26.6%	25.4%	27.7%	28.2%	25.2%
not interested	12.9%	13.0%	10.5%	11.8%	11.4%	15.4%	13.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



9. hotel/motel	all respondents	age: younger	middle	older
very interested	49.2%	50.1%	49.0%	44.3%
somewhat interested	25.8%	26.0%	25.9%	29.2%
not interested	25.0%	23.9%	25.1%	26.4%
total	100.0%	100.0%	100.0%	100.0%

9. hotel/motel	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very interested	48.3%	46.8%	51.5%	**41.4%**	43.6%	**54.5%**	**54.2%**
somewhat interested	27.1%	27.1%	25.7%	26.0%	27.2%	27.4%	27.9%
not interested	24.6%	26.1%	22.8%	**32.5%**	29.2%	**18.1%**	**17.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

There was interest in a wide variety of overnight accommodations at Lake Berryessa and not just traditional tent and RV camping. Respondents were asked to check the importance of nine different types of accommodations. Ranked below are the "very important" and "not important" answers.

type of accommodation	percent of: "very important" answers	"not important" answers
higher-end, larger cabin/cottage with kitchen, restroom with shower, all utilities and	64.0%	13.5%

separate bedroom(s)		
house-boat	60.8%	12.6%
"glamping," i.e., a unique, high-quality canvas tent on a platform with kitchen, restroom with shower, all utilities, and separate bedroom(s)	57.8%	17.0%
small rustic cabin/cottage without utilities, but near to hot showers and toilets	55.4%	15.9%
hotel/motel	49.2%	25.0%
tent camping on the ground	47.4%	27.6%
mobile home	36.8%	36.9%
park model RV	34.8%	35.5%
smaller RV	31.1%	38.2%

The two least important accommodations were RV-related – "park model RV" at 34.8 percent ("very important") and "smaller RV" at 31.1 percent. The other traditional type of camping, "tent camping on the ground" was checked by 47.4 percent, but was sixth out of the nine options. A "mobile home" was seventh at 36.8 percent.

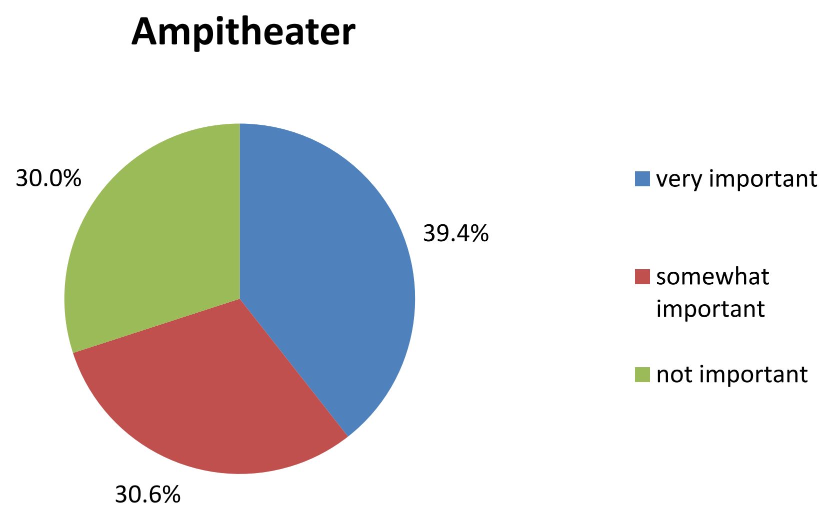
Two options were checked as "very important" by almost two-thirds of the respondents, including a "higher-end, larger cabin/cottage" at 64.0 percent and "house-boats" at 60.8 percent. They were followed closely by "glamping" at 57.8 percent, a "small rustic cabin/cottage" at 55.4 percent and a "hotel/motel" at 49.2 percent. Again, it appears a strong market for other types of higher-end accommodations would exist at Lake Berryessa and not just RVs and tents.

Shown below are the most significant variations among the different respondent-groups.

	respondent-groups with especially:	
type of accommodation (all)	high "very important" responses	low "very important" responses
higher-end, larger cabin/cottage (64.0%)	South Bay at 69.2%	older at 58.2%
house-boat (60.8%)		older at 51.9%
glamping (57.8%)	South Bay at 65.8% younger at 64.5%	older at 46.8%
small rustic cabin/cottage (55.4%)	younger at 62.8% lower income at 60.5%	older at 41.3%
hotel/motel (49.2%)	South Bay at 54.5% Delta at 54.2%	Napa County at 41.4%

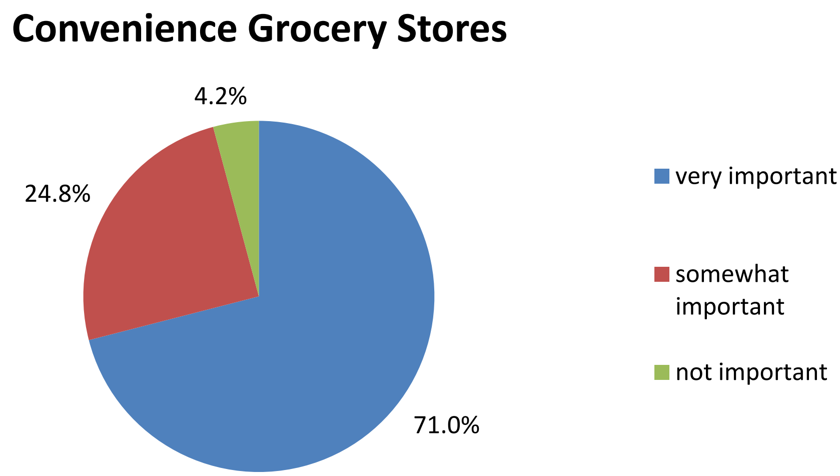
tent camping on the ground (47.4%)	younger at 56.3% lower income at 55.8%	older at 31.5% higher income at 38.1%
mobile home (36.8%)	Delta at 44.9% South Bay at 42.4%	Napa County at 30.9% North Bay at 31.0% older at 31.5%
park model RV (34.8%)		older at 29.1% higher income at 29.3%
smaller RV (31.1%)	Delta at 36.2%	older at 23.7% higher income at 24.9%

QUESTION 12. In addition to boating and camping opportunities, there also could be a wide variety of other amenities and services at the various resort destinations at Lake Berryessa. How important would each of the following be in your decision to visit?



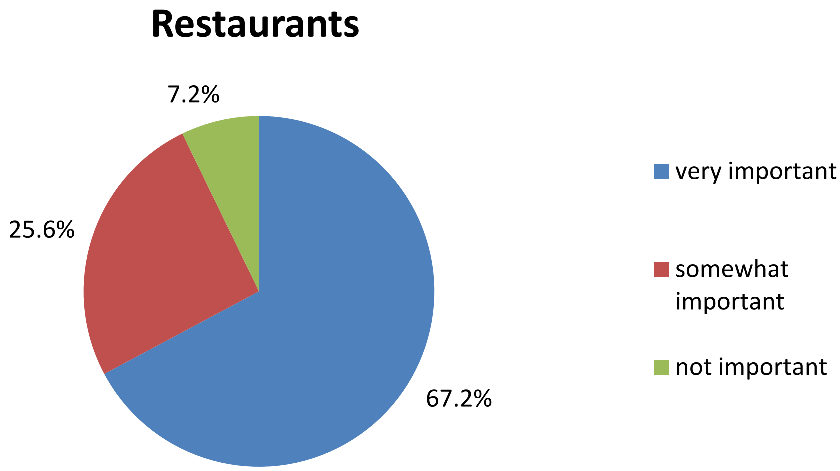
1. amphitheater with outdoor concerts and "name" entertainment	all respondents	age: younger	middle	older
very important	39.4%	**46.3%**	38.9%	**26.1%**
somewhat important	30.6%	29.9%	30.1%	33.7%
not important	30.0%	**23.8%**	31.0%	**40.2%**
total	100.0%	100.0%	100.0%	100.0%

1. amphitheater with outdoor concerts and "name" entertainment	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	40.9%	37.3%	39.5%	39.4%	34.8%	42.6%	**48.2%**
somewhat important	30.0%	32.1%	30.4%	30.9%	31.5%	29.6%	30.5%
not important	29.1%	30.6%	30.1%	**29.8%**	33.7%	27.8%	**21.3%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



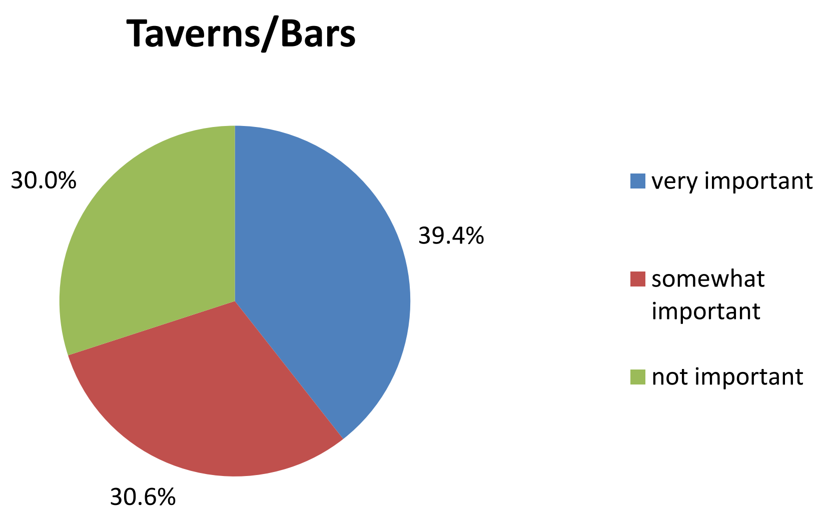
2. convenience grocery stores	all respondents	age: younger	middle	older
very important	71.0%	69.5%	71.1%	72.3%
somewhat important	24.8%	25.1%	23.9%	23.8%
not important	4.2%	5.4%	5.0%	3.9%
total	100.0%	100.0%	100.0%	100.0%

2. convenience grocery stores	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	68.0%	70.7%	73.6%	75.8%	69.6%	69.3%	67.4%
somewhat important	25.7%	24.4%	22.4%	20.6%	24.8%	25.3%	29.8%
not important	6.3%	4.8%	4.0%	3.6%	5.6%	5.5%	2.8%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



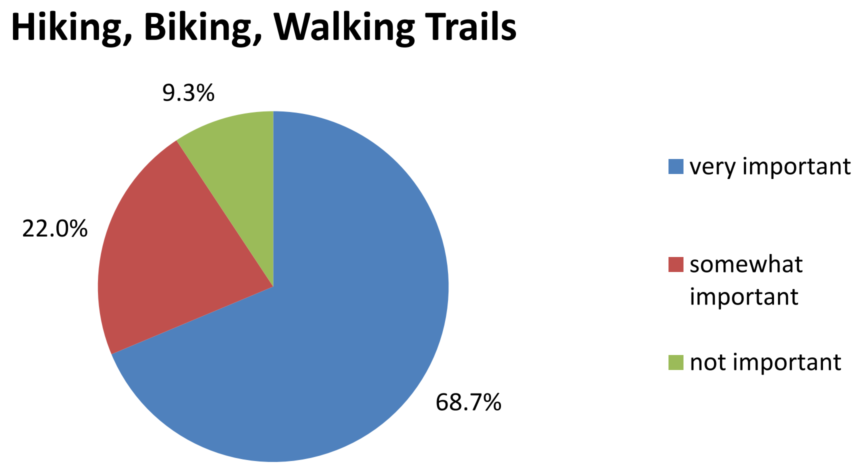
3. restaurants and other food services	all respondents	age: younger	middle	older
very important	67.2%	62.9%	69.6%	69.4%
somewhat important	25.6%	28.9%	24.0%	24.1%
not important	7.2%	8.2%	6.4%	6.5%
total	100.0%	100.0%	100.0%	100.0%

3. restaurants and other food services	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	62.6%	66.8%	**72.6%**	**72.9%**	65.5%	64.8%	64.1%
somewhat important	27.4%	26.8%	21.6%	23.2%	27.6%	26.1%	29.1%
not important	10.0%	6.4%	5.8%	3.9%	6.9%	9.1%	6.8%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



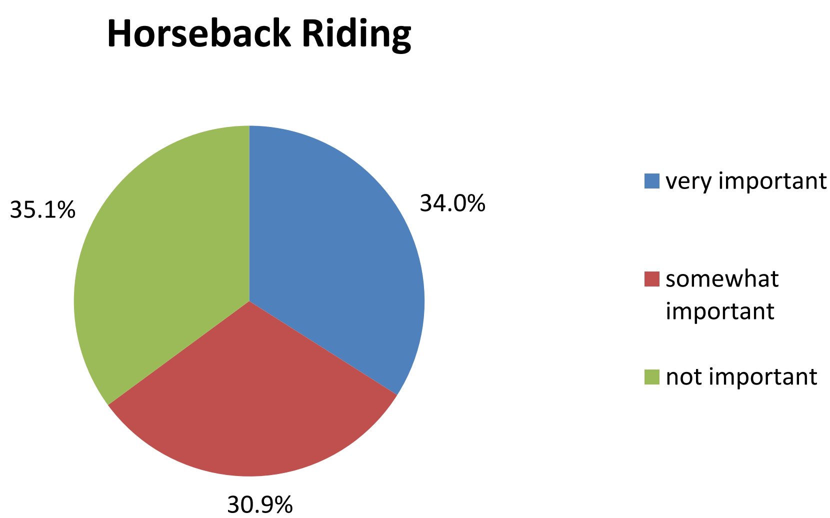
4. taverns/bars	all respondents	age: younger	middle	older
very important	48.2%	52.8%	48.2%	**39.7%**
somewhat important	27.1%	29.5%	26.3%	26.8%
not important	24.7%	**17.7%**	25.5%	**33.5%**
total	100.0%	100.0%	100.0%	100.0%

4. taverns/bars	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	45.7%	46.4%	52.9%	**55.8%**	44.7%	**43.5%**	52.1%
somewhat important	28.9%	29.3%	24.2%	23.9%	27.1%	**33.6%**	25.3%
not important	25.4%	24.3%	22.9%	20.3%	28.3%	22.9%	22.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



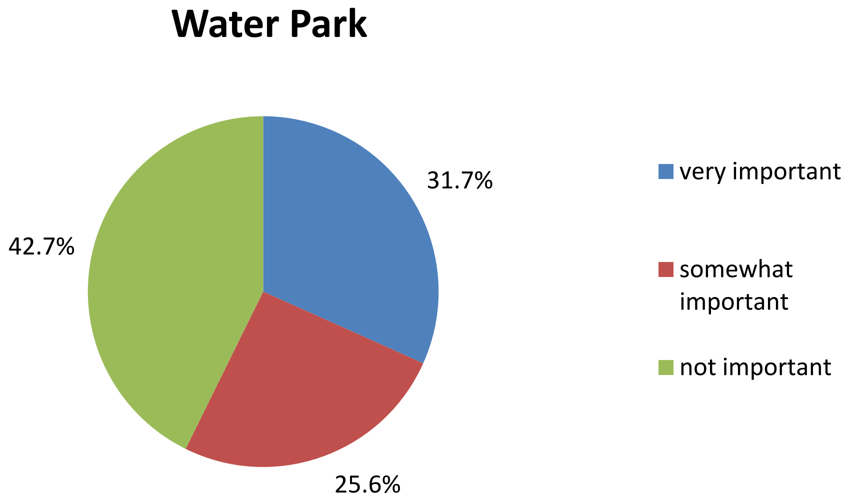
5. hiking, biking, walking trails	all respondents	age: younger	middle	older
very important	68.7%	73.2%	69.3%	**58.3%**
somewhat important	22.0%	19.8%	21.3%	**28.3%**
not important	9.3%	7.0%	9.4%	13.4%
total	100.0%	100.0%	100.0%	100.0%

5. hiking, biking, walking trails	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	71.1%	69.2%	65.9%	72.6%	68.4%	67.6%	72.4%
somewhat important	19.9%	22.6%	23.1%	19.8%	22.0%	23.3%	21.0%
not important	9.0%	8.1%	11.0%	7.6%	9.6%	9.1%	6.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



6. horseback riding	all respondents	age: younger	middle	older
very important	34.0%	**40.1%**	33.5%	**24.0%**
somewhat important	30.9%	31.8%	29.9%	33.2%
not important	35.1%	**28.1%**	36.6%	**42.8%**
total	100.0%	100.0%	100.0%	100.0%

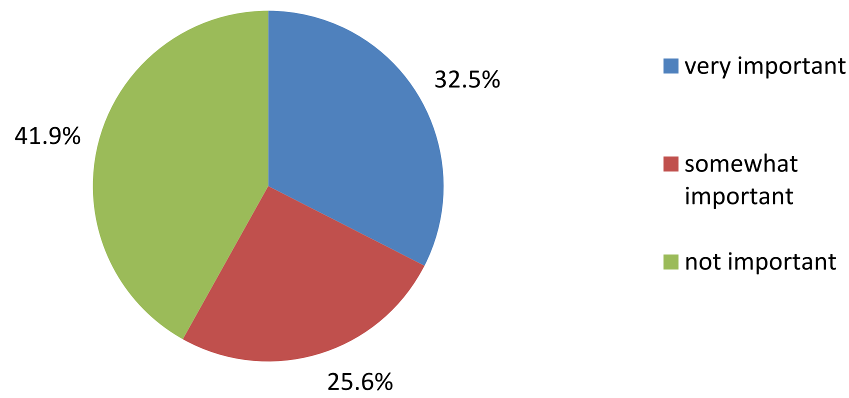
6. horseback riding	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**41.3%**	32.7%	29.3%	**40.5%**	31.8%	31.5%	**44.1%**
somewhat important	30.6%	33.7%	28.6%	29.3%	29.1%	**35.6%**	32.8%
not important	**28.1%**	33.6%	**42.1%**	30.2%	39.1%	32.9%	**23.1%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



7. indoor-outdoor water park for year-round use	all respondents	age: younger	age: middle	age: older
very important	31.7%	**40.0%**	31.1%	**17.7%**
somewhat important	25.6%	25.5%	23.8%	27.5%
not important	42.7%	**34.5%**	45.1%	**54.8%**
total	100.0%	100.0%	100.0%	100.0%

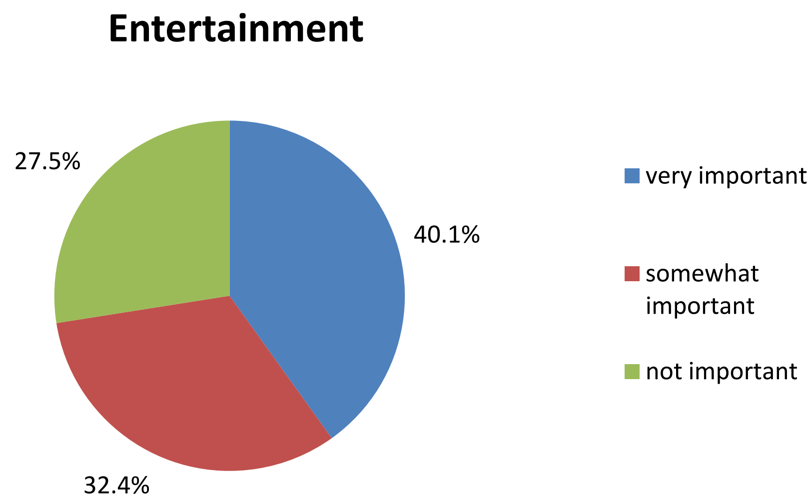
7. indoor-outdoor water park for year-round use	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**36.1%**	32.1%	27.0%	29.7%	29.3%	30.6%	**44.3%**
somewhat important	29.9%	26.6%	**20.0%**	20.9%	25.7%	31.3%	26.3%
not important	**34.0%**	41.3%	**53.0%**	**49.4%**	45.0%	38.1%	**29.4%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Off-Roading/Motorcycling/ATV Riding



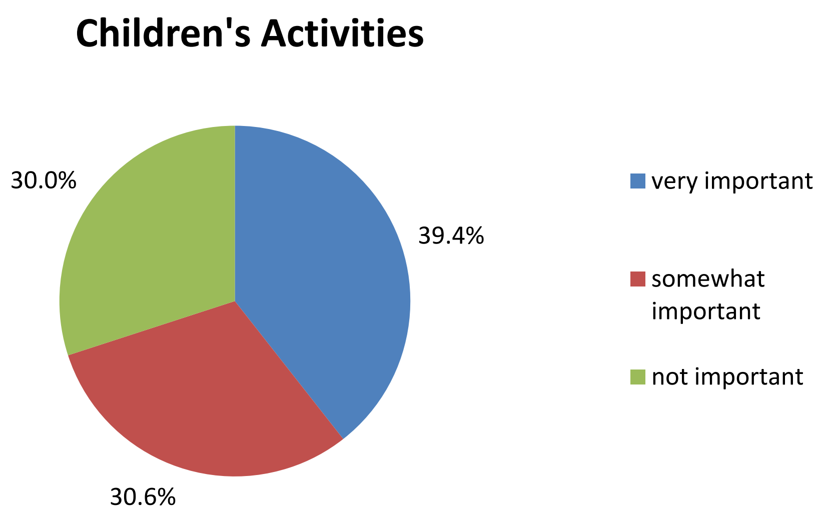
8. off-roading, motor-cycling, ATV riding	all respondents	age: younger	middle	older
very important	32.5%	**42.8%**	31.9%	**13.9%**
somewhat important	25.6%	27.5%	27.6%	**19.1%**
not important	41.9%	**29.7%**	40.5%	**67.0%**
total	100.0%	100.0%	100.0%	100.0%

8. off-roading, motor-cycling, ATV riding	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	38.1%	32.0%	**27.2%**	**39.3%**	28.6%	27.7%	**42.7%**
somewhat important	25.2%	26.7%	26.9%	22.4%	26.7%	29.2%	26.0%
not important	**36.7%**	41.3%	45.9%	38.4%	44.7%	43.1%	**31.3%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



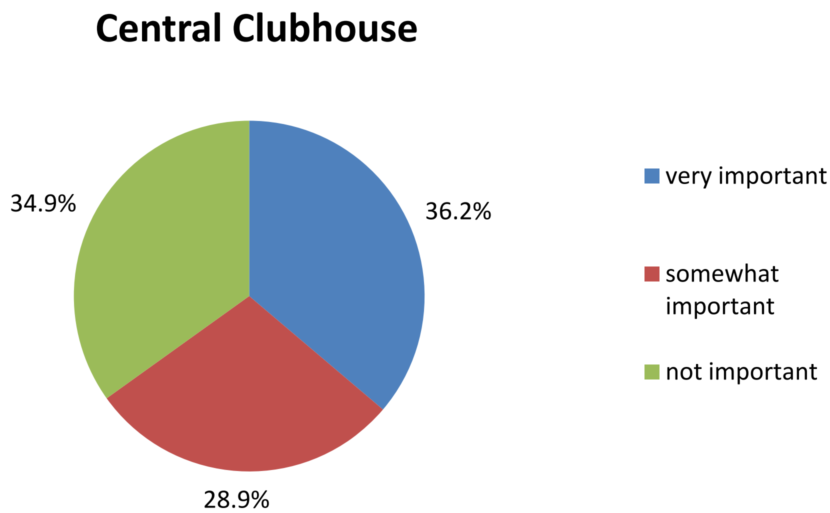
9. evening entertainment, music, dancing, movies, etc.	all respondents	age		
		younger	middle	older
very important	40.1%	42.3%	41.8%	**30.5%**
somewhat important	32.4%	34.7%	30.0%	33.8%
not important	27.5%	23.0%	28.2%	35.7%
total	100.0%	100.0%	100.0%	100.0%

9. evening entertainment, music, dancing, movies, etc.	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	43.6%	36.9%	41.1%	**45.7%**	35.4%	40.9%	41.4%
somewhat important	30.5%	35.3%	30.1%	28.0%	32.8%	31.9%	**39.3%**
not important	25.9%	27.8%	28.8%	26.3%	31.9%	27.2%	**19.4%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



10. children's activities	all respondents	age: younger	middle	older
very important	45.4%	**53.4%**	44.6%	**31.4%**
somewhat important	30.0%	26.2%	30.2%	**37.8%**
not important	24.6%	20.4%	25.2%	**30.8%**
total	100.0%	100.0%	100.0%	100.0%

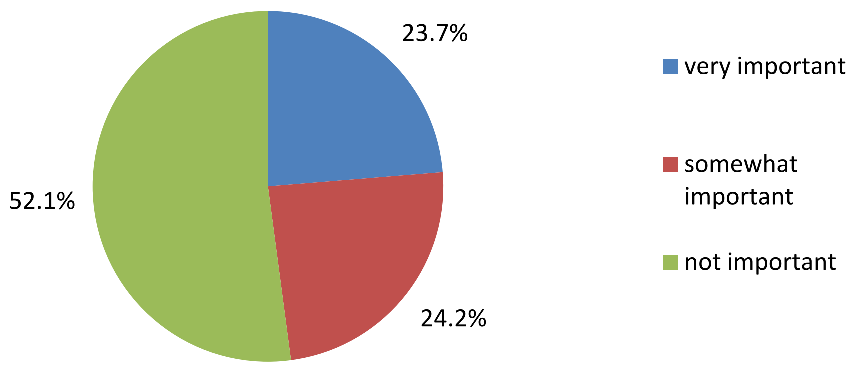
10. children's activities	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	48.6%	46.5%	40.7%	**50.7%**	42.2%	43.2%	49.8%
somewhat important	26.8%	30.6%	33.4%	27.0%	32.6%	31.0%	28.6%
not important	24.6%	22.9%	25.9%	22.3%	25.3%	25.8%	21.6%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



11. central clubhouse with swimming pool, fitness center and other amenities/activities	all respondents	age		
		younger	middle	older
very important	36.2%	**42.1%**	35.8%	**25.9%**
somewhat important	28.9%	30.0%	27.9%	30.7%
not important	34.9%	**27.9%**	36.3%	**43.4%**
total	100.0%	100.0%	100.0%	100.0%

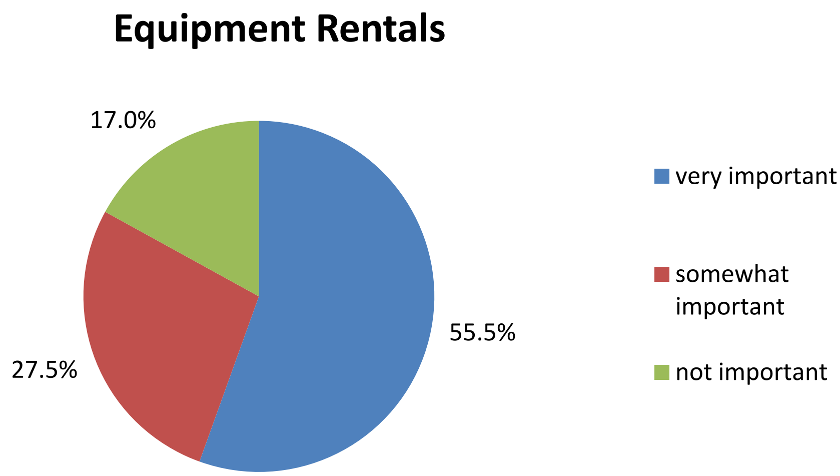
11. central clubhouse with swimming pool, fitness center and other amenities/activities	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	40.2%	35.4%	33.8%	37.2%	31.2%	36.2%	**47.4%**
somewhat important	29.7%	28.9%	30.4%	27.6%	30.1%	32.6%	26.6%
not important	30.1%	35.7%	35.8%	35.2%	38.7%	31.2%	**26.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Health and Wellness Facilities



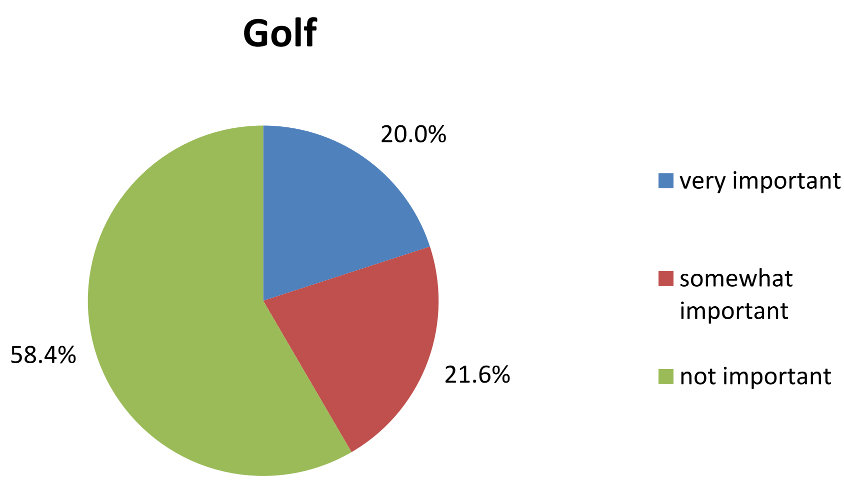
12. health and wellness facilities and seminars	all respondents	age: younger	middle	older
very important	23.7%	**32.1%**	20.0%	**15.6%**
somewhat important	24.2%	27.9%	23.1%	22.3%
not important	52.1%	**40.0%**	56.9%	**62.1%**
total	100.0%	100.0%	100.0%	100.0%

12. health and wellness facilities and seminars	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**30.2%**	21.5%	20.3%	23.7%	**17.9%**	27.9%	**35.0%**
somewhat important	26.7%	25.9%	22.3%	21.9%	22.2%	**31.4%**	27.3%
not important	**43.1%**	52.6%	**57.4%**	54.4%	**59.9%**	**40.7%**	**37.7%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



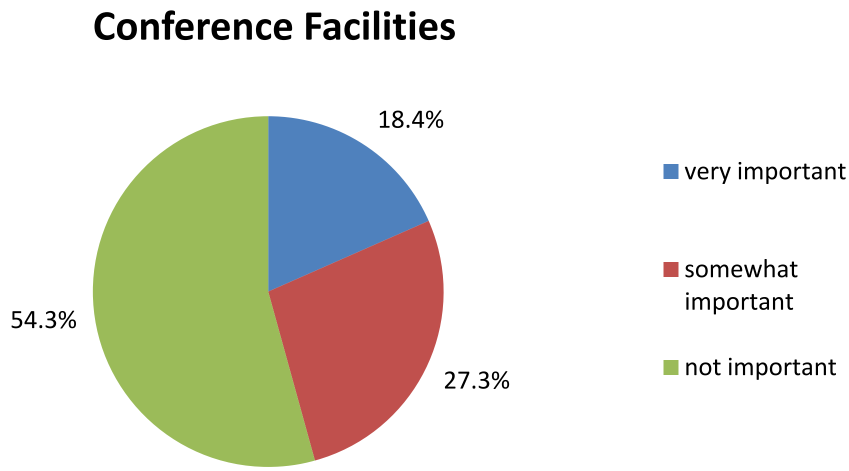
13. equipment rentals, e.g., jet skis, off-road vehicles, boats, etc.	all respondents	age		
		younger	middle	older
very important	55.5%	**64.4%**	53.3%	**43.3%**
somewhat important	27.5%	24.7%	28.7%	31.9%
not important	17.0%	10.9%	18.0%	**24.8%**
total	100.0%	100.0%	100.0%	100.0%

13. equipment rentals, e.g., jet skis, off-road vehicles, boats, etc.	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	57.4%	53.5%	55.4%	57.8%	50.9%	58.1%	58.8%
somewhat important	25.9%	31.0%	25.9%	26.3%	29.1%	28.2%	26.5%
not important	16.7%	15.5%	18.7%	15.9%	20.0%	13.7%	14.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



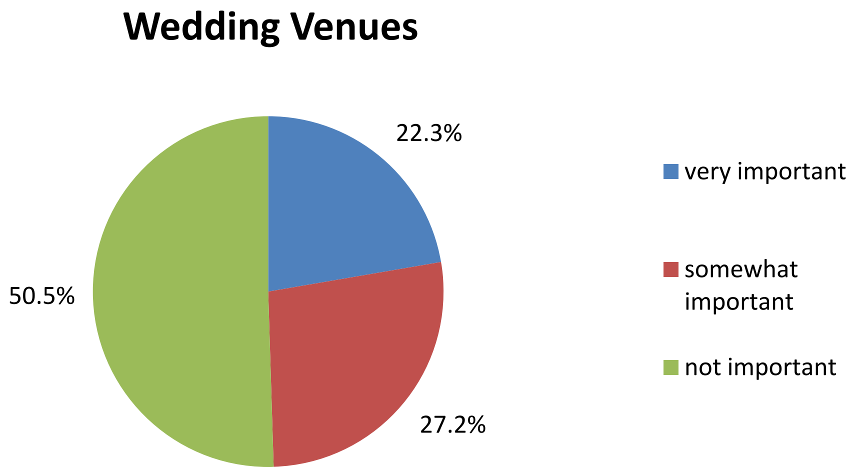
14. golf	all respondents	age: younger	age: middle	age: older
very important	20.0%	**26.1%**	16.4%	17.0%
somewhat important	21.6%	26.4%	19.3%	17.9%
not important	58.4%	**47.4%**	**64.3%**	**65.1%**
total	100.0%	100.0%	100.0%	100.0%

14. golf	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	22.0%	18.4%	20.9%	16.5%	17.1%	23.2%	**27.9%**
somewhat important	22.0%	22.1%	21.1%	**15.9%**	18.3%	**26.7%**	**29.0%**
not important	56.0%	59.5%	58.0%	**67.6%**	**64.6%**	**50.1%**	**43.1%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



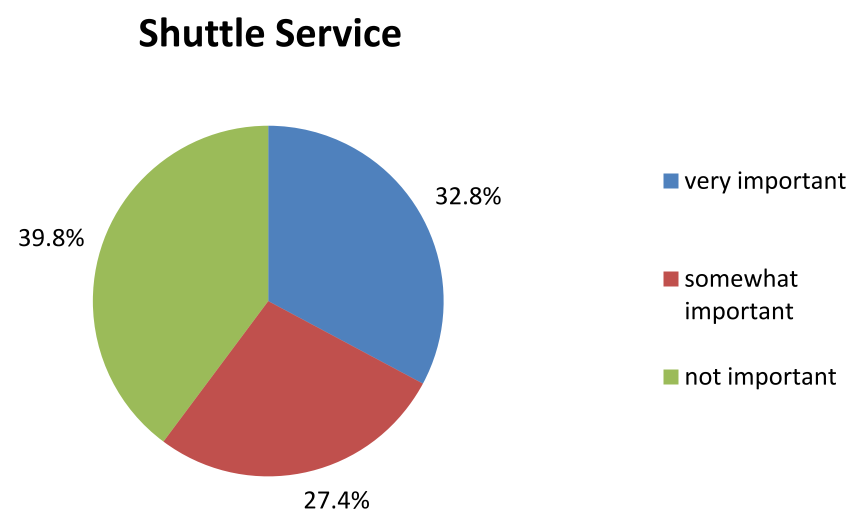
15. conference, meetings and lifestyle retreat facilities	all respondents	age: younger	middle	older
very important	18.4%	**25.1%**	15.4%	**12.7%**
somewhat important	27.3%	31.6%	26.2%	24.1%
not important	54.3%	**43.3%**	58.4%	**63.2%**
total	100.0%	100.0%	100.0%	100.0%

15. conference, meetings and lifestyle retreat facilities	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	21.7%	17.3%	17.2%	18.2%	13.8%	20.0%	**29.0%**
somewhat important	27.9%	28.5%	26.0%	25.9%	24.5%	**33.1%**	**34.4%**
not important	50.4%	54.2%	56.8%	55.9%	**61.7%**	**46.9%**	**36.6%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



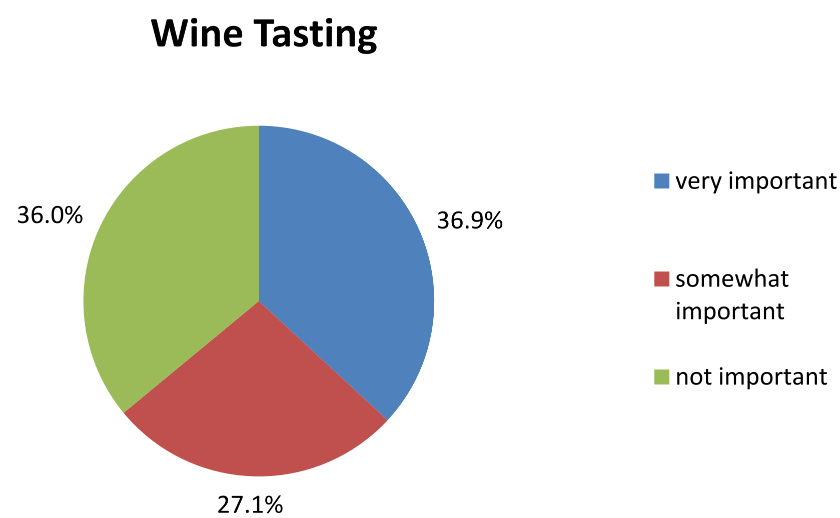
16. wedding venues	all respondents	age: younger	age: middle	age: older
very important	22.3%	**31.7%**	18.6%	**14.4%**
somewhat important	27.2%	30.4%	27.6%	21.4%
not important	50.5%	**37.9%**	53.8%	**64.3%**
total	100.0%	100.0%	100.0%	100.0%

16. wedding venues	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**28.4%**	21.1%	18.7%	23.7%	18.1%	24.3%	**29.4%**
somewhat important	27.6%	30.2%	23.6%	24.0%	27.0%	30.0%	33.2%
not important	**44.0%**	48.7%	**57.7%**	52.2%	54.9%	**45.7%**	**37.5%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



17. shuttle service to wineries and other attractions in nearby Napa Valley	all respondents	age		
		younger	middle	older
very important	32.8%	**41.9%**	29.2%	**24.6%**
somewhat important	27.4%	29.6%	26.1%	27.2%
not important	39.8%	**28.5%**	**44.7%**	**48.2%**
total	100.0%	100.0%	100.0%	100.0%

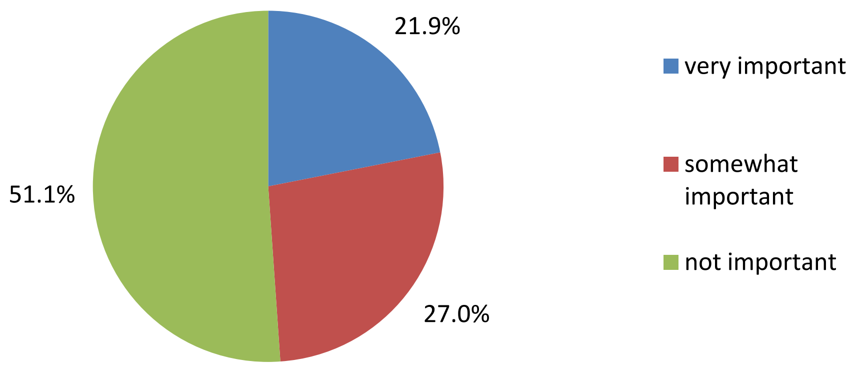
17. shuttle service to wineries and other attractions in nearby Napa Valley	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	37.3%	30.6%	31.5%	**27.3%**	**25.3%**	**43.3%**	**42.7%**
somewhat important	27.2%	29.9%	25.9%	23.5%	24.0%	**32.6%**	**33.3%**
not important	35.5%	39.5%	42.6%	**49.2%**	**50.7%**	**24.1%**	**24.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



18. wine tasting on the shores of Lake Berryessa	all respondents	age: younger	middle	older
very important	36.9%	**46.0%**	32.1%	**29.1%**
somewhat important	27.1%	28.4%	27.8%	26.3%
not important	36.0%	**25.6%**	40.1%	**44.6%**
total	100.0%	100.0%	100.0%	100.0%

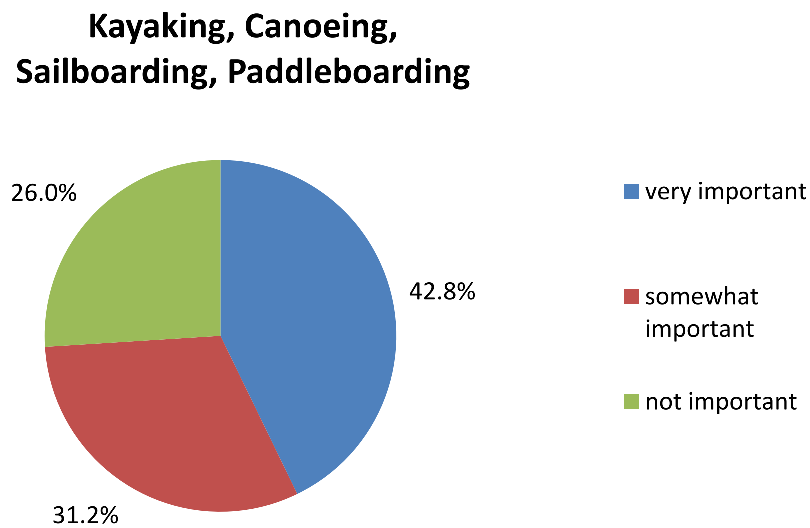
18. wine tasting on the shores of Lake Berryessa	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	39.1%	36.6%	33.6%	**29.8%**	**30.9%**	**45.7%**	**44.9%**
somewhat important	25.6%	27.9%	30.0%	23.0%	28.1%	31.6%	31.6%
not important	35.3%	35.5%	36.4%	**47.2%**	40.9%	**22.7%**	**23.5%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Organized Bird Watching



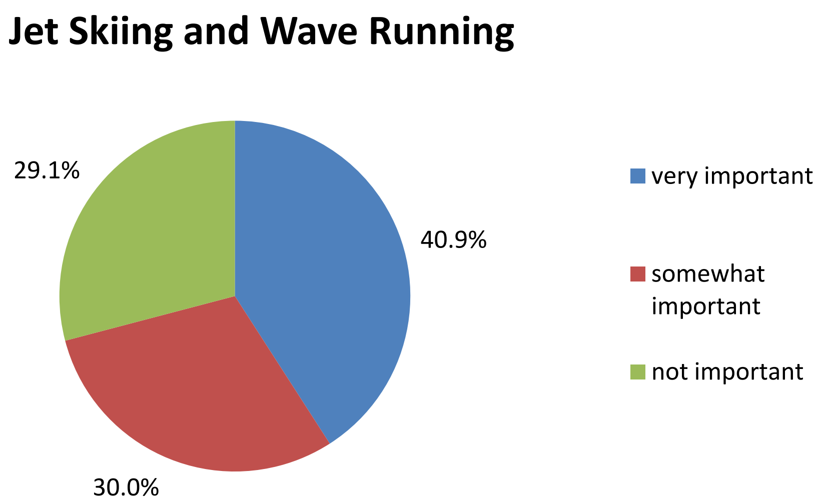
19. organized bird watching	all respondents	age younger	age middle	age older
very important	21.9%	26.2%	19.4%	18.5%
somewhat important	27.0%	28.2%	26.2%	27.5%
not important	51.1%	**45.6%**	54.4%	54.0%
total	100.0%	100.0%	100.0%	100.0%

19. organized bird watching	income lower	income middle	income higher	residence Napa	residence North Bay	residence South Bay	residence Delta
very important	**28.6%**	21.2%	**16.2%**	25.0%	18.6%	21.5%	**32.9%**
somewhat important	29.5%	28.3%	23.6%	30.5%	23.1%	31.9%	28.5%
not important	**41.9%**	50.5%	**60.2%**	**44.5%**	**58.3%**	**46.6%**	**38.6%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



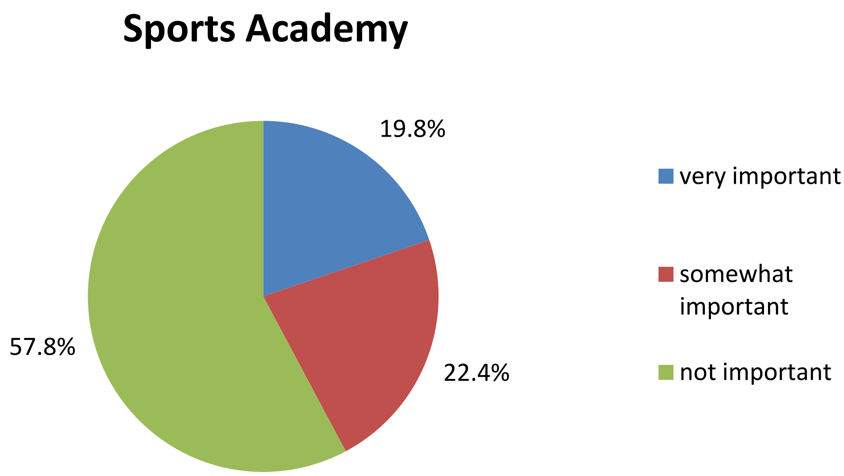
20. defined areas for kayaking, canoeing, sailboarding, paddleboarding, etc.	all respondents	age		
		younger	middle	older
very important	42.8%	**46.7%**	40.0%	39.4%
somewhat important	31.2%	30.3%	31.6%	32.8%
not important	26.0%	23.0%	28.4%	27.8%
total	100.0%	100.0%	100.0%	100.0%

20. defined areas for kayaking, canoeing, sailboarding, paddleboarding, etc.	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	46.1%	44.2%	**35.5%**	45.1%	40.7%	41.3%	**53.1%**
somewhat important	33.0%	30.4%	31.6%	**25.6%**	31.9%	36.0%	31.8%
not important	**20.9%**	25.4%	**32.9%**	29.4%	27.4%	22.7%	**15.1%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



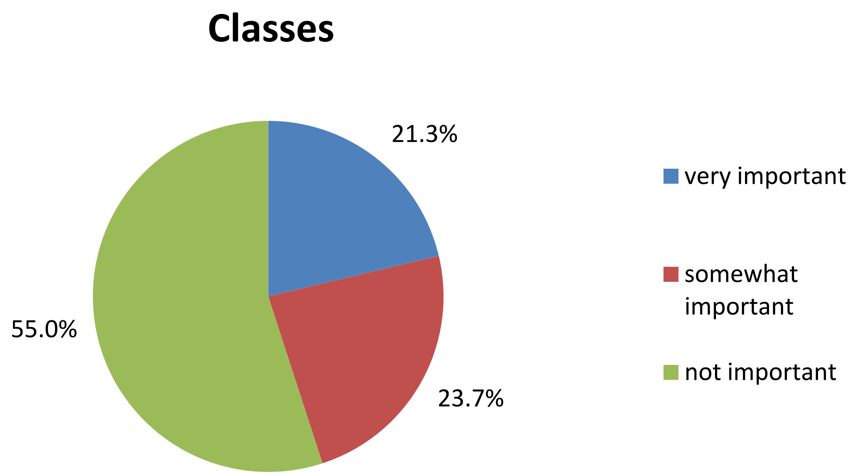
21. defined areas for jet skiing and wave running	all respondents	age		
		younger	middle	older
very important	40.9%	42.8%	37.9%	42.0%
somewhat important	30.0%	31.5%	29.3%	28.2%
not important	29.1%	25.7%	32.8%	29.8%
total	100.0%	100.0%	100.0%	100.0%

21. defined areas for jet skiing and wave running	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very important	47.7%	40.0%	**35.1%**	39.9%	38.5%	42.6%	**48.7%**
somewhat important	29.0%	30.9%	29.1%	25.2%	30.0%	32.2%	31.6%
not important	**23.3%**	29.1%	**35.8%**	**34.9%**	31.5%	25.2%	**19.7%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



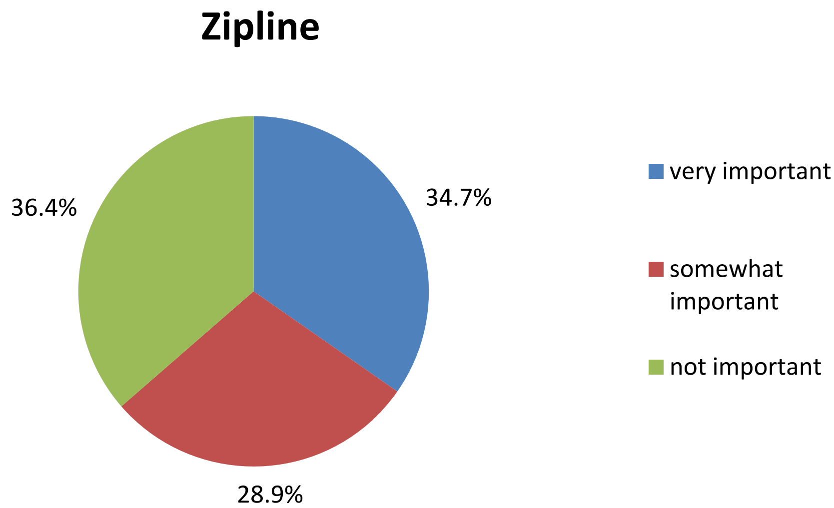
22. a year-round sports/athletic academy with professional training facilities, name instructors	all respondents	age: younger	middle	older
very important	19.8%	**30.0%**	15.4%	**12.1%**
somewhat important	22.4%	26.3%	20.8%	18.0%
not important	57.8%	**43.7%**	**63.8%**	**69.9%**
total	100.0%	100.0%	100.0%	100.0%

22. a year-round sports/athletic academy with professional training facilities, name instructors	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**25.6%**	19.0%	16.9%	20.4%	**13.7%**	24.2%	**30.1%**
somewhat important	22.4%	23.4%	20.5%	19.5%	20.0%	**27.5%**	**29.0%**
not important	52.0%	57.6%	62.6%	60.1%	**66.4%**	**48.2%**	**40.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



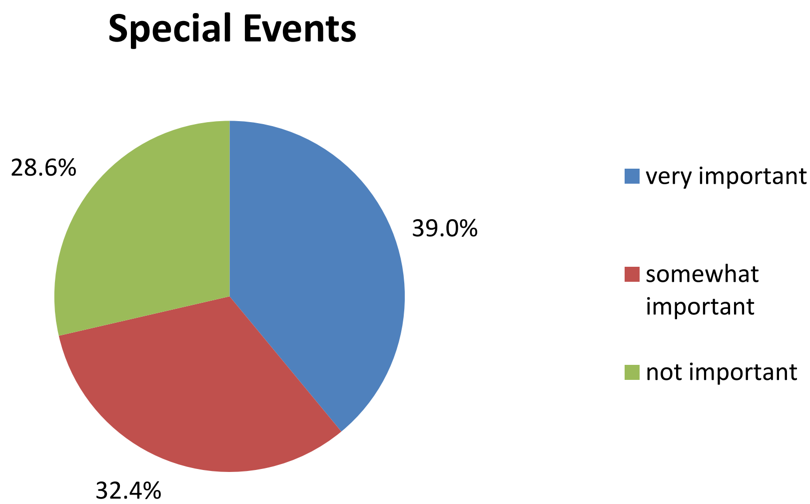
23. classes in culinary arts, wellness, crafts, etc.	all respondents	age: younger	age: middle	age: older
very important	21.3%	**30.9%**	17.6%	**13.8%**
somewhat important	23.7%	27.2%	22.3%	20.8%
not important	55.0%	**41.9%**	**60.1%**	**65.4%**
total	100.0%	100.0%	100.0%	100.0%

23. classes in culinary arts, wellness, crafts, etc.	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**26.9%**	20.0%	18.9%	19.0%	**14.3%**	**28.2%**	**35.3%**
somewhat important	27.8%	24.5%	20.2%	17.4%	21.7%	**30.6%**	**28.9%**
not important	**45.3%**	55.5%	**60.9%**	**63.6%**	**64.0%**	**41.2%**	**35.8%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



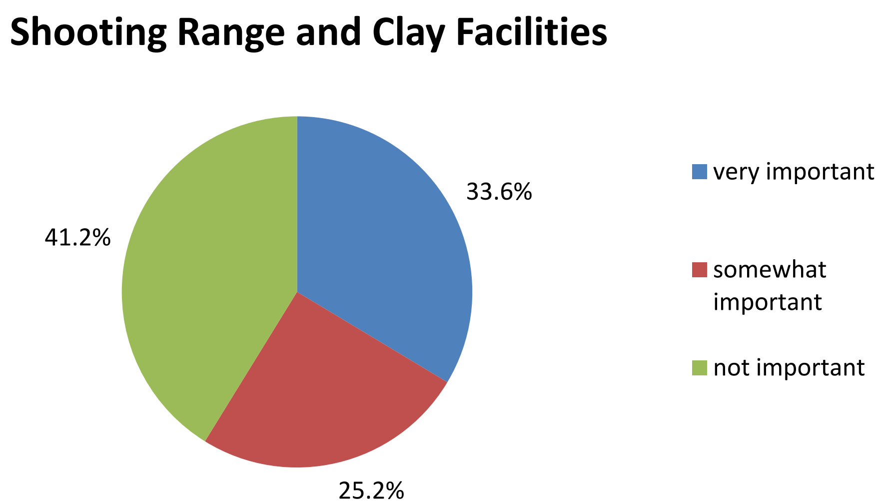
24. zipline	all respondents	age: younger	middle	older
very important	34.7%	**43.9%**	34.4%	**18.6%**
somewhat important	28.9%	30.2%	29.9%	25.4%
not important	36.4%	**25.9%**	35.7%	**56.0%**
total	100.0%	100.0%	100.0%	100.0%

24. zipline	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**42.4%**	34.9%	**28.0%**	36.1%	30.9%	35.7%	**45.6%**
somewhat important	28.6%	29.2%	28.5%	27.6%	27.5%	32.2%	29.5%
not important	**29.0%**	35.9%	**43.5%**	36.2%	**41.6%**	32.2%	**24.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



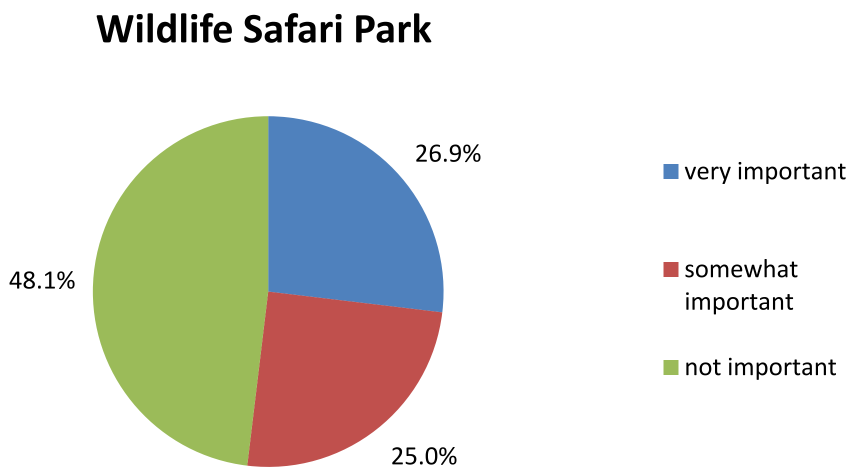
25. special events such as boat races, car clubs, triathlon, fishing tournaments, etc.	all respondents	age: younger	middle	older
very important	39.0%	**45.6%**	37.6%	**31.7%**
somewhat important	32.4%	29.2%	33.1%	36.9%
not important	28.6%	25.2%	29.3%	31.4%
total	100.0%	100.0%	100.0%	100.0%

25. special events such as boat races, car clubs, triathlon, fishing tournaments, etc.	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very important	**45.3%**	37.3%	36.5%	**47.8%**	36.3%	**33.8%**	**45.5%**
somewhat important	29.2%	34.4%	32.2%	32.0%	32.6%	36.1%	29.6%
not important	25.5%	28.4%	31.3%	**20.2%**	31.1%	30.1%	24.9%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



26. shooting range and clay facilities	all respondents	age: younger	age: middle	age: older
very important	33.6%	**44.2%**	32.6%	**17.3%**
somewhat important	25.2%	26.3%	24.2%	26.2%
not important	41.2%	**29.4%**	43.2%	**56.5%**
total	100.0%	100.0%	100.0%	100.0%

26. shooting range and clay facilities	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	38.3%	33.4%	30.1%	**39.2%**	29.6%	**27.9%**	**47.1%**
somewhat important	25.6%	25.5%	25.0%	24.7%	22.2%	**33.6%**	23.0%
not important	**36.1%**	41.1%	44.9%	**36.1%**	**48.1%**	38.6%	**30.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



27. wildlife safari park	all respondents	age: younger	age: middle	age: older
very important	26.9%	**37.7%**	24.3%	**12.5%**
somewhat important	25.0%	29.0%	22.8%	23.2%
not important	48.1%	**33.3%**	52.9%	**64.3%**
total	100.0%	100.0%	100.0%	100.0%

27. wildlife safari park	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very important	**36.5%**	26.4%	**19.9%**	**19.8%**	21.0%	30.3%	**48.7%**
somewhat important	26.3%	25.7%	22.4%	21.9%	21.1%	**32.8%**	29.3%
not important	**37.2%**	47.9%	**57.7%**	**58.3%**	**57.9%**	**36.9%**	**22.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Not only is it evident that visitors to Lake Berryessa will be attracted by a variety of boating activities and overnight accommodations, but so too will they be by a variety of recreational activities and services. Ranked below are the proportion of "very important" responses for 27 different possible amenities and services at Lake Berryessa. For the most part, they were never found at the Lake, or at least not in adequate supply.

amenity or service	percent of: "very important" answers	percent of: "not important" answers
convenience grocery stores	71.0%	4.8%

hiking, biking, walking trails	68.7%	9.3%
restaurants and other food services	67.2%	7.2%
equipment rentals	55.5%	16.9%
taverns/bars	48.2%	24.7%
children's activities	45.4%	25.6%
defined areas for kayaking, canoeing, sailboarding, paddleboarding, etc.	42.8%	25.9%
defined areas for jet skiing and wave running	40.9%	29.2%
evening entertainment, music, dancing, movies, etc.	40.1%	27.4%
amphitheater with outdoor concerts and "name entertainment"	39.4%	30.0%
special events such as boat races, car clubs, triathlons, fishing tournaments, etc.	39.0%	28.6%
wine tasting on the shores of Lake Berryessa	36.9%	36.0%
central clubhouse with swimming pool, fitness center and other amenities/activities	36.2%	34.8%
zipline	34.7%	36.4%
horseback riding	34.1%	35.1%
shooting range with clay facilities	33.6%	41.2%
shuttle service to wineries and other attractions in nearby Napa Valley	32.8%	39.8%
off-roading/motorcycling/ATV riding	32.5%	41.9%
indoor-outdoor water park for year-round use	31.7%	42.7%
wildlife safari park	27.0%	48.1%
health and wellness facilities and seminars	23.7%	52.1%
wedding venues	22.3%	50.5%
organized bird watching	21.9%	51.0%
classes on culinary arts, wellness, crafts, etc.	21.3%	55.0%
golf	20.0%	58.4%
year-round sports/athletic academy with professional training facilities and name instructors	19.8%	57.7%
conference, meetings and lifestyle retreat facilities	18.4%	54.3%

	respondent-groups with especially:	
amenity or service (all)	high "very important" responses	low "very important" responses
convenience grocery stores (71.0%)	high among all groups	
hiking, biking, walking trails (68.7%)	younger at 73.2%	older at 58.3%
restaurants and other food services (67.2%)	Napa County at 72.9% higher income at 72.0%	

equipment rentals (55.5%)	younger at 64.4%	older at 43.3% South Bay at 50.9%
taverns/bars (48.2%)	Napa County at 55.8%	older at 39.7% South Bay at 43.5%
children's activities (45.4%)	younger at 53.4% Napa County at 50.7%	older at 31.4%
defined areas for kayaking, etc. (42.8%)	Delta at 53.1% younger at 46.7%	older at 35.5%
defined areas for jet skiing, etc. (40.9%)	Delta at 48.7%	higher income at 35.1%
evening entertainment (40.1%)	Napa County at 45.7%	older at 30.5%
amphitheater (39.4%)	Delta at 48.2% younger at 46.3%	older at 26.1%
special events (39.0%)	Napa County at 47.8% younger at 45.6% Delta at 45.5% lower income at 45.3%	older at 31.7% South Bay at 33.8%
wine tasting (36.9%)	younger at 46.0% South Bay at 45.7%	Napa County at 23.2% older at 29.1%
central clubhouse (36.2%)	Delta at 47.4% younger at 42.1%	older at 25.9%
zipline (34.7%)	Delta at 45.0% younger at 43.9% lower income at 42.4%	older at 18.6% higher income at 28.0%
horseback riding (34.1%)	lower income at 41.3% Delta at 44.1% Napa County at 40.5% younger at 40.1%	older at 24.0%
shooting range (33.6%)	Delta at 47.6% younger at 44.2%	older at 17.3% South Bat at 27.9%
shuttle service to Napa Valley (32.8%)	South Bay at 43.3% Delta at 42.7% younger at 46.9%	older at 24.6% North Bay at 25.3%
off-roading (32.5%)	younger at 42.8% Delta at 42.7% Napa County at 39.3%	older at 13.9% higher income at 27.2%

water park (31.7%)	Delta at 44.3% younger at 40.0% lower income at 36.1%	older at 17.7%
wildlife safari park (27.0%)	younger at 37.7%	older at 12.5% Napa County at 19.8% higher income at 19.9%
health and wellness facilities (23.7%)	Delta at 35.0% younger at 32.1% lower income at 30.2%	older at 15.6% North Bay at 17.9%
wedding venues (22.3%)	younger at 31.7% Delta at 29.4% lower income at 28.4%	older at 14.4%
bird watching (21.9%)	Delta at 32.9% lower income at 28.0% younger at 26.2%	higher income at 16.2%
classes (21.3%)	Delta at 35.3% younger at 30.9% South Bay at 28.2% lower income at 26.9%	older at 13.8% North Bay at 14.3%
golf (20.0%)	Delta at 27.9% younger at 26.1%	
sports academy (19.8%)	Delta at 30.1% younger at 30.0% lower income at 25.0% South Bay at 24.2%	older at 12.1% North Bay at 13.7%
conference center (18.4%)	Delta at 29.0% younger at 25.1%	older at 12.7%

Some overview comments can be made in regard to the preceding results:

1. By far the most important amenities/services were “convenience grocery stores” at 71.0 percent, “hiking, biking, walking trails” at 68.7 percent, and “restaurants and other food services” at 67.2 percent. All of these seem basic to a satisfactory vacation experience. Related to the importance of restaurants and food services, 48.2 percent said having “taverns/bars” would be “very important.”

2. Many more respondents said “defined areas for kayaking, canoeing, sailboarding, paddleboarding, etc.” and “defined areas for jet skiing and wave running” than said such definition was not important. In other words, mixing all types of boating together throughout the Lake seems questionable.

3. Other amenities/services checked as “very important” by more than 40 percent of respondents included “equipment rentals” at 55.5 percent, “children’s activities” at 45.4 percent, and “evening entertainment” at 40.1 percent.

4. The “very important” answers for the other 18 amenities/services ranged from 18.4 percent for “conference, meetings and lifestyle facilities” to 39.4 percent for “an amphitheater with outdoor concerts and name entertainment.” It is emphasized that although these amenities/services seem less important, it does not mean they should be neglected in planning for the future of Lake Berryessa. Many are inexpensive to implement, and should be attractive to a wide variety of recreationists in the PMA. On the other hand, it does not mean that every imaginable amenity/service should be pursued. The challenge is to plan for ones which are cost-effective to implement, and will attract the most visitors without harming the environment.

5. Significant differences exist among the various respondent-groups regarding answers to this question. Some observations:

    - Great disparity between the age groups: younger respondents are more interested in having more amenities and services, especially those involving more strenuous activity; older respondents are less interested in almost all of the amenities/services, and perhaps, see their vacation experience at Lake Berryessa as being one more of rest and relaxation than physical activity. The middle age respondents are somewhere in between for almost all amenities and services.

    - Less disparity exists among the income groups, although: lower income respondents are more akin in their answers to younger respondents, and vice versa. As with age, middle income respondents always seem to be between lower and higher income respondents.

- Delta residents demonstrate a higher interest in almost all amenities and services than residents in the other three areas.

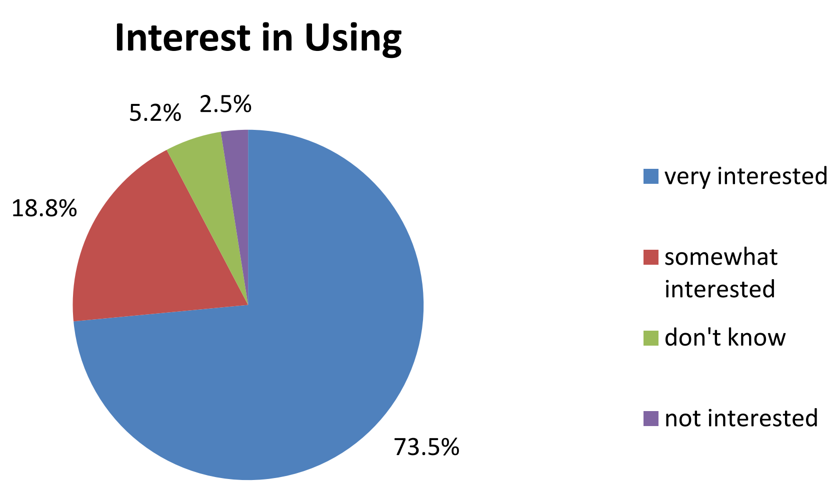
- Limited variation exists between residents of the other three regions, including those in Napa County.

- Again, it appears that many potential visitors to Lake Berryessa would like more than just motor boats and tent/RV camping.

IV. QUESTIONS PERTAINING TO PERSONAL INTEREST IN VISITING LAKE BERRYESSA

YOUR PERSONAL INTEREST IN USING LAKE BERRYESSA

QUESTION 13. If appropriate facilities for water-oriented outdoor recreational activities are again available, how interested would you be in visiting Lake Berryessa?



interest in using	all respondents	age: younger	age: middle	age: older
very interested	73.5%	68.8%	77.6%	72.5%
somewhat interested	18.8%	22.3%	16.1%	19.0%
don't know	5.2%	6.1%	4.6%	5.5%
not interested	2.5%	2.8%	1.7%	3.0%
total	100.0%	100.0%	100.0%	100.0%

interest in using	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very interested	**68.8%**	71.9%	**80.2%**	**82.8%**	77.3%	**66.4%**	**62.2%**
somewhat interested	20.8%	20.8%	13.9%	**11.3%**	17.1%	**24.6%**	**26.9%**
don't know	6.7%	5.3%	4.2%	3.9%	4.7%	6.6%	6.7%
not interested	3.8%	2.0%	1.7%	2.0%	1.0%	2.4%	4.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

In a very positive finding, 92.3 percent of all respondents say they are interested in visiting Lake Berryessa if appropriate facilities are available. This includes 73.5 percent who said they would be "very interested," and 18.8 percent who said "somewhat interested." Only 2.5 percent said "not interested," with the remaining 5.2 percent saying "don't know."

As shown below, the proportion of "very interested" responses ranged from 62.2 percent of Delta residents to 82.8 percent of Napa County residents. Responses from South Bay residents were comparable to Delta residents, while responses from North Bay residents were comparable to Napa County residents.

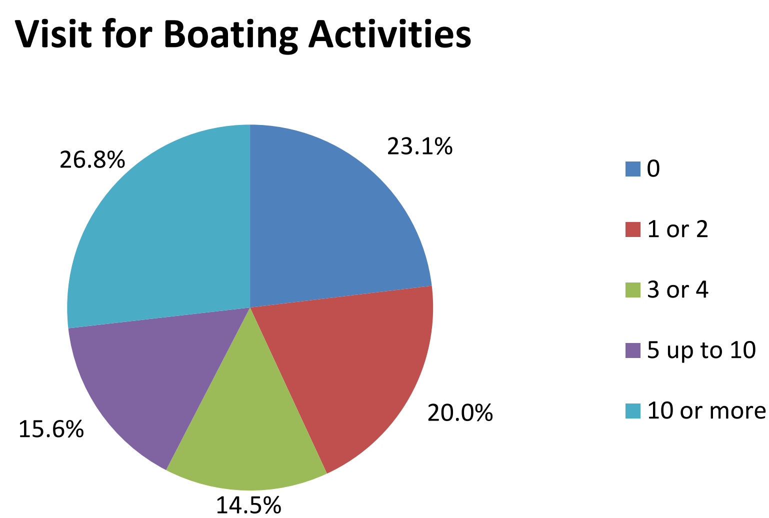
Interest was significantly greater among higher income respondents than lower income respondents. It also was higher among the middle age respondents, followed by the older and then by the younger.

The proportion of "very interested" answers are ranked below for the various respondent-groups.

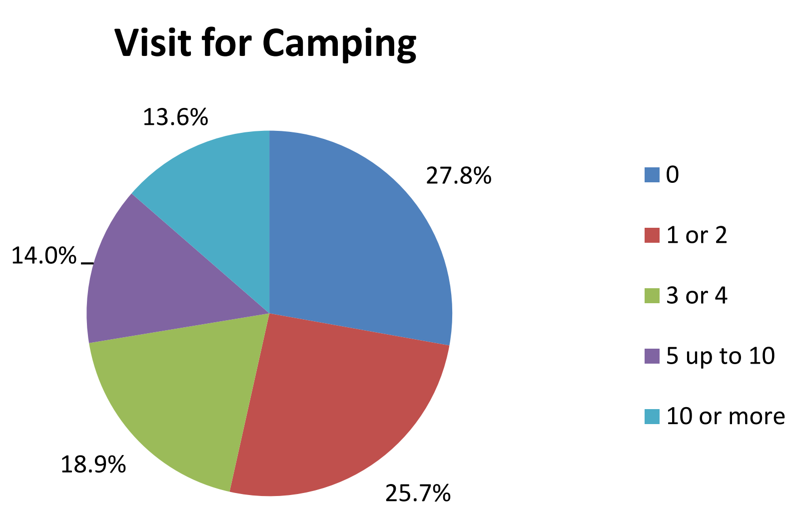
respondent-group	percent of "very interested" responses
Napa County	82.8%
higher income	80.2%
middle age	77.6%
North Bay	77.3%
older	72.5%
middle income	71.9%
younger	68.8%
lower income	67.8%
South Bay	66.4%
Delta	62.2%

Interest among South Bay and Delta residents is still high (almost two-thirds of both groups checking "very interested"), but lower than for the other groups. This probably relates to distance, and the competition from other water bodies, e.g., the Delta river area, Folsom Lake and Lake Tahoe for Delta residents, and San Francisco Bay and lakes in the Sierra Foothills for South Bay residents.

QUESTION 14. How many times in a typical year would you:



visit for boating activities?	all respondents	residence Napa	North Bay	South Bay	Delta
0	23.1%	19.3%	22.0%	22.9%	**31.2%**
1 or 2	20.0%	**9.8%**	**14.9%**	**31.0%**	23.7%
3 or 4	14.5%	9.8%	12.5%	16.1%	**27.0%**
5 up to 10	15.6%	18.3%	17.4%	13.2%	10.7%
10 or more	26.8%	**42.8%**	**33.3%**	**16.8%**	**7.4%**
total	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	3.5	15.0	4.0	2.0	1.5



visit for camping?	all respondents	residence Napa	North Bay	South Bay	Delta
0	27.8%	26.1%	26.5%	29.5%	27.6%
1 or 2	25.7%	**19.9%**	24.2%	**32.0%**	26.6%
3 or 4	18.9%	15.3%	19.5%	19.0%	**24.3%**
5 up to 10	14.0%	15.3%	15.0%	12.4%	14.5%
10 or more	13.6%	**23.3%**	14.8%	**7.1%**	**7.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	1.5	4.0	2.0	1.5	2.0

On average, respondents would visit Lake Berryessa about 3.5 times a year for boating activities and 1.5 times for camping activities. Propensity to visit for the amenities and services in the preceding question was not addressed in this question.

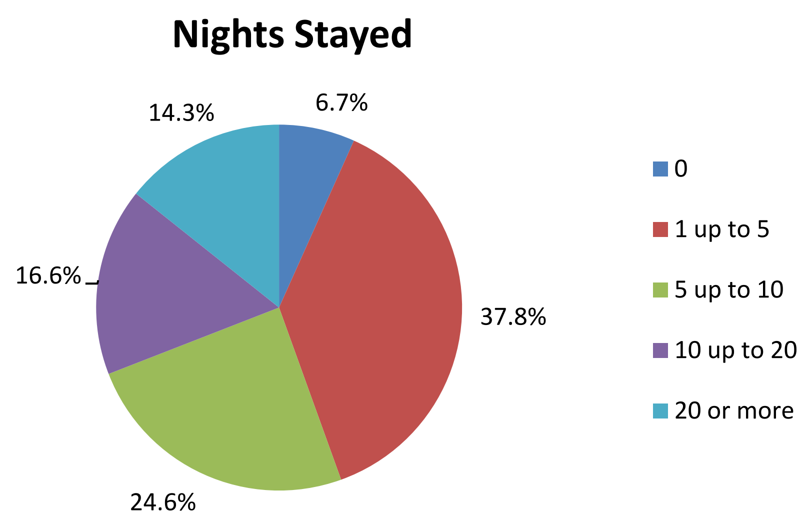
There was significant variation among the four areas. For example, Napa County residents stated an average of about 15.0 times for boating activities and 4.0 times for camping. On the other end of the range were Delta residents with an average of only about 1.5 times for boating activities and 2.0 times for camping. As in the previous question, residents of the North Bay were more likely to visit for both items than were residents of the South Bay.

Some 42.8 percent of Napa County residents and 33.3 percent of North Bay residents are likely to visit 10 or more times for boating activities. These portions were only 16.8 percent for South Bay residents and 7.4 percent for Delta residents.

Some 23.3 percent of Napa County residents and 14.8 percent of North Bay residents are likely to visit 10 or more times for camping. These portions were only 7.1 percent for South Bay residents and 7.0 percent for Delta residents.

In summary, the vast majority of all residents say they are interested in boating and camping at Lake Berryessa. The frequency of such visits increases with proximity to the Lake, as might be expected.

QUESTION 15. How many nights would you stay in a typical year?



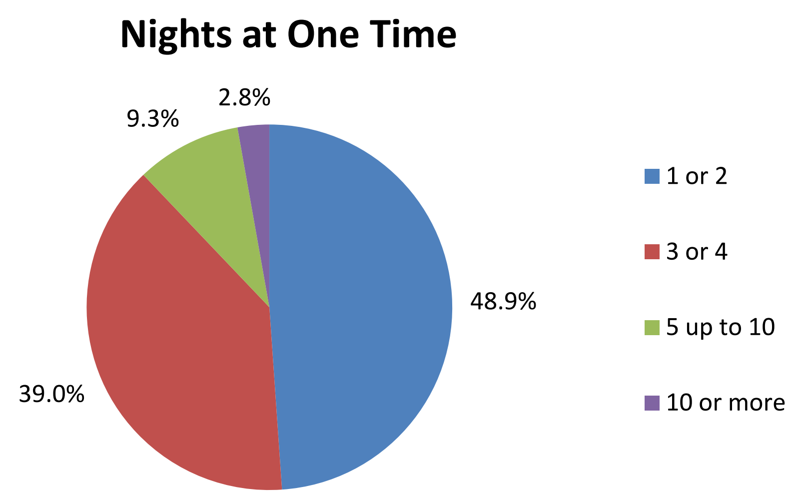
nights stayed	all respondents	residence: Napa	North Bay	South Bay	Delta
0	6.7%	8.5%	6.6%	6.7%	6.7%
1 up to 5	37.8%	**29.2%**	35.5%	**45.3%**	**48.7%**
5 up to 10	24.6%	21.1%	25.0%	24.5%	28.2%
10 up to 20	16.6%	21.1%	18.8%	13.2%	**11.3%**
20 or more	14.3%	**20.1%**	14.1%	10.3%	**5.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	5.2	8.0	7.0	5.0	4.5

The average respondent would stay about 5.2 nights per year at Lake Berryessa. This ranged from 4.5 nights for Delta residents, to 5.0 nights for South Bay residents, to 7.0 nights for North Bay residents, to 8.0 nights for Napa County residents.

Of Napa County residents, 41.2 percent would stay 10 or more nights, and 20.1 percent would stay 20 or more nights. Conversely, of Delta residents, these figures were only 16.3 percent and 5.0 percent, respectively.

If considering only respondents to the survey, over 16,000 annual room nights at Lake Berryessa would be generated. They represent only a small handful of all households in the PMA.

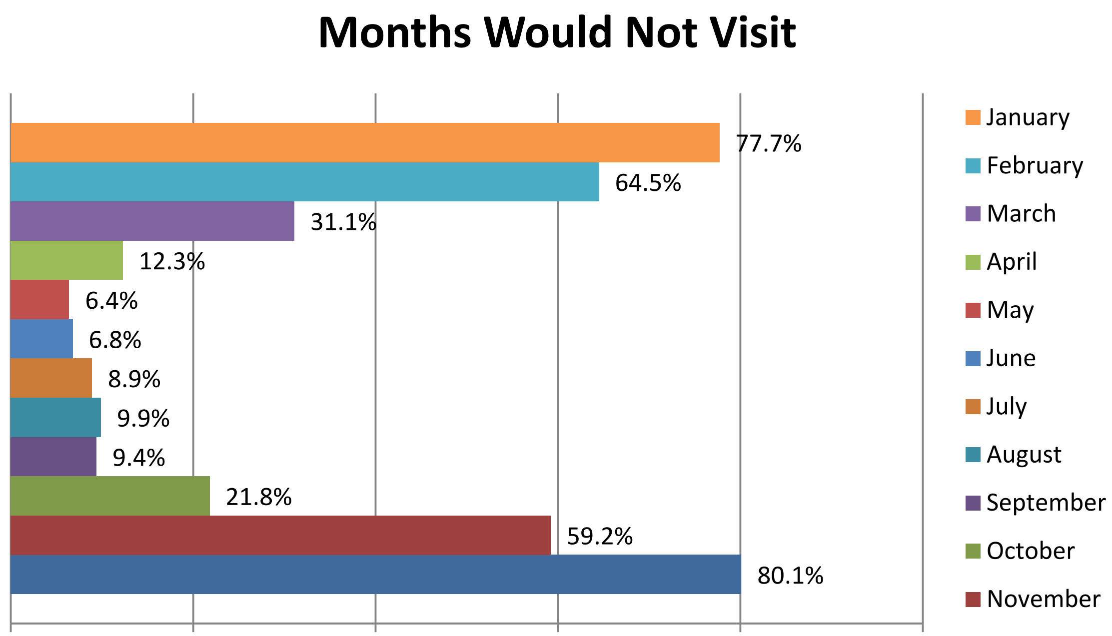
QUESTION 16. How many nights would you stay at one time?



nights at one time	all respondents	residence: Napa	North Bay	South Bay	Delta
1 or 2	48.9%	46.8%	51.9%	51.1%	48.7%
3 or 4	39.0%	37.0%	40.2%	35.8%	34.8%
5 up to 10	9.3%	9.8%	6.5%	10.5%	**14.8%**
10 or more	2.8%	6.4%	1.4%	2.6%	1.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	2.0	2.0	2.0	2.0	2.0

The average number of nights stayed during any given visit to Lake Berryessa would be about 2.0. This approximate average was the same for all four areas. About one-third (39.0 percent) would stay three or four nights, 9.3 percent would stay five up to 10 nights, and only 2.8 percent would stay 10 or more nights. In other words, respondents (especially those in Napa County) would frequently visit Lake Berryessa in any given year, but most would stay just one or two nights.

QUESTION 17. Are there any months you would not visit Lake Berryessa?



months would not visit	all respondents	residence: Napa	North Bay	South Bay	Delta
January	77.7%	81.2%	**82.7%**	**72.0%**	**69.9%**
February	64.5%	65.7%	66.2%	61.3%	61.7%
March	31.1%	28.0%	30.4%	30.9%	33.0%
April	12.3%	8.3%	10.0%	14.3%	14.4%
May	6.4%	4.1%	3.0%	9.0%	**12.4%**
June	6.8%	7.4%	5.2%	8.6%	9.6%
July	8.9%	8.7%	7.2%	10.7%	**13.9%**
August	9.9%	12.8%	7.9%	11.2%	13.4%
September	9.4%	8.7%	7.1%	10.7%	**15.8%**
October	21.8%	**14.2%**	19.7%	24.2%	**29.7%**
November	59.2%	**52.8%**	63.9%	56.5%	56.9%
December	80.1%	83.0%	84.7%	**74.1%**	**71.3%**

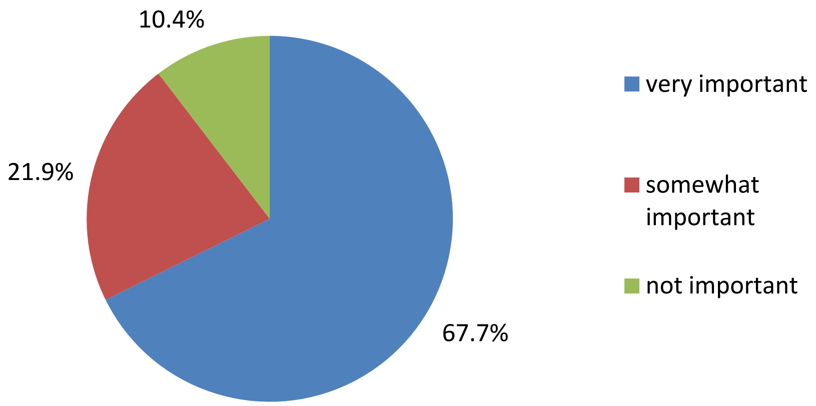
The degree of interest in visiting Lake Berryessa varies throughout the year, as shown above. Peak months appear to be May through September, shoulder months are March, April and November, and low months are December through February. Even in the low months, however, a significant portion of respondents would be interested in visiting Lake Berryessa.

Among Napa County residents, over 80 percent would not visit Lake Berryessa in December or January, and about 60 percent would not visit in February and November. These patterns are very similar among North Bay residents.

Most likely, interest in visiting Lake Berryessa among all respondents would increase if more amenities and services existed there than just motor boating and camping, e.g., restaurants, bar, evening entertainment, stores, and indoor/outdoor activities.

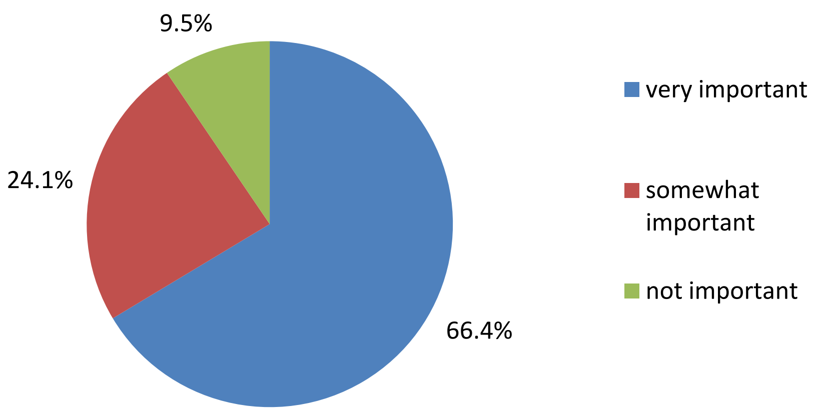
QUESTION 18. How important would each of the following reasons be in your decision to visit Lake Berryessa?

Extent and Quality of Boating Facilities

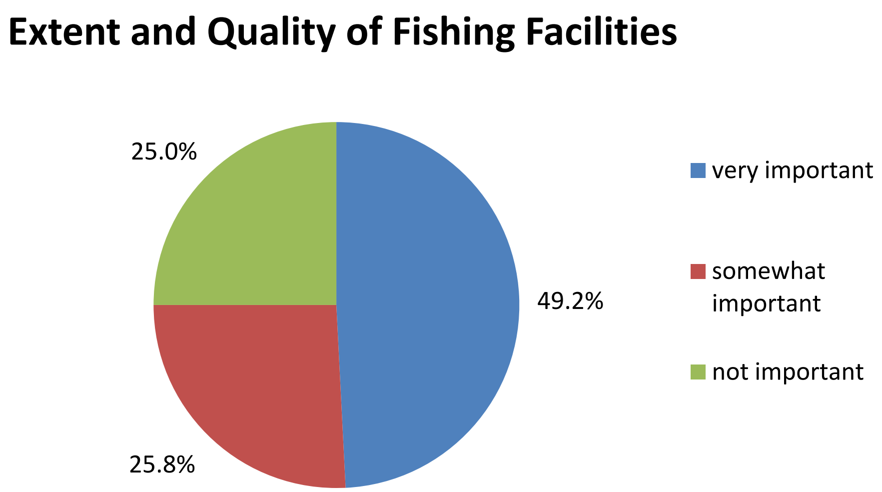


1. extent and quality of boating facilities	all respondents	residence Napa	North Bay	South Bay	Delta
very important	67.7%	72.9%	69.1%	66.8%	**56.3%**
somewhat important	21.9%	18.0%	20.9%	22.8%	**31.6%**
not important	10.4%	9.1%	10.1%	10.4%	12.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Extent and Quality of Camping Facilities

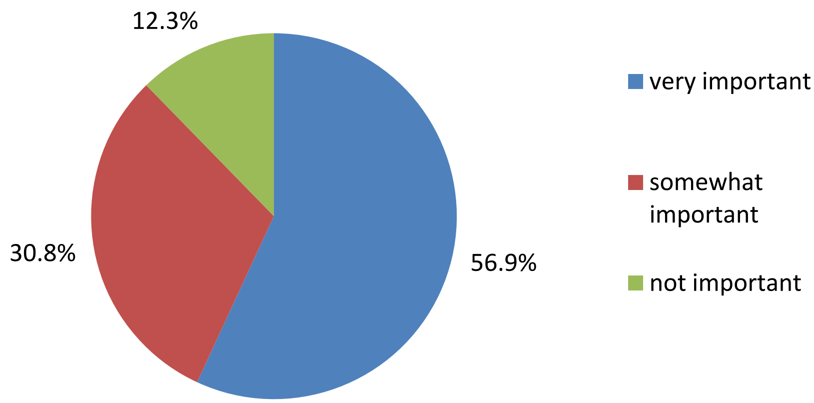


2. extent and quality of camping facilities	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	66.4%	67.9%	66.2%	60.6%	69.2%
somewhat important	24.1%	23.2%	23.7%	28.5%	25.1%
not important	9.5%	9.0%	10.1%	10.9%	5.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%



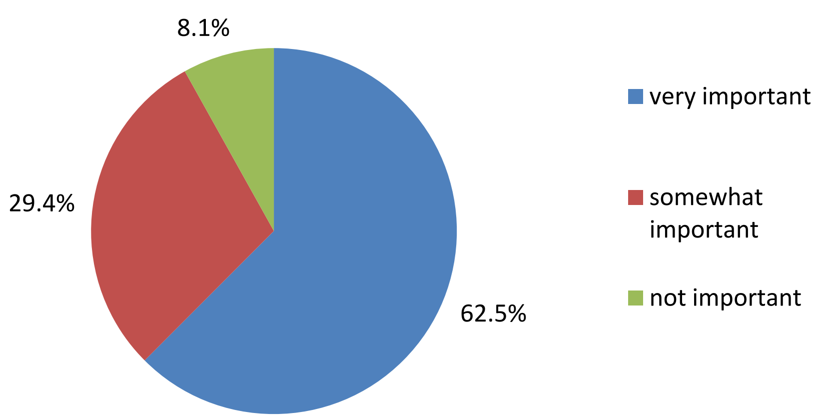
3. extent and quality of fishing facilities	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	49.2%	**56.6%**	49.1%	**41.9%**	**54.9%**
somewhat important	25.8%	23.6%	23.6%	30.6%	**31.9%**
not important	25.0%	**19.8%**	27.3%	27.5%	**13.2%**
total	100.0%	100.0%	100.0%	100.0%	100.0%

Close to Where You Live

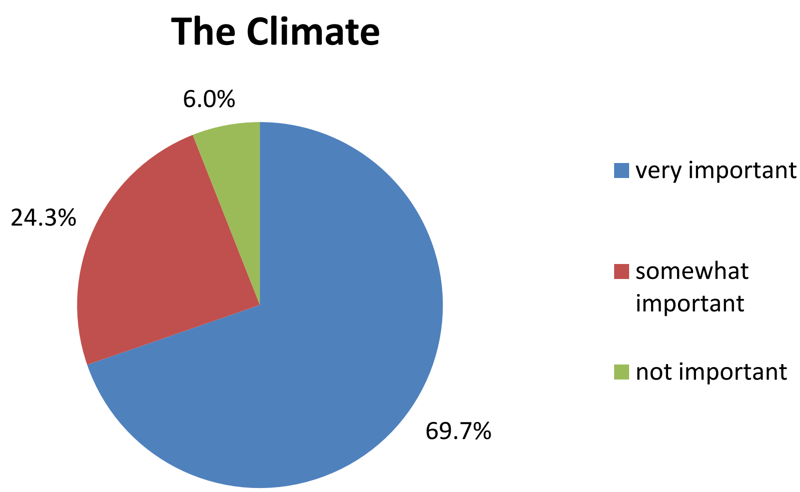


4. close to where you live	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	56.9%	**64.4%**	**64.2%**	**48.4%**	**51.8%**
somewhat important	30.8%	**22.7%**	27.3%	**35.8%**	**37.7%**
not important	12.3%	12.9%	8.4%	15.8%	10.5%
total	100.0%	100.0%	100.0%	100.0%	100.0%

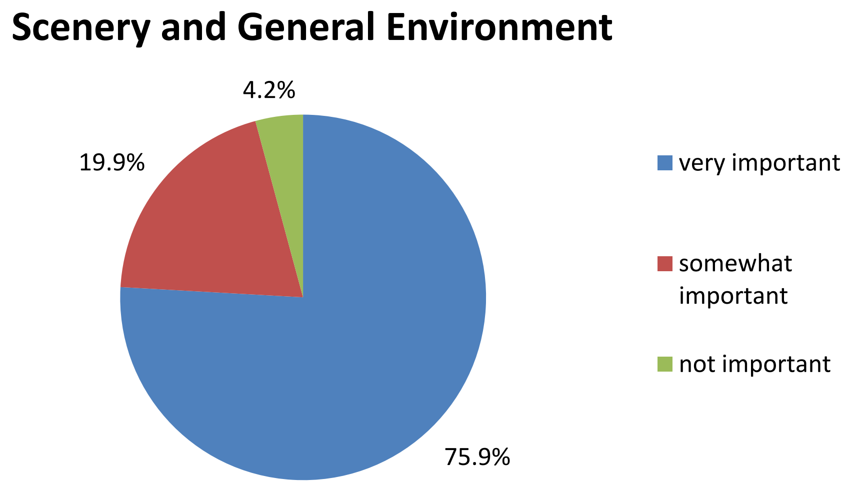
Ease of Getting There



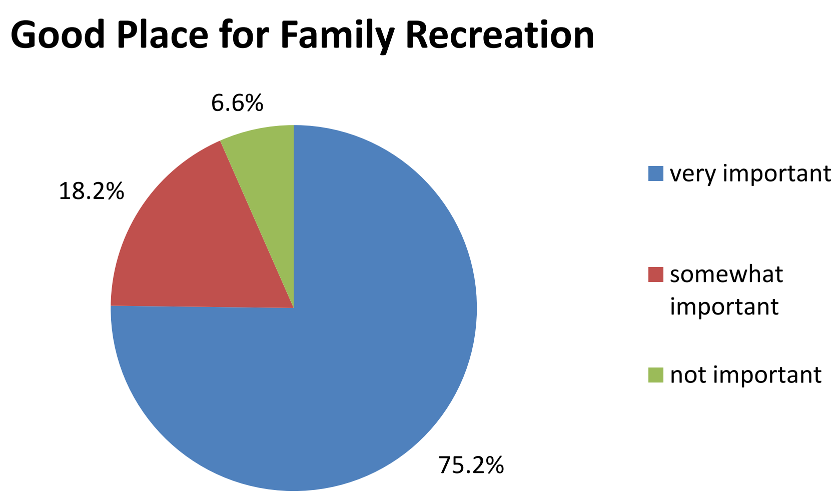
5. ease of getting there	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	62.5%	62.1%	**67.6%**	**57.0%**	61.4%
somewhat important	29.4%	27.9%	26.7%	**34.5%**	30.5%
not important	8.1%	10.0%	5.8%	8.5%	8.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%



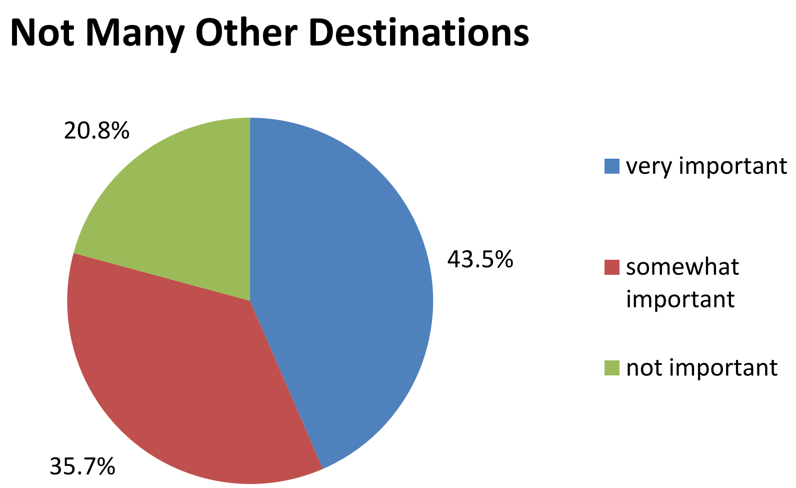
6. the climate	all respondents	residence			
		Napa	North Bay	South Bay	Delta
very important	69.7%	69.0%	69.3%	71.4%	69.4%
somewhat important	24.3%	24.5%	25.0%	23.3%	25.1%
not important	6.0%	6.5%	5.7%	5.3%	5.5%
total	100.0%	100.0%	100.0%	100.0%	100.0%



7. scenery and general environment	all respondents	residence: Napa	North Bay	South Bay	Delta
very important	75.9%	**80.5%**	75.4%	73.2%	74.4%
somewhat important	19.9%	16.2%	20.7%	21.0%	21.3%
not important	4.2%	3.3%	3.9%	5.8%	4.3%
total	100.0%	100.0%	100.0%	100.0%	100.0%

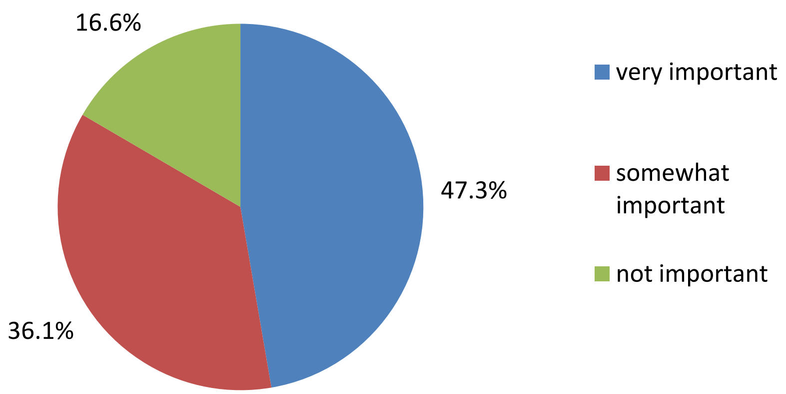


8. good place for family recreation	all respondents	residence Napa	North Bay	South Bay	Delta
very important	75.2%	**80.8%**	77.7%	**68.4%**	**64.9%**
somewhat important	18.2%	**13.2%**	16.5%	22.2%	**26.9%**
not important	6.6%	6.0%	5.8%	9.5%	8.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%



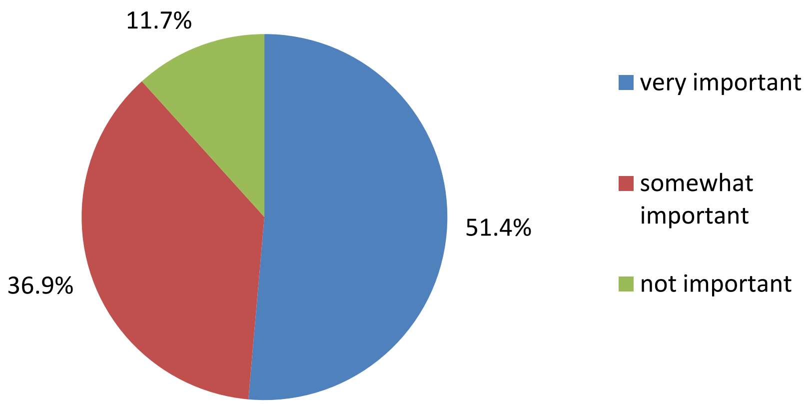
9. not many other destinations in northern California for water-oriented outdoor recreation	all respondents	residence Napa	North Bay	South Bay	Delta
very important	43.5%	49.3%	42.8%	44.5%	**36.4%**
somewhat important	35.7%	33.6%	35.3%	36.4%	**46.5%**
not important	20.8%	17.1%	22.0%	19.2%	17.1%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Other Amenities and Activities



10. the many other amenities and activities	all respondents	residence Napa	North Bay	South Bay	Delta
very important	47.3%	47.4%	44.4%	48.7%	49.5%
somewhat important	36.1%	36.2%	37.1%	36.6%	40.4%
not important	16.6%	16.5%	18.5%	14.7%	**10.1%**
total	100.0%	100.0%	100.0%	100.0%	100.0%

Consistency of Water Level



11. consistency of water level	all respondents	residence Napa	North Bay	South Bay	Delta
very important	51.4%	48.2%	50.2%	52.2%	55.6%
somewhat important	36.9%	38.8%	37.4%	36.5%	34.2%
not important	11.7%	13.0%	12.4%	11.3%	10.2%
total	100.0%	100.0%	100.0%	100.0%	100.0%

Respondents were asked the importance of 11 items in their decision to visit Lake Berryessa. Results are supportive of previous questions. The proportion of "very important" answers are ranked below.

reason for visiting Lake Berryessa	percent of: "very important" answers	"not important" answers
scenery and natural environment	75.9%	4.2%
good place for family recreation	75.2%	6.6%
the climate	69.7%	6.0%
extent and quality of boating facilities	67.7%	10.4%
extent and quality of camping facilities	66.4%	9.5%
ease of getting there	62.5%	8.1%
close to where you live	56.9%	12.3%
consistency of water level	51.4%	11.7%
extent and quality of fishing facilities	49.2%	25.0%
the many other amenities and activities	47.3%	16.6%
not many other destinations in northern California for water-oriented outdoor recreation	43.5%	20.8%

The three items checked most frequently as being "very important" are not directly related to boating or camping – "scenery and natural environment" at 75.9 percent, "good place for family recreation" at 75.2 percent, and "the climate" at 69.7 percent. In other words, it is obvious that people are attracted to Lake Berryessa for other reasons than just boating and fishing. Once more and varied year-round amenities and activities are in place, interest in visiting should increase even more.

Boating and camping are still important, however, as they received the fourth and fifth most "very important" answers, including "extent and quality of boating facilities" at 67.7 percent and "extent and quality of camping facilities" at 66.4 percent.

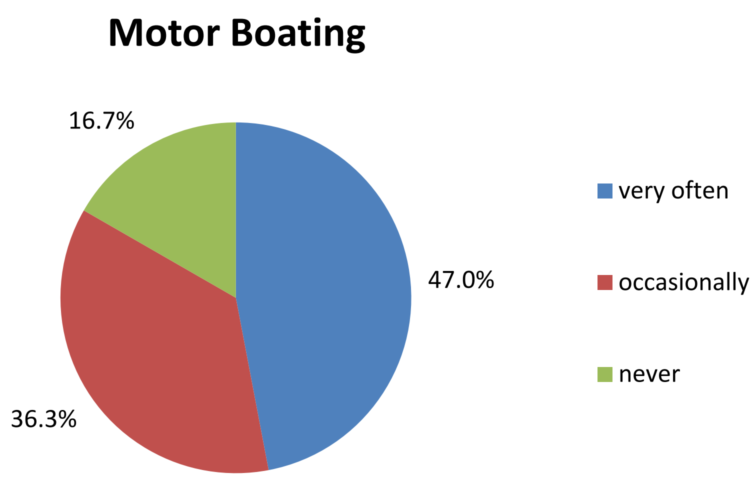
Variations among residents of the four areas are nominal, but some do occur, as shown below.

reason for visiting (all)	percent of "very important" reasons range from: low	high
scenery and natural environment (75.9%)	South Bay at 73.2%	Napa County at 80.5%
good place for family recreation (75.2%)	Delta at 64.9%	Napa County at 80.8%
the climate (69.7%)	Napa County at 69.0%	South Bay at 71.4%
extent and quality of boating facilities (67.7%)	Delta at 56.3%	Napa County at 72.9%
extent and quality of camping facilities (66.4%)	South Bay at 60.6%	Delta at 69.2%
ease of getting there (62.5%)	South Bay at 57.0%	North Bay at 67.6%
close to where you live (56.9%)	South Bay at 48.4%	Napa County at 64.4%
consistency of water level (51.4%)	Napa County at 48.2%	Delta at 55.6%
extent and quality of fishing facilities (49.2%)	South Bay at 41.9%	Napa County at 56.6%
the many other amenities and activities (47.3%)	North Bay at 44.4%	Delta at 49.5%
not many other destinations in northern California for water-oriented outdoor recreation (43.5%)	Delta at 36.4%	Napa County at 49.3%

V. QUESTIONS PERTAINING TO RESPONDENT CHARACTERISTICS

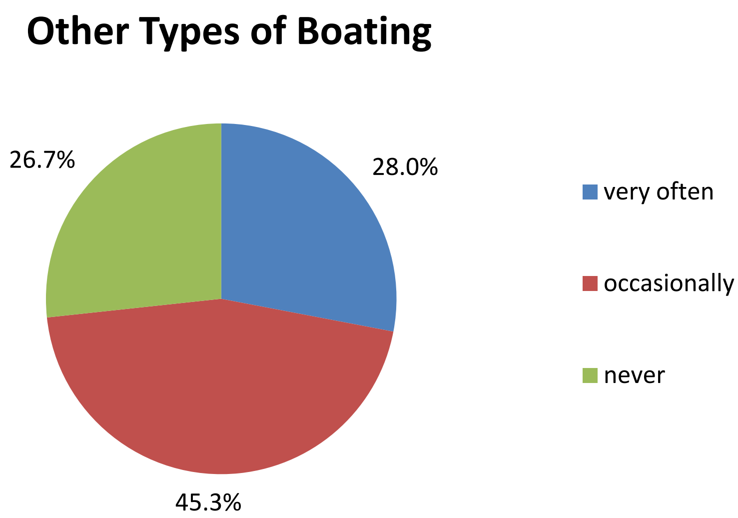
YOU AND YOUR FAMILY

QUESTION 19. How many times in a typical year do you participate in the following activities at inland water bodies?



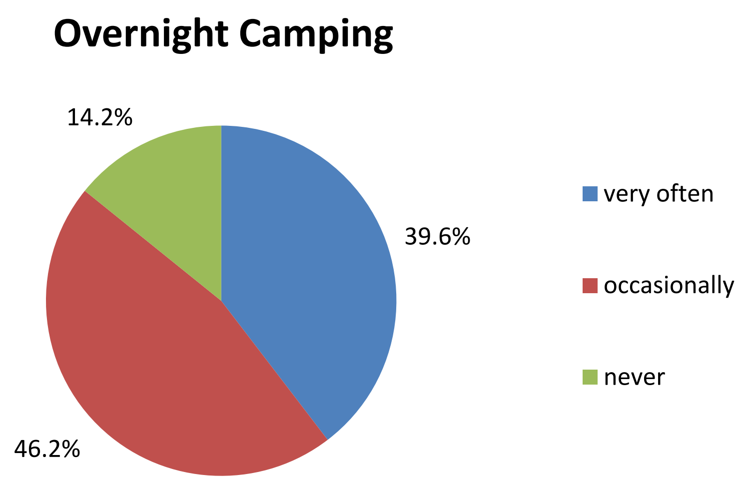
1. motor boating	all respondents	age: younger	age: middle	age: older
very often (more than 10 times a year)	47.0%	43.2%	51.0%	44.4%
occasionally (1 up to 10 times a year)	36.3%	38.5%	34.8%	36.7%
never	16.7%	18.3%	14.2%	18.9%
total	100.0%	100.0%	100.0%	100.0%

1. motor boating	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very often (more than 10 times a year)	**37.8%**	47.7%	**53.6%**	50.7%	51.0%	**38.3%**	**37.2%**
occasionally (1 up to 10 times a year)	36.3%	36.9%	35.6%	33.2%	35.0%	**41.7%**	40.2%
never	**25.9%**	15.4%	**10.8%**	16.2%	14.0%	20.0%	**22.6%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



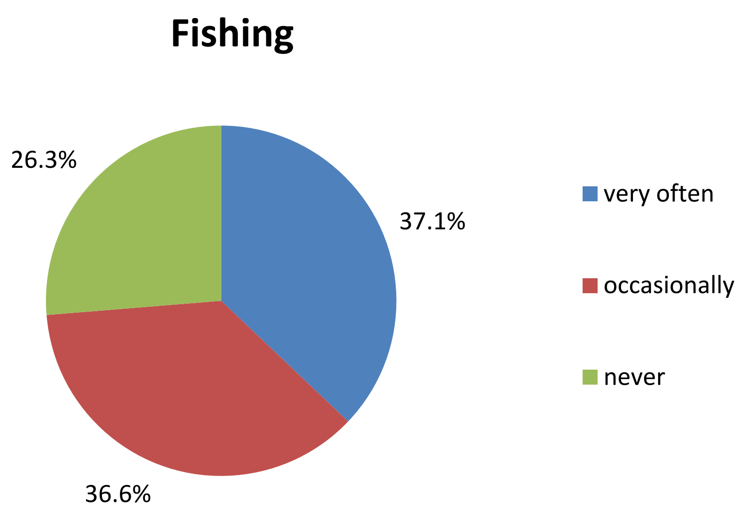
2. other types of boating	all respondents	age: younger	middle	older
very often (more than 10 times a year)	28.0%	29.5%	29.9%	**21.3%**
occasionally (1 up to 10 times a year)	45.3%	45.8%	45.1%	45.2%
never	26.7%	24.7%	25.0%	**33.5%**
total	100.0%	100.0%	100.0%	100.0%

2. other types of boating	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very often (more than 10 times a year)	27.1%	28.3%	28.5%	**32.2%**	27.1%	23.1%	26.3%
occasionally (1 up to 10 times a year)	42.0%	45.4%	48.2%	44.6%	45.3%	48.9%	50.0%
never	30.9%	26.3%	23.2%	23.2%	27.5%	28.0%	23.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



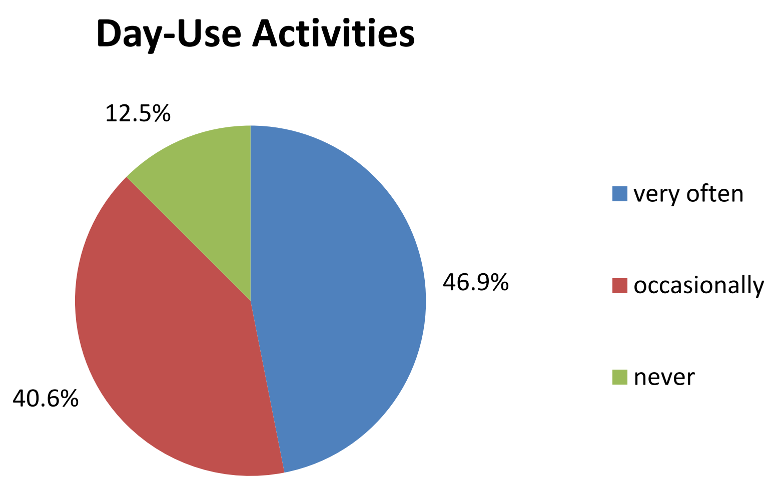
3. overnight camping	all respondents	age: younger	age: middle	age: older
very often (more than 10 times a year)	39.6%	**44.9%**	40.7%	**28.4%**
occasionally (1 up to 10 times a year)	46.2%	44.5%	47.0%	47.8%
never	14.2%	10.6%	12.3%	**23.8%**
total	100.0%	100.0%	100.0%	100.0%

3. overnight camping	income: lower	income: middle	income: higher	residence: Napa	residence: North Bay	residence: South Bay	residence: Delta
very often (more than 10 times a year)	41.9%	42.2%	**34.0%**	41.0%	40.3%	**30.1%**	**46.6%**
occasionally (1 up to 10 times a year)	41.5%	47.1%	50.2%	46.2%	46.9%	**52.3%**	41.4%
never	16.6%	10.7%	15.8%	12.8%	12.7%	17.6%	12.0%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



4. fishing	all respondents	age: younger	middle	older
very often (more than 10 times a year)	37.1%	39.1%	37.1%	33.8%
occasionally (1 up to 10 times a year)	36.6%	37.3%	36.1%	36.9%
never	26.3%	23.6%	26.8%	29.3%
total	100.0%	100.0%	100.0%	100.0%

4. fishing	income: lower	middle	higher	residence: Napa	North Bay	South Bay	Delta
very often (more than 10 times a year)	40.7%	37.7%	33.9%	40.3%	37.4%	**27.4%**	**44.0%**
occasionally (1 up to 10 times a year)	**31.9%**	37.7%	38.7%	37.3%	36.1%	**41.8%**	35.0%
never	27.4%	24.6%	27.4%	22.4%	26.5%	**30.8%**	**21.0%**
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



5. day-use activities such as off-road vehicles, hiking or walking, picnicking, etc.	all respondents	age		
		younger	middle	older
very often (more than 10 times a year)	46.9%	**53.3%**	48.6%	**32.4%**
occasionally (1 up to 10 times a year)	40.6%	37.7%	40.5%	**46.6%**
never	12.5%	9.0%	10.9%	**21.0%**
total	100.0%	100.0%	100.0%	100.0%

5. day-use activities such as off-road vehicles, hiking or walking, picnicking, etc.	income			residence			
	lower	middle	higher	Napa	North Bay	South Bay	Delta
very often (more than 10 times a year)	47.9%	48.5%	43.0%	**53.2%**	45.2%	42.7%	48.8%
occasionally (1 up to 10 times a year)	39.2%	40.0%	44.1%	36.3%	41.1%	45.4%	41.9%
never	12.9%	11.5%	12.9%	10.5%	13.7%	11.9%	9.3%
total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The following percentage of respondents participate in the various activities explored in this question at inland water bodies. Also shown are the percentages who annually participate "very often (more than 10 times a year)."

activity	percent who: participate	participate very often (10+ times)
day use activities such as off-road vehicles, hiking or walking, picnicking, etc.	87.5%	46.9%
overnight camping	85.8%	39.6%
motor boating	83.3%	47.0%
fishing	73.7%	37.1%
other types of boating	73.3%	28.0%

The vast majority of all respondents participate in the traditional primary activities offered at Lake Berryessa, including 87.5 percent who participate in "day use activities" (probably too broad of a definition), 85.8 percent in overnight camping, 83.3 percent in motor boating, 73.7 percent in fishing, and 73.7 percent in other types of boating.

Over one-third of all respondents participate in all five activities more than 10 or more times a year.

These percentages obviously cannot be generalized to all households in the PMA, and simply reflect the characteristics of the sample chose for the survey.

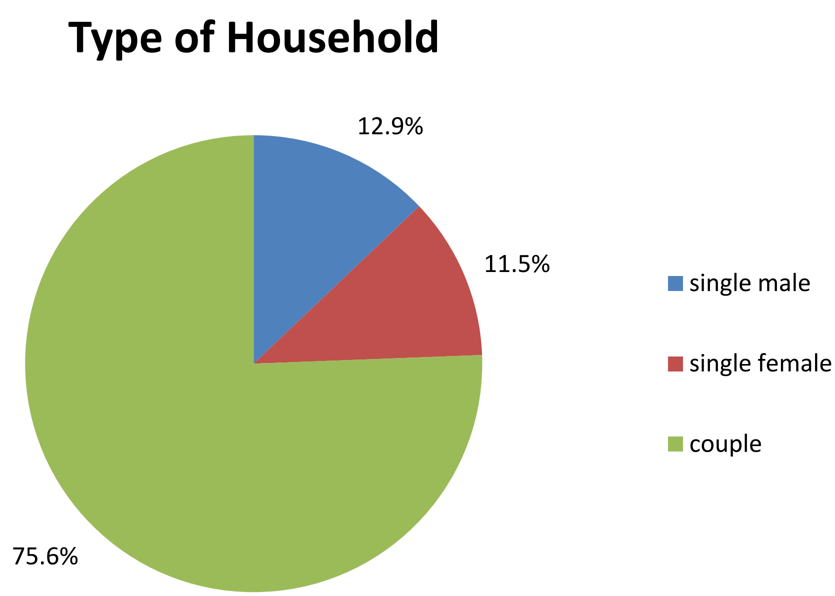
Participation rates vary among the different respondent-groups, as summarized below. For example, only 37.2 percent of Delta respondents and 38.3 percent of South Bay respondents participate in motor boating, while these proportions are 50.7 percent for Napa County respondents and 51.0 percent for North Bay respondents. Only 30.1 percent of South Bay respondents are campers, compared to about 42 percent of all other respondents. Only 27.4 percent of South Bay respondents are fishermen, compared to about 40 percent of all other respondents. These variations help explain differences in answers among the four groups in many of the questions in the survey. This is especially evident when asking about most preferred amenities and services, and importance of boating and camping facilities.

It also is noted that participation rates vary among the other respondent-groups:

- highest for motor-boating among the higher income and lowest among the lower income
- highest for camping and fishing among the younger and lower income

activity (all)	respondent-groups with especially: high participation rates	low participation rates
day use activities (87.5%)	younger at 53.3% Napa County at 53.2%	older at 32.4%
overnight camping (85.8%)	younger at 44.9%	older at 28.4% South Bay at 30.1% higher income at 34.0%
motor boating (83.3%)	higher income at 53.6%	lower income at 37.8% South Bay at 38.3%
fishing (73.7%)	Delta at 44.0%	South Bay at 27.4%
other types of boating (73.7%)	limited variation	

QUESTION 20. Please describe your household.

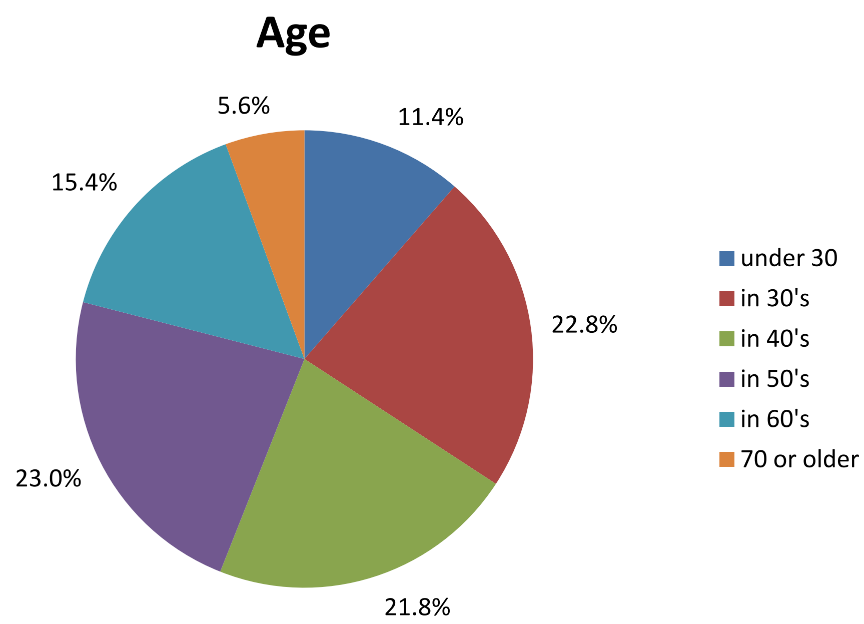


type of household	all respondents	Napa	North Bay	South Bay	Delta
		residence			
single male	12.9%	10.8%	10.4%	**20.2%**	14.2%
single female	11.5%	10.8%	8.1%	15.5%	15.9%
couple	75.6%	78.4%	81.5%	**64.4%**	**69.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%

About three-quarters (75.6 percent) of respondents live in a households with a partner, i.e., a "couple." About an equal portion are single males (12.9 percent) or single females (11.5 percent). Little variation is found among the four areas, except that a higher 20.2 percent of South Bay respondents are single males. Also, 78.4 percent of Napa County respondents and 81.5 percent of North Bay respondents are couples, compared to only 64.4 percent of South Bay respondents and 69.9 percent of Delta respondents.

It is interesting to compare demographics of respondents to the survey at-hand for Lake Berryessa with results of the most recent "Napa Valley Visitor Profile Survey," conducted for Visit Napa Valley by Destination Analysts, and previously discussed in this report. In the Visit Napa Valley survey, only 70.2 percent of the respondents were couples, compared to 75.6 percent in the Lake Berryessa survey. This probably reflects the family-oriented environment and activities at the Lake more so than in the Valley.

QUESTION 21. What is the age of the head of your household?



age	all respondents	residence: Napa	North Bay	South Bay	Delta
under 30	11.4%	**5.1%**	7.9%	**18.1%**	**17.8%**
in 30's	22.8%	**17.8%**	18.7%	**29.7%**	**35.9%**
in 40's	21.8%	23.9%	23.3%	19.1%	16.9%
in 50's	23.0%	23.2%	26.5%	19.2%	**17.8%**
in 60's	15.4%	20.0%	17.1%	11.2%	**8.7%**
70 or older	5.6%	10.0%	6.5%	2.8%	2.9%
total	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	48	52	50	52	48

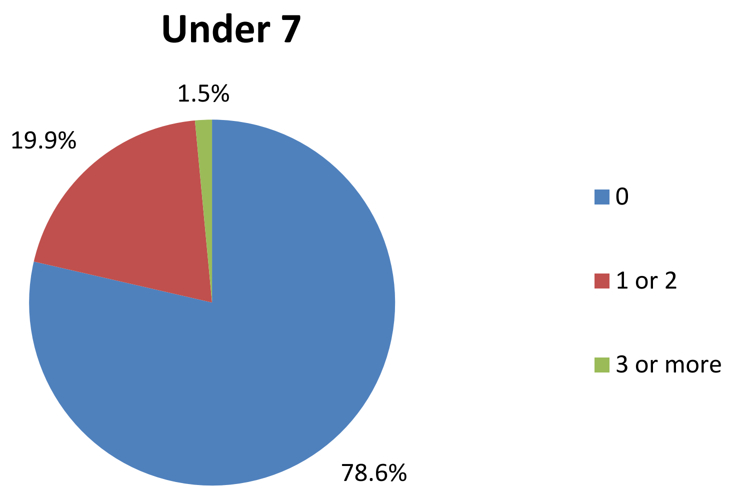
The average age of all respondents was about 48 years. This includes 34.2 percent in their 30's or younger (defined in this survey as the "younger"), 44.8 percent in their 40's or 50's (defined in this survey as the "middle-age"), and 21.0 percent in their 60's and older (defined in this survey as the "older").

Respondents in the Delta tended to be considerably younger than in the three other areas. Some 53.7 percent of Delta respondents are "younger," compared to only 22.9 percent of Napa County respondents and 26.6 percent of North Bay respondents.

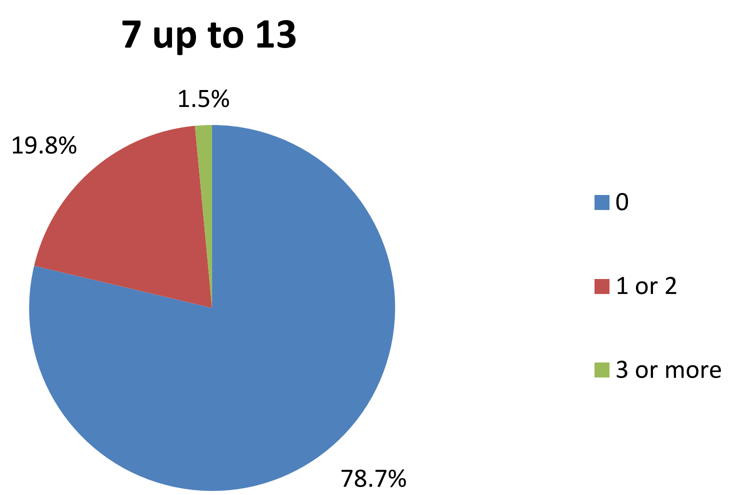
Conversely, 30.0 percent of Napa County respondents are "older," compared to only 11.6 percent of Delta respondents. Such variation again helps explain differences between the four groups in how they answered many of the preceding questions.

In the most recent Visit Napa Valley survey, respondents tended to be younger. The average age was about 43 years, compared to 48 in the Lake Berryessa survey.

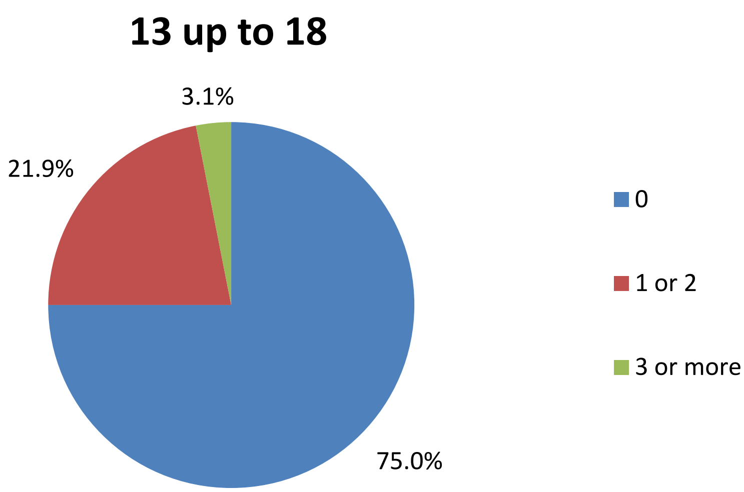
QUESTION 22. How many children do you have living at home that are:



under 7?	all respondents	residence: Napa	North Bay	South Bay	Delta
0	78.6%	79.8%	79.4%	78.1%	**71.2%**
1 or 2	19.9%	18.5%	19.5%	19.6%	**28.3%**
3 or more	1.5%	1.7%	1.1%	2.3%	0.5%
total	100.0%	100.0%	100.0%	100.0%	100.0%



7 up to 13?	all respondents	residence: Napa	North Bay	South Bay	Delta
0	78.7%	82.4%	78.8%	75.8%	**73.5%**
1 or 2	19.8%	16.5%	20.1%	21.6%	24.7%
3 or more	1.5%	1.2%	1.1%	2.6%	1.8%
total	100.0%	100.0%	100.0%	100.0%	100.0%

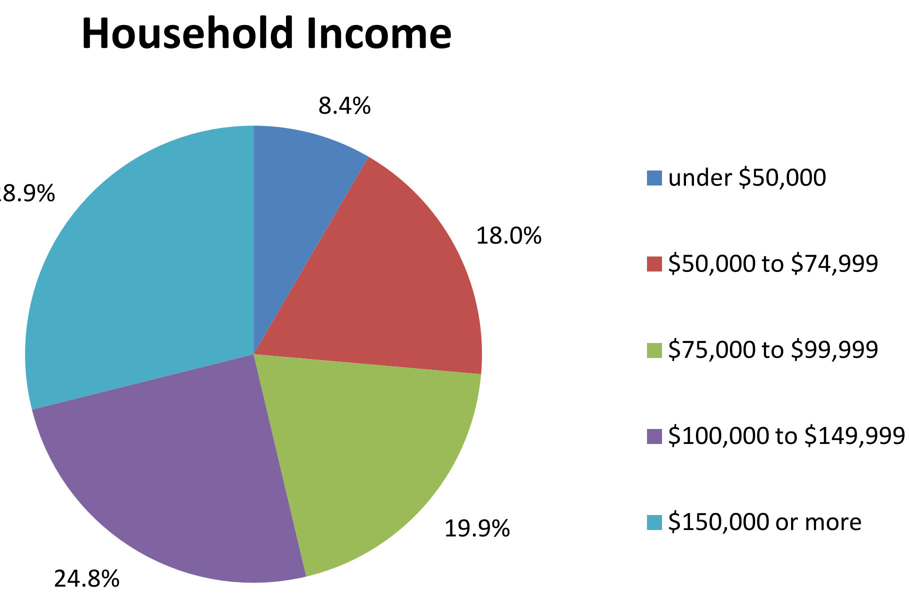


13 up to 18?	all respondents	residence: Napa	North Bay	South Bay	Delta
0	75.0%	72.8%	73.8%	78.5%	76.1%
1 or 2	21.9%	21.9%	23.7%	17.1%	23.2%
3 or more	3.1%	5.3%	2.5%	4.4%	0.7%
total	100.0%	100.0%	100.0%	100.0%	100.0%

As might be expected due to the age of most respondents, relatively few have children living at home. Also as might be expected, respondents in the Delta and South Bay more frequently have children living at home than do respondents in Napa County and the North Bay due to age variations.

Of all respondents, only 21.4 percent have children living at home under seven years, 21.3 percent have children living at home between seven and 13, and 25.0 percent have children living at home between 13 and 18.

QUESTION 23. In what range was your household income (before taxes) in 2016?



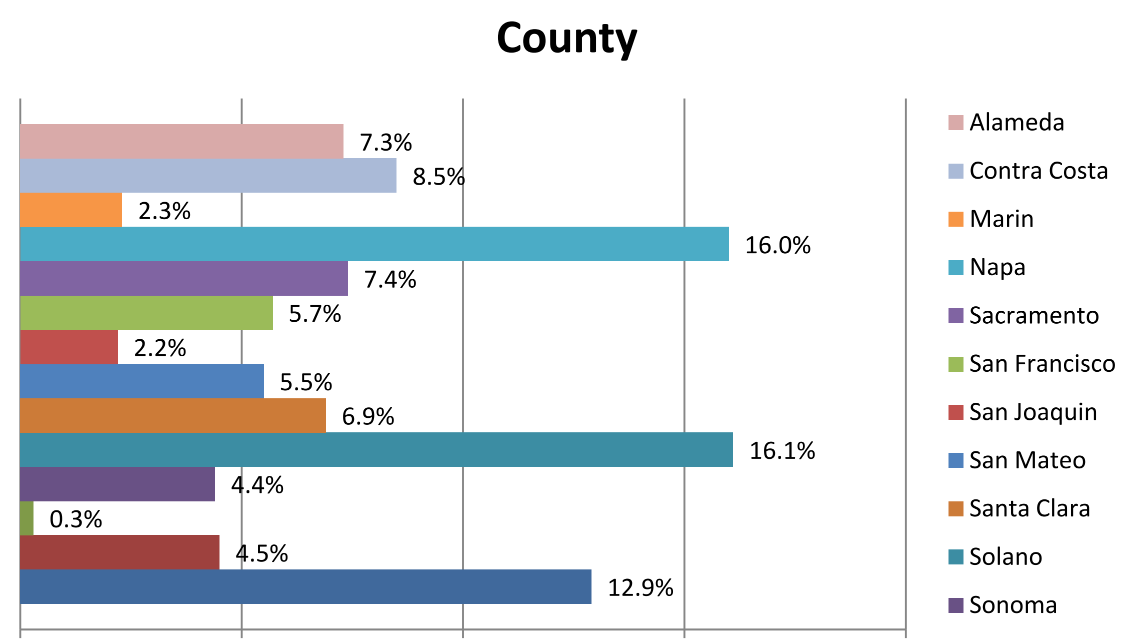
household income	all respondents	residence: Napa	North Bay	South Bay	Delta
under $50,000	8.4%	10.0%	7.0%	6.4%	10.6%
$50,000 to $74,999	18.0%	18.1%	15.8%	16.3%	**26.6%**
$75,000 to $99,999	19.9%	17.8%	19.6%	19.9%	**28.3%**
$100,000 to $149,999	24.8%	25.4%	28.7%	24.1%	20.7%
$150,000 or more	28.9%	28.8%	29.0%	33.2%	**13.9%**
total	100.0%	100.0%	100.0%	100.0%	100.0%
est. average	$110,000	$110,000	$120,000	$120,000	$85,000

The average household income of all respondents in 2016 was about $110,000. This is less than the $160,000 in the most recent Visit Napa Valley survey. Such variation simply reflects the different types of primary attractions – boating, camping and family outdoor recreational activities at Lake Berryessa versus wine tasting, high-end restaurants, shopping and spas in Napa Valley, i.e., different consumer profiles for different activities.

Some 26.4 percent of all respondents have annual household incomes under $75,000 (defined in this survey as the “lower income”), 44.7 percent have incomes between $75,000 and $150,000 (defined in this survey as the “middle income”), and 28.9 percent have incomes over $150,000 (defined in this survey as the “higher income”).

In general, Delta respondents have the lowest incomes. Their approximate average is about $85,000, compared to about $110,000 for Napa County respondents and $120,000 for both North Bay and South Bay respondents. In the three latter areas, over 25 percent of respondents have incomes over $150,000.

QUESTION 24. In what county do you live?



county	all respondents
Alameda	7.3%
Contra Costa	8.5%
Marin	2.3%
Napa	16.0%
Sacramento	7.4%
San Francisco	5.7%
San Joaquin	2.2%
San Mateo	5.5%
Santa Clara	6.9%
Solano	16.1%
Sonoma	4.4%
Sutter	0.3%
Yolo	4.5%
other	12.9%
total	100.0%

The vast majority (87.1 percent) of all respondents live in the PMA. The other 12.9 percent are scattered throughout the country, although almost all live in other counties in northern California.

The four areas used in describing results of this survey generate the following portion of the respondents: Napa County with 16.0 percent, North Bay with 27.6 percent, South Bay with 33.9 percent, and the Delta with 9.6 percent.

Comparative Results With Other Consumer Surveys

At least three other consumer surveys have been conducted for Lake Berryessa over the past several years. They include:

1. "Lake Berryessa Market Area Survey," Survey Research Center, California State University, Chico, March 1997, and hereafter referred to as the "Chico State" survey.

2. "A Study of Boater Recreation on Lake Berryessa, California," William Jackson, Colorado State University, Summer 1998, and hereafter referred to as the "Colorado State" survey.

3. "A Vision for Lake Berryessa," Berryessa Trails and Conservation and the Association for Lake Berryessa, April 2004, and hereafter referred to as the "ALB" survey.

The first two surveys were funded by BOR. The third was independently funded, but results were presented to BOR. The methodologies included:

1. The Chico State survey involved telephone interviews of randomly selected residents living within a 100-mile radius of Lake Berryessa who had participated in outdoor recreation on water bodies within the preceding 12 months. Interviews were conducted with 883 people, including 57.3 percent who had recreated at Lake Berryessa.

2. The Colorado State survey was conducted by on-site interviews and by mail of 653 boaters at Lake Berryessa. About one-half were public launch ramp users, and the other one-half were marina users.

3. The ALB survey included 389 respondents, generated from a variety of sources, e.g., display tables at various locations in Napa County, notification in several local and regional newspapers, etc. The vast majority were residents of Napa County.

While conducted several years ago, the surveys are interesting to review due to commonality of results with the recent one conducted by Ragatz Associates. The commonality is especially evident in regard to services, amenities and activities that respondents would like to have at Lake Berryessa, as summarized on the following pages for three of the surveys. (The question was not asked in the Colorado State survey.)

It is apparent from all three surveys that while the primary past image of Lake Berryessa has been that of a motor-boating and RV camping destination, people are seeking many more activities than just these two. This is seemingly especially important for nature-based activities such as walking, hiking and biking trails, picnicking, defined areas for non-motor boating, bird watching, etc., as well as comfort/entertainment items such as food service, convenience stores, evening activities, etc. These important suggestions are returned to in the final part of the report.

It also is interesting to include the primary findings and recommendations from the Colorado State and ALB surveys. (None were included in the Chico State survey.) They are stated in verbatim form below, and returned to in the final chapter.

Colorado State survey

1. **Some selected findings:**
    - **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

ALB		Chico State		Ragatz	
service, etc.	% of respondents*	service, etc.	% of respondents*	service, etc.	% of respondents*
hiking trails	90%	maintenance of facilities and areas	74.8%	boat launching facilities	72.2%
swimming area	79%	enforcement of rules and regulations	73.9%	convenience store	71.0%
tent campgrounds	78%	picnic areas	61.9%	marina	70.3%
picnicking	76%	security patrol	61.3%	hiking, biking, walking trails	68.7%
nature hikes	71%	hiking/biking trails	53.8%	food services	67.2%
canoeing, kayaking	68%	convenience store	47.6%	lake patrolling	57.7%
biking	64%	children's play area	47.1%	fishing	57.1%
grocery store	63%	reservation system	43.9%	equipment rentals	55.5%
fishing	63%	visitor information facility	43.7%	taverns/bars	48.2%
nature presentations	61%	primitive campgrounds	42.2%	rental boats	47.1%
birding	56%	swimming area	40.9%	control of boat density	46.7%
camping/hiking supplies	56%	outdoor/nature educational facilities and programs	37.9%	children's activities	45.4%
safe non-motor boat area	56%	cabins for rent	33.4%	defined areas for non-motor boats	42.8%
cabins	54%	food service	32.9%	defined areas for jet skiing	40.9%
cafes	51%	boat launching	31.0%	evening entertainment	40.1%
sailing	48%	full service marina	25.9%	amphitheater	39.4%
bridle trails	47%	hotels and motels	24.7%	limits on boat speed	39.4%
restaurants	45%	sports facilities, e.g., golf, tennis	18.5%	dry storage	39.2%
free boat launches	45%	boat rentals	18.1%	special events	39.0%
fishing supplies	45%	equipment rentals and lessons	15.6%	wine tasting	36.9%
playgrounds	42%	special events	15.5%	central clubhouse	36.2%
snack bars	40%	bar or tavern	14.0%	zipline	34.7%
boat safety classes	39%	equestrian facilities	13.9%	bridle trails	34.1%
swimming classes	38%	facilities for dirt bikes and off-road vehicles	13.8%	shooting range	33.6%
fishing classes	37%	public swimming pool	13.1%	shuttle service to Napa Valley	33.6%
music	36%	charter fishing boats	11.4%	off-roading	32.5%

riding lessons	36%
RV campgrounds	35%
evening dining	35%
dancing	32%
water-skiing	31%
marinas	31%
waterski lessons	24%
sundries store	23%
meeting room	23%
wine store	21%
houseboats	21%
motor boats	21%
wine/dine cruises	20%
wine tasting	16%
souvenir shop	15%
hotel/motel	15%
jet skiing	13%

* all respondents

dry boat storage	7.2%

* “very important” answers

water park	31.7%
wild safari park	27.0%
spa	23.7%
wedding venues	22.3%
bird watching	21.9%
classes	21.3%
golf	20.0%
sports academy	19.8%
conference facilities	18.4%

* “very important” answers

- 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.

- **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".

- **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.

2. Concluding recommendations

- 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.

- ***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).

- 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.

- ***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.

- ***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.

- 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.

- 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.

- ***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.

ALB survey

The results of the survey indicate that the recreational activities for which the Lake is primarily known, motor boating, water-skiing and jet skiing, serve only a small fraction of those who completed the survey (21%, 31% and 13%). Nature-based recreational pursuits, which are poorly served by the recreation area today (e.g., hiking, swimming, kayaking, bicycling), are in substantially greater demand (90%, 79%, 68%, 64% respectively) among survey respondents.

At a mere 13%, jet skis serve the smallest percentage of survey respondents. At the same time, they generate the largest number of complaints. An equal number (13%) of survey respondents indicated that they did not want jet skis allowed at Lake Berryessa. Given the vehemence of a number of these remarks, that figure might have been higher had banning jet skis actually been one of the options offered. There were also a number of remarks critical of motor boats. Added to the interest held by 56% of survey respondents in *safe non-motor boat areas*, it seems clear that the incompatibility of motorized recreation with nature-based recreation, needs to be addressed.

It is the additional comment section which most clearly reflects the common frustration many respondents feel with the current facilities and limited recreational offerings in the LBRA. Three major themes stand out in the remarks made in the

Additional Comments section. The most common theme is that the LBRA should focus on nature, and provide for nature-based recreation in a non-commercial atmosphere. The second most common theme is the criticism of jet skis and, to a lesser degree, motorboats. The third most common theme is criticism of the current resorts.

1. Focus on Nature

The results present a very clear picture of what those who filled out the survey would like the LBRA to be – *a place to enjoy nature*. This is more than evident from the preference for nature-based recreational activities in the checklist portion of the survey. The remarks made in the "Additional Comments" section of the survey further underscore the strong desire for the LBRA to be a place of "nature, peace and quiet." Even more so than criticism of jet skis and the current resorts, the desire for nature-based recreation dominated the comments, including:

a. *Recreation Preferences – motorized versus non-motorized*

Every form of non-motorized recreation ranks substantially higher than *any* motorized activity. Thus, the most popular motorized activity, water-skiing at 31%, was greatly surpassed by hiking, the most popular activity by far at 90%. Swimming comes in second at 79%, followed closely by picnicking at 76%.

Nature hikes come in at 71%, with substantial interest in biking (64%), fishing (63%) and birding (56%). Even bridle trails/stables at 47% rank above all forms of motorized boating. In fact, the *least* popular form of non-motorized activity, playgrounds at 42%, still ranked 11 percentage points higher than water-skiing (31%).

Even when looking at only water-based recreation, far more people are interested in swimming (79%) than in water-skiing (31%). The issue is the same when looking only at boating activities. More than twice as many respondents want to canoe/kayak (68%) as want to water-ski (31%). Fifty percent more respondents were interested in sailing (48%) than water-skiing. Although 45% want more free boat launches, no distinction was made between launching a wind (sailing or wind surfing) or human powered (canoe/kayak) boat and a motor boat, so it is difficult to draw conclusions based on this result.

b. *Classes and lessons*

The interest in nature-based recreation is equally pronounced in the positive response to nature presentations (61%), which outranked by 21 percentage points all other types of classes which were listed. The next four types of classes/lessons are within 3 percentage points of each other – boat safety classes (39%), swimming (38%), fishing (37%), horseback riding (36%). While boat safety classes rank highest of these four, the survey results indicate that this is not so much from a desire to take such classes as from a concern over the reckless boating behavior of others. Only 24% are interested in water-ski lessons.

Wine tasting was the least popular choice at 16%. As will be seen below, neither retail wine sales nor wine/dine cruises are of much interest. Added to a few random comments ("the wine country experience…should not be extended to the lake."), it seems that wine tourism should be left to Napa Valley.

c. *Accommodations*

The preference for a nature-based recreation area is echoed yet again in the choices made with respect to accommodations. Seventy-eight percent of those who filled out the survey want tent campgrounds. Fifty-four percent are also interested in cabins. The third choice in terms of popularity is RV campgrounds at only 35%. A handful (5) think there should be no RV campgrounds.

Consistent with remarks asking that the lake not be commercialized, motels (16%) and hotels (15%) are clearly less popular forms of accommodation. A handful (5 and 4, respectively) went so far as to say there should be no motels or hotels. Twenty-three percent indicate that they would like to have a meeting room in the LBRA for classes, community meetings, etc.

d. *Retail*

There is also an echo of the nature theme in the retail section of the survey. Groceries (63%), which would serve both campers and those staying in cabins, are the most popular retail opportunity, followed, not surprisingly by camping/hiking supplies (56%). There is significant interest in fishing supplies (45%), less in marina/boating supplies (31%). Sundries (postcards, health, books, etc.) is at 23%, 21% for wine, and the least popular retail option is souvenirs/gifts at a mere 15%.

e. *Food*

The results were fairly even with respect to the food category, there being only a moderate difference among informal cafes (51%), more formal restaurants (45%) and mere snack bars (40%). There is little demand for wine/dine cruises (20%).

f. *After hours activity*

There is some, but not substantial interest in having entertainment opportunities in the evening. Thirty-six percent would like some music in the evenings, a more formal dining experience was of interest to 35%, and even dancing appealed to 32%. In contrast, there were a few remarks which indicated that these activities would not be appropriate in a recreation area.

2. <u>Criticism of Jet Skis and Motor Boats</u>

The lower preferences for jet skis and boating recreation were further offset by fairly extensive criticism and complaints. Clearly a number of survey respondents feel that the presence and noise of motor boats and even more so jet skis, interferes with quieter forms of recreation. As noted above, as many people wanted jet skis banned as were interested in jet skiing.

3. Criticism of the Resorts

Criticism of the current concession areas is the third most common theme in the additional comments section. The concessions are the object of almost universal condemnation by those who remarked on them. This criticism is based in part on the appearance of the vacation trailers, and in part because exclusive long-term sites are viewed as unfair to the public.

PART FIVE

POTENTIAL ATTRACTIONS AND AMENITIES

PART FIVE
POTENTIAL ATTRACTIONS AND AMENITIES

Introduction

Heretofore, Lake Berryessa has been positioned as an attractive destination for outdoor recreation activities, especially motor boating and camping. Even during peak years when all concession areas were open, seasonality of use was high, with the vast majority of visitors coming in June through September, and especially July and August. Variety and quality of services and facilities were limited. Few convenience stores, restaurants, evening entertainment venues and unique accommodations beyond RV and tent camping existed. Proper controls and regulations were not enforced. Despite such conditions, the area regularly attracted over 1.5 million visitors.

The challenge and opportunity are to redevelop the five concession areas into resorts that more appropriately reflect the lifestyle of today's participants in outdoor recreation – higher quality, more variety, greater convenience, more nature-based (but not forgetting the ever-popularity of motor boats and RVs), more family-oriented, etc. If more care is given to these important trends, Lake Berryessa has the opportunity to: (1) become a significant **year-round** destination for the almost 10 million people in the PMA; (2) significantly impact the economy of Napa County; (3) be profitable to appropriately selected concessionaires; and (4) do so while maintaining and enhancing the natural environment.

Listed below are a variety of uses that could be considered in the redevelopment of the five concession areas. Some historically have existed, while others are new. Perhaps not all will be possible, but many will. It is not the intent to make Lake Berryessa into a highly-commercialized theme park environment, and care must be taken to always balance the criteria of consumer demand, economic gain and protection of Lake Berryessa's beautiful natural setting.

<u>motor-based</u>	<u>accommodations</u>	<u>nature-based</u>	<u>commercial</u>
motor boating	RV camping	trails for hiking, biking, walking, nature walks	wine tasting/tour center
jet skiing	tent camping	swimming	Napa Valley shuttle
water skiing	glamping	bird watching	9-hole golf course
full service marinas	houseboats	flora and fauna viewing	conference, meetings, retreats
dry storage	rustic cabins, cottages and park models	fishing	schools, lessons, lectures
boat and equipment rentals	higher-end cabins, cottages and park models	kayaking, canoeing, sailing, paddleboarding	spa, wellness facility
off-road vehicles	hotel/motel	picnicking	wedding venues
	nightly, extended stay and snowbird markets	horseback riding	amphitheater
		interpretive center	indoor water park
		eco-appreciation	restaurants, taverns
		water trail	shopping
		day care	night entertainment
		quiet areas in coves and inlets	sports academy
		photography	service station
			clubhouse with pool, fitness center, activities
			zipline
			special events, races, tournaments
			wildlife safari park
			Lake cruise boat
			water taxi
			fly-in

The remainder of this part of the report contains detail on several potential uses not currently present (or at least, not fully utilized) at Lake Berryessa. It is anticipated others will evolve during the search for appropriate concessionaires. They include: (1) bird watching; (2) an indoor water park; (3) an outdoor concert venue; (4) wedding venues; (5) a cruise boat; (6) golf; (7) expanded sport fishing; and (8) conference facilities.

Birding and Related Attractions

We have spent some time researching the demographics of bird watchers and the comparative advantage of Lake Berryessa over other destinations for this popular outdoor activity. Bird watching could be part of hospitality programming – along with health and wellness programs, spa services and culinary education – that would drive off-season and mid-week demand. Bird migrations are spring and fall phenomena and Lake Berryessa is within the Pacific flyway. On-site birding guides (docents), birdlife artwork, museum-quality collections and an Audubon-sanctioned aviary, could all help position the Lake resort as a year-round destination.

Lake Berryessa offers exceptional bird watching opportunities, as more than 150 different species have been identified on, or adjacent to, the Lake. A "Berryessa Bird Checklist," published by BOR, is found on the following pages. This great variety would place Lake Berryessa among the best destinations in the country for serious birders. Interest in bird

	SP	S	F	W	Hab.
FLYCATCHERS					
Olive-sided Flycatcher............	u				ro
Western Wood-pewee.............	u				ro
Western Flycatcher.................	u				ro
Black Phoebe..........................	c	c	c	c	rog #
Say=s Phoebe..........................	o		o	c	rog
Ash-throated Flycatcher..........	o	u			og #
Western Kingbird....................	c	u			
LARK / SWALLOWS					
Horned Lark...........................	o		o	o	og
Violet-green Swallow.............	c	c			ro #
Tree Swallow..........................	c	c			ro #
Cliff Swallow..........................	c	c			wro #
Barn Swallow..........................	c	c	o		wro #
JAYS / RAVEN TITMOUSE / BUSHTIT					
Scrub Jay................................	c	c	c	c	cog #
Stellar's Jay............................	o	r	o	c	ro
Common Raven.......................	c	c	c	c	rcog#
American Crow.......................	c	c	c	c	rcog#
Yellow-billed Magpie.............	c	c	c	c	rcog
Plain Titmouse........................	c	c	c	c	co #
Bushtit....................................	c	c	c	c	co #
NUTHATCH / WREN					
White-breasted Nuthatch.........	c	c	c	c	o #
Brown Creeper........................	u	u	u	u	o #
Canyon Wren..........................	o	o	o	o	rco #
Rock Wren..............................	o	o	o	o	co #
Bewick=s Wren........................	o	o	o	o	rco #
House Wren............................	o	o	o	o	rco #
Blue-gray Gnatcatcher............	u				o
Dipper.....................................	u			u	r
KINGLET / THRUSH BLUEBIRD					
Ruby-crowned Kinglet............	c	c	c	c	ro #
Hermit Thrush.........................	o	o	o	o	r
Varied Thrush.........................	o		o	c	og
Mountain Bluebird.................	u			u	og
Western Bluebird....................	c	u	c	c	og #
American Robin......................	c	o	o	c	og #
WRENTIT /THRASHER MOCKINGBIRD					
Wrentit......................................	c	c	c	c	ro #
Northern Mockingbird..............	c	c	c	c	rog #
California Thrasher....................	u	u	u	u	ro

	SP	S	F	W	Hab.
WAXWING / VIREO					
Cedar Waxwing......................	o				o
Loggerhead Shrike................	u	u	u	u	og
European Starling..................	c	c	c	c	og #
Solitary Vireo.........................		o	u		ro #
Warbling Vireo........................		u			o #
Hutton=s Vireo........................	u	u	u	u	o
WARBLERS					
Yellow-rumped Warbler..........	c	u	c	c	ro
Black-throated Gray Warbler..	u	u		u	co #
Yellow Warbler *...................	u	u		u	ro
Townsend=s Warbler..............	u			u	o
Orange Crown Warbler..........	u	u		u	ro#
Common Yellowthroat...........	u		u	u	og
TANAGER / GROSBEAK					
Western Tanager......................	u				o #
Lazuli Bunting.........................	u				ro
Black-headed Grosbeak............	u				ro #
SPARROW / TOWHEE					
Rufous-crowned Sparrow........			o	o	co #
Sage Sparrow..........................			o	o	co #
Lark Sparrow..........................	o	o	o	o	cog #
Dark-eyed Junco.....................	c	u	c	c	og #
Lincoln=s Sparrow..................	o		o	c	og #
Fox Sparrow...........................	u		c	c	og #
Golden-crowned Sparrow........	u		c	c	og
White-crowned Sparrow.........	c		c	c	og
Chipping Sparrow...................	o	o	o	o	og
Rufous-sided Towhee.............	c	c	c	c	co #
Brown Towhee	c	c	c	c	co #
Song Sparrow.........................	o	o	o	o	rco #
Savannah Sparrow..................	c	o	c	c	co #
BLACKBIRD / ORIOLE MEADOWLARK					
Red-winged Blackbird............	a	c	a	a	rog #
Brewer=s Blackbird.................	a	c	a	a	rog #
Northern Oriole......................	c	o			ro #
Brown-headed Cowbird..........	c	c	c	c	rog #
Western Meadowlark..............	a	c	a	a	og #
FINCHES					
Lawrence=s Goldfinch............	c	c	o	o	og #
Lesser Goldfinch....................	c	c	o	o	og #
American Goldfinch...............	c	c	o	o	og #
House Finch............................	c	c	c	c	og #
Purple Finch...........................	o	o	o	o	og #

RECLAMATION

Managing Water in the West

Berryessa Bird Checklist

A Guide to Watchable Wildlife

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

Checklist of Birds

This checklist has been prepared for visitors wishing to record birds they observe while recreating in the Berryessa region. The Berryessa area provides habitat for numerous bird species. Certain birds are only present in the summer, others winter in the area, and some just migrate through or occur irregularly. Habitats within the area include oak woodlands, grasslands, mixed chaparral, lake and riparian vegetation types. Three permanent waterways flow into Lake Berryessa: Capell Creek, Pope Creek and Putah Creek. Also present are numerous smaller intermittent streams and waterways. It is along these waterways and shorelines that the greatest number and variety of birds occur.

For more information contact:
The Bureau of Reclamation - Lake Berryessa,
5520 Knoxville Road Napa, CA 94558
(707) 966-2111.

Season of Occurrence
Sp = Spring (March-May)
S = Summer (June-August)
F = Fall (September-November)
W = Winter (December-February)

Abundance
a = Abundant, common species, numerous
c = Common, frequently seen in small numbers
o = Occasional, seen a few times during season
u = Uncommon, present but not certain to be seen
r = Rare, known to be present but not every year

Status
* = Threatened or endangered
# = nests or has nested in the area

Habitat Preferences (Hab.)
w = water areas which include the lake.
r = riparian habitat bordering waterways.
c = chaparral brushlands which include three brushland types and varied species composition.
o = oak woodland vegetation of varying densities intermingled with grass, shrub, and gray pine.
g = grassland areas of varying sizes including intermixes of chaparral and oak.

	SP	S	F	W	Hab.
DIVING BIRDS					
CommonLoon			o	o	w
Western Grebe	a	a	a	a	w #
Clark=s Grebe	a	a	a	a	w #
Pied-billedGrebe	o	o	o	o	wr #
Eared Grebe	o	u	o	o	wr #
Double-crested Cormorant	c	c	c	c	w
PELICANS					
American White Pelican*	c	c	c	c	w
HERONS / EGRETS					
Great Blue Heron	c	c	c	c	wrg #
Great Egret	o	o	o	o	wrg
Snowy Egret	o	o	o	o	wrg
Green Heron	o	o	o	o	wrg
Sandhill Crane *	r		r	r	wrg
WATERFOWL / GEESE					
Canada Goose	c	c	a	a	wg #
Snow Goose			c	c	wg
Wood Duck	c	c	c	c	wr #
Northern Pintail			o	o	wr
American Widgeon			u	o	w
Common Golden-eye	u		u	u	wr
Bufflehead	c		c	c	wr
Green-winged Teal			u	u	w
Mallard	c	o	c	c	wr #
Common Merganser	o	o	o	o	wr
Hooded Merganser	u	u	u	u	wr
Lesser Scaup			u	u	w
Gadwall			u	u	w
American Coot	a	a	a	a	w #
EAGLES / RAPTORS FALCONS					
Red-shouldered Hawk *	u	u	u	u	og
Rough-legged Hawk	u		u	o	og
Northern Harrier *	c	c	c	c	og
White-tailed Kite	c	c	c	c	og #
Turkey Vulture	a	a	a	a	og #
Osprey*	c	c	c	c	wro#
Cooper=s Hawk	u	u	u	u	co #
Northern Goshawk	r	r	r	r	co
Sharp-shinned Hawk	u	u	u	u	co #
Golden Eagle*	u	u	u	u	cog #
Bald Eagle*	u	u	c	c	wro #
Red-tailed Hawk	c	c	c	c	rcog #
Prairie Falcon*	r	r	r	r	
Peregrine Falcon*	r	r	r	r	
American Kestrel	c	c	c	c	

	SP	S	F	W	Hab.
TURKEY / QUAIL					
Wild Turkey	c	c	c	c	co #
California Quail	a	a	a	a	co #
Mountain Quail	u	u	u	u	co #
SHOREBIRDS					
Killdeer	c	c	c	c	wr #
Spotted Sandpiper	o		o	c	wr #
Western Sandpiper	o		o	c	wr
Common Snipe	u		u	o	wr
Long-billed Curlew	o		o	c	wrg
Herring Gull	c	c	c	c	w
Bonaparte=s Gull				o	w
Caspian Tern	u		u	u	w
DOVE / PIGEON ROADRUNNER					
Band-tailed Pigeon	u	u	u	u	co #
Mourning Dove	c	c	c	c	co #
Roadrunner	r	r	r	r	co #
OWLS / POORWILL					
Common Barn Owl	c	c	c	c	og #
Burrowing Owl*	u		u	u	og
Great Horned Owl	c	c	c	c	og #
Spotted Owl	u		u	u	o
Northern Pygmy Owl	u	u	u	u	o #
Western Screech Owl	c	c	c	c	o #
Short-eared Owl	u		u	u	og
Common Nighthawk	u	u	u	u	o
Common Poorwill	u	u	u	u	o
SWIFTS HUMMINGBIRDS					
White-throated Swifts	c	c			o #
Vaux=s Swifts	c	c			o
Anna=s Hummingbird	c	c	c	c	co #
Rufous Hummingbird	o		o	o	co
Allen=s Hummingbird	o		o	o	co
KINGFISHER WOODPECKERS					
Belted Kingfisher	o	o	o	o	wr #
Pileated Woodpecker	u		u	u	o
Northern Flicker	c	c	c	c	o #
Acorn Woodpecker	a	a	a	a	o #
Lewis Woodpecker	u		u	u	o
Nuttall=s Woodpecker	c	c	c	c	o #
Red-breasted Sapsucker	o	o	o	o	o

watching was mentioned several times in the consumer survey, and in other conversations.

A 10-year old study, published by the U.S. Fish and Wildlife Service, estimated that 20 percent of all Americans identified themselves as birdwatchers. More importantly, some 19 million pursued their hobby away from home, with a frequency of participation

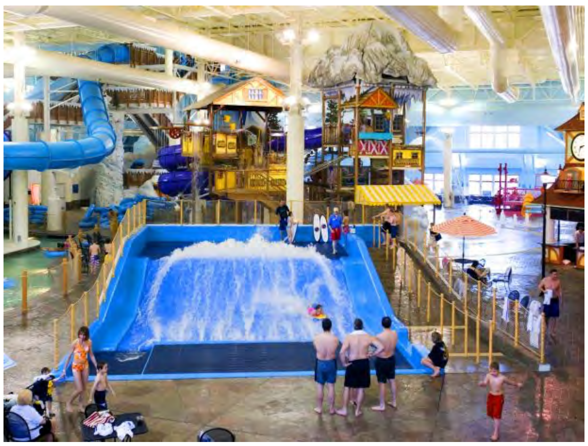
of approximately 13 times annually. The contribution to the U.S. economy was determined to be a staggering $36 billion. The number of birding enthusiasts is growing based on book and equipment sales and the circulation of periodicals focused on this pastime.

The same study concluded that birders have higher incomes and higher levels of education than the general population. Birdwatchers have an average age of 53 years, and a majority of bird watchers are women (56 percent). This is significant because women, more than men, also attend culinary schools and health spas. Such amenities and programs have a similar appeal to guests during off-season periods. Moreover, by some accounts, women control 60 percent of the wealth in United States – and make 80 percent of the vacation travel decisions. These are significant statistics in planning resort facilities at Lake Berryessa.

Indoor Water Park Resort

There are at least 150 “indoor water park resorts” in North America. However, there is only one in California. It is located in southern California near Disneyland. Similar projects have been proposed in both Manteca and Brentwood in the Sacramento Delta area, but neither has broken ground.

On average, indoor water park resorts have 150 to 200 guest rooms and 35,000+ square feet of attractions. Larger indoor water parks can encompass 100,000 square feet - or even more. Most include some or all of the following features: tube slides, body slides, speed slides, family rides, lazy rivers, wave pools, water coasters, children’s play areas (sprayers, tipping buckets, slides) and other elements. Indoor water park resorts often include substantial space for meetings and conferences. Waterpark attractions can be great fun and adventure for folks of all ages, including conference attendees. We think it possible to integrate views of the lake itself into the design and entertainment themes of a water park.



There are several **outdoor** waterparks within the PMA. Without exception, they operate on a seasonal basis, opening in mid- to late-May and closing early to mid-September. The locations include:

- Aqua Adventure – Fremont
- Boomerang Bay – Santa Clara (in Great America)
- Golfland Sunsplash – Roseville
- Islands Water Park – Fresno
- Raging Waters – Sacramento
- Raging Waters – San Jose
- Splash Pad Park – Oakland
- Waterworld California – Concord

According to David Sangree, hospitality consultant and principal in Hotel & Leisure Advisors, an indoor water park resort would typically cost $300,000 to $500,000 per guest room, including the park itself. The two largest developers of such resorts are Great Wolf Lodge and Kalihari Resorts, although there are many smaller companies. These projects are relatively difficult to finance. Sangree's fee for a comprehensive feasibility study would be approximately $35,000.

According to a presentation by Mr. Sangree in 2016, an "Indoor Waterpark Destination Resort" can be defined as a resort with more than 30,000 square feet of indoor waterpark space, inclusive of amenities such as slides, tubes and a variety of indoor water play features. It would be considered a true destination resort, which families frequent on a year-round basis primarily to utilize the waterpark, and secondarily to visit other attractions or events in the area.

Sangree noted that two very popular clusters of hotels with indoor waterpark amenities are located at Wisconsin Dells, Wisconsin and Sandusky, Ohio with 34 and 14 projects (operating or under-construction), respectively with 9,599 and 4,039 hotel guest rooms. In 2015, within 180 miles of each destination, there were 4.3 million and 6.6 households, respectively. So one metric to assess the feasibility of an indoor waterpark destination resort is the number of households in the market area for each hotel room in similar resorts. By this measure, a water park resort at Lake Berryessa, with 3.5 million households within the PMA of only 100 mile radius – and no existing competition –

should be viable.

In 2016 there were approximately seven new indoor waterpark resorts scheduled to open in the United States, excluding expansions. On average, the waterpark itself occupied 48,000 square feet of space, and each new resort had 247 guest rooms. The largest project, and the only one to date in California, is the Great Wolf Lodge in Garden Grove in southern California.

Outdoor Concert Venue

Outdoor musical entertainment could provide one more reason to visit Lake Berryessa over a potentially longer season than summer months alone. Before closing in 2009, the 5,000-seat amphitheater at Konocti Harbor Resort, in nearby Lake County, staged a concert series that sometimes began as early as mid-April and ended as late as mid-October. Over six years, from 2003 to 2008, an average of 25 outdoors concerts were staged each year, with 34 in the biggest year. A great many name acts played the lakeside venue.

Recently, the Green Music Theater at Sonoma State College, with an indoor/outdoor seating capacity of almost 5,000, and indoor-only seating for 1,400, cancelled plans to build a 10,000 seat outdoor amphitheater. Although demand for concerts and shows has proven to be strong, the facility was budgeted to cost nearly $10 million, and funding was never found.

Jason Scoggins, a partner in Latitude 38 Entertainment (promoter of Napa's Bottlerock music festival) believes that a right-sized outdoor music venue could be successful at Lake Berryessa. He cautioned it should not be overly ambitious in scale (3,000 seats would be about right – similar to Mountain Winery in Saratoga), and that it absolutely must offer a unique guest experience. Scoggins was enthusiastic about a floating performance stage like the ones pictured here. Latitude 38 Entertainment has a separate talent booking business that could schedule popular touring acts for play dates at Lake Berryessa. Many outdoor performance venues have an ‘anchor’ performing company – such as a symphony orchestra from the region.

The country’s greatest outdoor music venues – according to one critic – feature dramatic architecture or stunning natural setting, or both, as well as plenty of nearby recreational amenities, a variety of convenient food and beverage facilities (including picnic grounds), an inclusive mix of musical offerings from symphony orchestra to rock, overnight accommodations nearby, great lighting and extraordinary acoustics. Some of the best known are Red Rocks Amphitheater in Colorado, Hollywood Bowl in Los Angeles and Wolftrap in northern Virginia. These are larger-scale venues with 20,000 seats or more, and no doubt well beyond the feasibility of a site at Lake Berryessa.

There are more than two-dozen outdoor amphitheaters in California providing seating for 10,000 audience members. However, more than half seat less than 5,000 patrons, with an average of just slightly more than 3,100.

Wedding Venue

The wedding industry is big business in America – by many accounts more than $50 billion each year. According to The Knot’s Real Weddings Study for 2015, average per wedding expenditures, excluding those relating to honeymoon travel, had grown to $32,641 nationally. This represented an increase of almost five percent over the year previous, at the same time as the number of guests, on average, declined to 139. Not surprisingly, San Francisco/Greater Bay Area wedding costs were substantially higher than the national average, at $39,250.

Nearly 40 percent of all weddings are now celebrated in September, October or November, reflecting a major increase over the previous year, when only 31 percent of weddings were held in that same three-month period. A high percentage of weddings are held at some distance from where the bride and groom reside. If guests are invited, these fit the category of "destination" weddings. As previously noted, some nine percent of all visitors to Napa Valley come as wedding guests.

In general, destination weddings, outdoor ceremonies, unique venues, and greater emphasis on guest entertainment are trends shaping the weddings industry. Many couples aspire to be married in wine country – Napa and Sonoma Counties in particular – but these locations are scarce and expensive. The Winery Definition Ordinance #947 in Napa County strictly limits the use of most wineries to events and receptions that are "primarily related to the marketing of wine." Weddings do not fit the definition. Some of the most romantic destinations are therefore off-limits, and many others are priced for the wealthiest families only.

The concession areas at Lake Berryessa will have the potential to serve a very large, and growing demand, for destination wedding locations that are unique but relatively affordable. Whether in a quiet garden, surrounded by vineyards with views of the Lake – or actually on the Lake within a purpose-built floating chapel, opportunities for truly creative and memorable settings abound. And, the potential variety of accommodations, from luxury camping (glamping) to park models to hotel suites could suit every budget.

Cruise Boat

There are several operators of cruise boats that cater to special events, including weddings. Hornblower Cruises, sailing from San Francisco and six other ports in California – including the Sacramento River – is a significant operator. Another operator, in Southern California is Electra Cruises. An image of one of their elegant cruise boats is shown above. One of the most interesting operators in this business is called the Lake George Steamboat Company. Lake George, in New York's Adirondack Mountains is, like Lake Berryessa, landlocked. The largest vessel operated by the company is 190 feet in length. It can accommodate 1,300 people for a cocktail (or wine tasting) cruise and 350 people for a wedding banquet. The boat, pictured to the left, was actually built on the shore of Lake George.

Golf

Overall participation rates in golf are declining. According to the National Golf Foundation (NGF), the number of U.S. golfers fell from 30 million in 2005 to 24.7 million in 2014 (about 17 percent). The Foundation defines a golfer as a person older than six years of age who played golf, on a golf course, at least once during the survey year. During the same period, the population of the country increased by 7.4 percent.

Bloomberg reported that more than 800 U.S. golf courses closed over the decade through 2016, although NGF argues that this is merely restoring balance after two decades of over-building.

Reasons for the declining interest in golf include: (i) people are just too busy with less and less leisure time; (ii) the sport is too expensive – and too elitist; (iii) it is frustratingly difficult to learn, and; (iv) young people do not think golf is very "cool" compared to other activities.

For all these reasons, investor interest in new golf courses – especially 18-hole regulation layouts - has substantially evaporated. Moreover, environmental concerns, including shortages of water for irrigation and risks associated with herbicide use, have made golf development in California particularly challenging. In fact, California ranks 49^{th} out of 50 states in golf accessibility, measured by total population for each 18 holes of golf (43,862) compared to the national average of 22,396. The only state with less golf to population is Alaska.

Nonetheless, the availability of golf can be an important factor in attracting meetings and conferences according to hospitality experts. It can also be an appealing family pastime where young players can learn and experience the game in the company of a parent or other family member. We believe that development of a 9-hole executive-length course, combined with a well-designed target practice range and separate putting course, could significantly increase the appeal of Lake Berryessa.

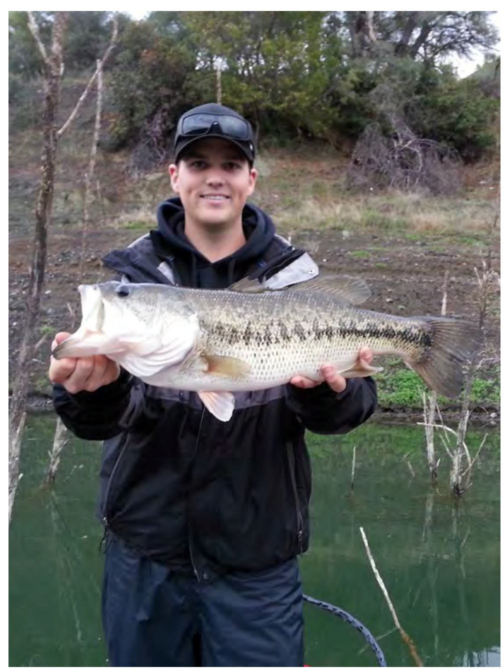
Such 9-hole courses can be very efficient in terms of land use, and therefore water consumption. We identified four 9-hole courses in the region and estimated their land areas (using Google Earth) as follows:

- Meadowood executive course: 14 acres
- Mill Valley in Marin County: 27 acres
- Mount St Helena in Calistoga: 27 acres
- Aetna Springs in Pope Valley: 55 acres

In contrast, a typical 18-hole regulation course requires 120 to 160 acres of land. John Strawn, a principal with Global Golf Consultants, opines that construction of a 9-hole course might cost as little as $3 million, and require very limited, if any, club house facilities. The golf outing on such a course could be much more relaxed, much less expensive, and considerably less time-consuming than typical.

Sport Fishing

Resting within a border of oak-tree dotted mountains, beautiful Lake Berryessa is a fishing mecca. It is a popular destination for locals and tourists alike during all four seasons, and is a great place to spend time away from Napa Valley's more widely known tourist attractions. For those who enjoy fresh water sport fishing, Lake Berryessa is well populated by a wide variety of fish including catfish, brown and rainbow trout, largemouth bass, bluegill and kokanee salmon.



Northern California is known to provide the best bass fishing in the United States. Some 21 of the 25 biggest largemouth bass on record were caught in California. According to Bassmaster, three of the top 10 bass fishing destinations in the entire country are in northern California. Lake Berryessa is one of the three. Widely-read sport fishing commentator, JD Richey, enthuses that Lake Berryessa ranks #2 among the top five bass fishing lakes in California, and #1 for Kokanee salmon fishing.

According to an editorial in the March 17th edition of *Western Outdoor News*, "sport anglers have a $4.6 billion impact on the state's economic output. Also, California's nearly 2.8 million anglers spent $2.4 billion while fishing last year." Sport fishing has, and will continue to have, a significant positive impact on California's economy. Lake Berryessa is well positioned to capture a disproportionate share of this economic activity. Aggressive promotion, with the help of one or more major tournament sponsors, could effectively put Lake Berryessa more "on the map" with anglers from all over California and the rest of the country than it has been in the past.

Conference Facilities

There appears to be a strong and growing demand for conference and meeting facilities in Napa County. It is felt a site at Lake Berryessa could meet a part of that demand.

According to a 2013 article in the *Orange County Register*, written by David Ferrell, "The Conference Industry Is Booming, and It Is Only Getting Bigger." As Ferrell reports:

> Many experts believed that (on a wired planet) the need for face time would diminish, that people would avoid hassling with airports and rental cars once it was possible to connect instantly from anywhere. The opposite is proving to be true. The conference industry is booming, expanding more or less in parallel with the Internet. Conferences not only are getting bigger and more numerous, they are tackling more daunting problems.
>
> According to the U.S. Bureau of Labor Statistics, conventions and events are expected to expand by 44 percent from 2010 to 2020, far beyond the average projected growth of other industries. A zealous conference-goer could travel to a new city every week and never exhaust the movable feast of issues and ideas — about smart-grid systems, electric cars, mental illness, cloud computing, mathematics, farming methods, aging. The more that people are connected electronically, the more hunger there is to meet face to face.

Estimates are that more than 500,000 conferences and similar events are held each year in the U.S. More than 120 million people attend at least one conference annually. Attendance is said to be growing at a rate of 5.8 percent each year, much faster than either the population – or the economy – of the United States. Interestingly, it seems that neither California, nor Napa, has the necessary infrastructure to capture its share of this robust industry.

The International Association of Conference Centers (IACC) has certified some 488 conference centers in the United States. But, only 37 such facilities (about 7.6 percent) are in California. Similarly, though slightly less relevant to the opportunity at Lake Berryessa, there are 226 convention centers in the country, but only 19 such facilities (about 8.4 percent) in California. Considering the state accounts for more than 12 percent of the country's population and approximately 14 percent of its economic activity, conference and meeting facilities seem to be significantly under-developed.

Some definition is required: a "convention center" is usually described as a large civic building or group of buildings designed for conventions, industrial shows, and the like, having large unobstructed exhibit areas and often including conference rooms, hotel accommodations, restaurants and other facilities. Convention centers typically offer sufficient floor area to accommodate several thousand attendees. Convention centers in California have an average floor area of 450,000 to 500,000 square feet.

On the other hand, the typical IACC approved "conference center" in California has a floor area of approximately only 20,000 square feet, and is usually designed for meetings and conferences with attendance of less than 150, and an average of 75. Residential conference centers, pursuant to IACC criteria, offer - and actively promote -

package plans that include the availability of dedicated conference rooms, guest rooms, three meals each day, continuous refreshment service, conference services and basic conference technologies. Additional criteria include minimum standards and specifications relating to appropriate furnishings, lighting levels, sound attenuation, climate controls, wall coverings and unobstructed views.

Napa has many hotels, wineries and special event facilities that collectively address that market. According to Visit Napa Valley (VNV) properties with at least 100 guest rooms and at least one meeting room larger than 2,000 square feet, are limited to six, however. These include:

- Meritage Resort & Spa
    - 50,000 square feet of meeting space
    - 34 meeting rooms – largest 10,490 square feet
    - 322 guest rooms
- Napa Valley Marriott Hotel & Spa
    - 20,000 square feet of meeting space
    - 12 meeting rooms – largest 3,827 square feet
    - 275 guest rooms
- Silverado Resort & Spa
    - 17,000 square feet of meeting space
    - 17 meeting rooms – largest 5,160 square feet
    - 385 guest rooms
- Hampton Inn & Suites
    - 5,373 square feet of meeting space
    - 4(?) meeting rooms – largest 3,000 square feet
    - 115 guest rooms
- Andaz Napa
    - 9,000(?) square feet of meeting space
    - 3 meeting rooms – largest 2,000(?) square feet
    - 141 guest rooms

- Archer Hotel (2018)
    - 17,900 square feet of meeting space
    - 6 meeting rooms – largest 2,000(?) square feet
    - 183 guest rooms

Corporate and professional meetings and conferences, with relatively few budget constraints, represent the preferred targets. However, only one of the properties described above would be relatively "affordable" to the so-called SMERF component of group

demand – those meetings and conferences attended by conferees with social, military, educational, religious and/or fraternal affinities. With close proximity to the San Francisco, Silicon Valley and Sacramento markets, low land cost, collaborative local government, great weather, abundant recreational opportunities and magnificent natural scenery, Lake Berryessa is an ideal place for development of moderately priced conference facilities.

We interviewed a representative of Benchmark Resorts & Hotels, a leading operator in the conference resort industry. Benchmark operates the Chaminade Conference Resort in Santa Cruz. The company's VP for Business Development & Strategy, Jarrad Evans, expressed concern about the accessibility of Lake Berryessa from both major airports and key employment centers in the Bay Area. However, he referred us to a close associate of the company, Jim Treadway, who is well known locally for his role in developing and operating Yountville's Bardessono Hotel. Treadway is enthusiastic about the opportunity for a conference hotel at Berryessa, as is his colleague, Don Winter, another Napa resident whose career has spanned many years as a respected lodging industry consultant.

Another specialist in the conference resort industry, Dolce Hotels & Resorts, is a subsidiary of Wyndham Hotels. Dolce operates both the Silverado Resort and the Hayes Mansion Conference Resort in San Jose. Dolce also believes a market exists for a dedicated conference resort at Lake Berryessa.

According to *Meetings & Conventions* magazine, more than 43 percent of all conferences are held in March, April, October and November. These four months would otherwise be off-season at Lake Berryessa, so a conference center could significantly address the inherent seasonality of demand.

PART SIX
SUMMARY AND RECOMMENDATIONS

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Part One: Introduction

This document represents Phase I of a two-phase assignment. Its primary purpose is to describe attributes of Lake Berryessa in northeastern Napa County. As such, it will provide critical background and educational information for Phase II. The purpose of Phase II is to attract appropriate entities who will develop and operate five available concession areas at the Lake.

The history of Lake Berryessa is long and complicated. It was created in 1957 with construction of the Monticello Dam. Purposes of the project were to control flooding, provide drinking and irrigation water, and generate hydroelectric power. These benefits were to be realized primarily by nearby Solano County and the environs, although both the dam and the Lake are in Napa County.

In 1958, it was decided that Lake Berryessa could be a prime destination for outdoor recreational activities of all types, especially boating and camping. In an arrangement with the National Park Service and the Bureau of Reclamation (BOR), Napa County entered into an agreement to manage development of the recreational opportunities. The land around the Lake, however, has always been owned by BOR.

In 1959, a General Development Plan was created by these three public entities. It provided for seven concession areas in strategic locations on the west side of the Lake. These seven areas were developed, and quickly became popular boating and camping destinations for families throughout northern California and beyond.

In 1975, BOR decided to take back control of the seven concession areas from Napa County due to alleged mismanagement. Control has remained with BOR ever since.

Recreational use of Lake Berryessa continued to grow, peaking at over 1.8 million annual visitors in 1996, and annually averaging well over one million. However, such popularity led to overuse and inappropriate use. The concession areas were not properly monitored and regulated, and BOR decided in 2009 that leases on five areas were not to be renewed. The five areas were closed by BOR, and most remnants removed.

During the next several years, numerous studies were completed by BOR, involving thousands of pages of documents and significant time and resources. BOR also briefly contracted with a new concessionaire, but without long-term results.

In 2015, six years after the closings, BOR felt ready to reissue an RFP for redevelopment of the five concession areas. Three proposals were received, but none were accepted. Finally in 2016, Napa County entered into conversations with BOR to again assume responsibility for the five areas, and to supervise their future development and operations, consistent with BOR's Visitor Service Plan.

Almost a decade has gone by since BOR closed the five areas. During this time, Napa County has missed out on significant economic opportunities, and families throughout northern California and beyond have missed out on outdoor recreational opportunities. The County is now considering a Managing Partner Agreement for five areas. The purpose of this document is to assist in finding the most appropriate concessionaires possible for one or more of the sites should the County enter into a Managing Partner Agreement. The five areas include:

- Putah Canyon (formerly Putah Creek)
- Monticello Shores (formerly Rancho Monticello)
- Berryessa Point (formerly Berryessa Marina)
- Spanish Flat (always referred to as Spanish Flat)
- Steele Canyon (formerly Steele Park)

The document is lengthy. Its preparation involved: (1) meetings and conversations with dozens of appropriate individuals and entities in Napa County, throughout the PMA and beyond; (2) conduct of a consumer survey with over 3,200 responses; (3) surveys of lakes, marinas and campgrounds in northern California; and (4) review of numerous reports and documents prepared by BOR and others over the past years. The document should be viewed as a "resource manual" for anyone interested in operating a concession area at Lake Berryessa. It also is meant to educate Napa County about the uniqueness and value of Lake Berryessa itself.

Part Two: Lake Berryessa and the Five Concession Areas

Lake Berryessa

Lake Berryessa is one of the largest and most attractive freshwater lakes in California. It has 165 miles of shoreline. By comparison, Lake Tahoe has only 72 miles of shoreline (although more surface acres). It is 26 miles long and three miles wide. It contains 20,700 surface acres. It is within 100 miles of over 10 million people. It represents one of the most untapped opportunities in the country for new resort development and local economic impacts.

Lake Berryessa is in northeastern Napa County, about 30 miles north of the City of Napa and 25 miles east of the famous Napa Valley. It is 65 miles west of Sacramento and 84 miles north of San Francisco. Accessibility is facilitated by a variety of State and U.S. Interstate Highways.

All lands abutting the Lake are owned by BOR. Adjacent lands are fairly steep, and for the most part undevelopable with any significant density. Most likely, they will remain in permanent open space, and accessible for a wide array of outdoor recreational opportunities. The area has a pleasant year-round Mediterranean climate. Rainfall is concentrated from November through March. Temperatures are mild, although the average high is over 90 degrees in June through September – the prime boating season. The average low is in the 40's in November through March, with average highs in the 60's.

Water level varies from year-to-year, depending on rainfall. During extended droughts in the mid-1990s and 2010s, it was under 400 feet. It is now close to capacity of 440 feet. The water is clear and very pure.

When all concession areas were open prior to 2009, Lake Berryessa annually attracted over one million visitors. Visitor count was over 1.8 million in 1987, 1996 and

1998. The annual average count was 1.5 million during the 25 years between 1981 and 2005. It has averaged less than 500,000 since the closings. As with most water-oriented outdoor recreation destinations, usage peaks in the summer months. It is anticipated that usage could be more year-round once a wider array of services, activities and accommodations are available than just boating and camping.

Currently, there are 10 existing areas at Lake Berryessa that provide a limited number of facilities and services. Most are operated by BOR, and restricted to day use activities.

In addition to boating and camping opportunities, there are numerous other attractions and activities at the Lake and the environs. Some include:

- extensive hiking, mountain biking and walking trails, with many more possible, including one perhaps around the entire Lake
- large nearby public land holdings, accessible for hiking, camping and a wide variety of other outdoor recreation activities. Included are 330,780 acres in the Berryessa Snow Mountain National Monument, Cache Creek Wilderness, Cedar Roughs Wilderness, Knoxville Wildlife Area, Knoxville Recreation Area, Lake Berryessa Wildlife Area and Quail Ridge Natural Reserve.
- some of the best lake fishing in the entire state
- swimming in the many private coves and inlets
- quiet areas for non-motor activities, such as kayaking, canoeing, etc.
- bird watching and wildlife viewing
- a few privately-owned facilities, with convenience stores, restaurants and other services
- close proximity to world renowned Napa Valley with its more than 500 wineries, geothermal springs, boutique shops, fine restaurants, eight golf courses and spectacular scenery

The Five Concession Areas

The five concession areas available for redevelopment are diverse in their size, amount of shoreline, vegetation and viewshed. They are all self-contained and prime waterfront properties.

They were closed in 2009, with most remnants of previous development removed. They are listed below, along with important dimensions. Collectively, they contain 12.6 miles of shoreline and 725 total acres. Some 137 acres are within the 440 (high water line) to 455 foot elevation, while the other 588 acres are above 455 feet to the edge of the BOR lands. These elevations are important because different types of land uses and tenure of occupancy are allowed in them by BOR. Additional uses may be considered as the five areas are redeveloped.

	shoreline frontage		acres with elevations of:		total
concession area	linear feet	miles	440 to 455 feet	over 455 feet	acres
Putah Canyon	19,165	3.6	30.03	137.84	167.87
Monticello Shores	14,600	2.8	31.20	118.06	149.26
Berryessa Point	7,100	1.3	13.41	41.76	55.17
Spanish Flat	11,000	2.1	28.30	187.90	216.20
Steele Canyon	14,886	2.8	34.54	102.55	137.09
total	66,751	12.6	137.48	588.11	725.59
average	13,350	2.5	27.50	117.62	145.12

BOR has completed detailed, but preliminary development plans for the five areas. Environmental impact statements have been completed for the plans to “the 60 percent design level.” If new concessionaires adhere to these plans, the final 40 percent of the EIRs will need to be completed. If existing plans are extensively revised, new environmental impact statements may be required. With guidance and influence from Napa County, it is possible the existing plans may be extensively altered, with more creative services, facilities and accommodations. The current BOR plans simply emphasize camping and boating uses.

Existing public utilities are nominal, with water and sewer currently available at only one site. Some remaining clean-up remains following the closures in 2009.

If the County enters into a Managing Partner Agreement for one or more of the sites, it will facilitate and review the implementation process. This public entity will balance economic impacts, profits for concessionaires, public access and environmental stewardship. There are basically no zoning regulations nor fear of lengthy litigation to prevent appropriate development.

Part Three: The Market Area for Lake Berryessa

Lake Berryessa itself, the five concession areas and the surrounding environs offer many unique and outstanding attributes, as discussed in the previous section – accessibility, size, extensive shoreline and surface area, beautiful scenery in a very natural setting, some of the best fishing in the state, large enough to offer both nature-based and motor-based activities without interference (if properly planned, regulated and monitored), and a wide array of family-oriented outdoor recreation opportunities.

Besides its own many positive attributes, Lake Berryessa also benefits tremendously from the surrounding 13-county primary market area (PMA):

1. **population and households**
    - 9.8 million people in the PMA (over 10 million if including counties to the immediate north), generating 3.5 million households – all within 100 miles
    - one of the most vibrant and prosperous regions in the country
    - 65 percent of households with incomes over $50,000 and 36 percent over $100,000 – proportions far above national averages
    - high participation rates in all types of outdoor recreation activities, most of which can, or could be, pursued at Lake Berryessa

2. **other freshwater lakes**
    - the eighth largest freshwater lake in California with 20,700 surface acres and 165 miles of shoreline
    - by far the largest freshwater lake in the PMA, with only two others containing more than 2,000 surface acres

- very limited facilities and services not only at the two other freshwater lakes in the PMA, but also at other lakes in a much larger 20-county surrounding area
- very few full-service marinas in the surrounding 20 counties. The majority are in the Sacramento Delta rather than in actual lake-environments. Existing marinas report operating on a good 72 percent year-round occupancy.
- only 15,900 boat slips in the 20 counties, although are over 185,000 pleasure boats registered in the PMA

3. campgrounds

- only 44 campgrounds around lakes in the 20 surrounding counties, and only 10 in the PMA, including the Delta
- only 164 campsites around lakes in the PMA, with another 575 in the Delta
- only 306 campsites around lakes with full RV hookups in the 20 surrounding counties (including the Delta). There are almost 30,000 RVs registered in the PMA.
- only 53 campgrounds in all types of locations in the PMA, generating less than 5,000 campsites
- limited amenities, services and contemporary comforts at the vast majority of the 53 campgrounds. Few provide food service, convenience stores, rental accommodations or even boating facilities.
- mostly managed by people without extensive experience in the hospitality industry
- mostly owned by the public sector, and suffer from lack of funding for proper upkeep and provision of activities. Most others are operated by small, private entrepreneurs with comparable funding issues. A survey conducted of campground operators in the area reveals the marginal condition, financial needs, and untapped opportunities.

4. tourism in Napa County

- close proximity to, and shared identity with, one of the most recognized tourist destinations in the PMA, as well as elsewhere in the U.S. and beyond
- a rapidly growing tourism industry, with 3.54 million visitors in 2016, up 20 percent from just four years ago
- some of the highest year-round occupancy rates and room rates in the country
- attractions and activities at Lake Berryessa complement those in Napa Valley, e.g., boating, fishing, extensive nature and other types of trails, etc. These complementary uses are attractive both to residents of Napa County and others throughout the PMA. Likewise, many visitors to Lake Berryessa will venture beyond the Lake into the Valley and Napa itself, thus generating additional consumer expenditures and economic impact.
- downtown Napa rapidly becoming a major tourist destination of its own, with large new supply of hotels, shops, restaurants and entertainment venues
- many intriguing potential opportunities for recreational attractions and activities that do not exist elsewhere in Napa County and/or are significantly under-supplied in the PMA, e.g., water park resorts, conference facilities, golf, wedding venues and outdoor musical performance venues

Some Issues

The preceding material has described the many positive attributes of Lake Berryessa, the five concession areas and the surrounding environs. There are few limiting factors regarding redevelopment of the five areas, with the most important being:

1. The concessions will be under a lease rather than deeded ownership in perpetuity. This could impact financing, and concern many in the resort development industry.

2. If managed by Napa County, BOR will continue to impose its many rules and policies controlling uses on the five areas. This also includes length of occupancy and permanency of structures.

3. Heretofore, there has been significant seasonality in visitation patterns, with the vast majority occurring in June through September, and especially July and August.

4. The last 25 miles before arriving at Lake Berryessa are over winding and fairly narrow two-lane highways. There are no plans nor budgets to widen and straighten the highways.

5. Being an inland lake at a relatively low elevation, Lake Berryessa is subject to significant variations in water levels. And, strict controls are in place to ensure public use of the water for irrigation, hydroelectric power, drinking and flood control.

6. There may remain some negative image of Lake Berryessa from previous years when rules and regulations were not carefully enforced, and overuse and misuse allowed.

7. A tourist-oriented infrastructure in the immediate area around Lake Berryessa is limited in terms of restaurants, shopping and entertainment. This will probably not change due to the topography and accessibility, but Napa Valley is only 25 miles distant.

8. The five concession areas are all very attractive, but have limited developable area, with irregular configuration, which may prevent some types of desirable uses.

Part Four: The Consumer Survey

Introduction

As part of Phase I, a consumer survey was conducted of households in northern California, with emphasis on the PMA. Some 3,211 responses were received, which is a significant number relative to most consumer surveys.

TapResearch provided 1,000 respondents, all of which participate in lake-oriented outdoor recreational activities. The survey also was announced in the *Napa County Register* and the *Lake Berryessa News* newspapers, with access information provided for completing the survey. These announcements resulted in the other 2,211 responses.

Respondents were very qualified to answer the survey:

- 90 percent have visited Napa County in the last five years
- 90 percent have visited Lake Berryessa in the past, and 50 percent have stayed overnight there
- 83 percent participate in motor boating, 73 percent in other types of boating, and 85 percent in hiking, walking, picnicking or other types of outdoor recreation
- 71 percent are between 30 and 60 years of age
- 92 percent have incomes over $50,000, and 54 percent are over $100,000
- 16 percent live in Napa County, 28 percent elsewhere in the North Bay, 34 percent in the South Bay, 10 percent in the Sacramento Delta, and 12 percent outside the PMA

Results of the survey were very positive in regard to: (1) awareness and perception of Lake Berryessa; and (2) potential size of future demand.

It also is apparent that interest in, and demand for, future use of Lake Berryessa will increase if offering more outdoor recreational activities than just motor boating and RV camping, especially those that are: (1) nature-based, family-oriented and/or innovative; and (2) in harmony with the lifestyle of today's participants in outdoor recreation. These themes are consistent throughout the report.

Selected Highlights

1. Most respondents have a positive image of Lake Berryessa and a high interest in visiting in the future.

   a. The following proportion of previous visitors to Lake Berryessa (90 percent of all respondents) had "positive" reactions to:

item	% positive
scenery and natural environment	90%
quality of water in the Lake	90%
climate	90%
distance/time from home	85%
ease of getting there	85%
family environment	77%
boating facilities	74%
security and safety	73%
quality of fishing	64%
enforcement of rules and regs	64%
visitor profile	63%
consistency of water level	60%
camping and RV facilities	60%
proximity to Napa Valley	60%
stores, restaurants and taverns	54%
lodging/overnight accommodations	50%

   Especially high ratings were given to attributes of the Lake itself, e.g., scenery, quality of water and climate. Lowest ratings were given to some services/manmade items, e.g., camping and RV facilities, availability of stores, restaurants and taverns, availability of lodging and overnight accommodations, and enforcement of rules and regulations.

   b. The vast majority (92 percent) are interested in visiting Lake Berryessa in the future. This includes 74 percent who are "very interested." Interest is especially high among Napa County, higher income, middle-age and North Bay respondents. It is lower among younger, lower income, South Bay and Delta respondents.

c. On average, respondents would annually visit Lake Berryessa four times a year for boating and two times for camping. They would stay an average of five nights per year and two nights per visit.

d. Over 90 percent would visit during May through September. And, over 25 percent would consider visiting in the winter months of December through February, assuming availability of appropriate services, activities and accommodations. In other words, it seems possible Lake Berryessa can become more of a year-round destination than in the past.

2. Results from several questions help determine services and facilities that should be included in the future of Lake Berryessa and the five concession areas in order to maximize visitation patterns. It is evident that potential users are interested in more than just motor boating and RV camping. Shown below are the proportion of "important" responses for 27 items that could be implemented at the Lake and the five areas.

item	% "important"
convenience grocery stores	96%
restaurants and other food services	93%
hiking, biking, walking trails	91%
equipment rentals	87%
taverns/bars	75%
children's activities	75%
defined areas for kayaking, canoeing, sailboarding, paddleboarding	74%
evening entertainment, music, dancing, movies, etc.	73%
special events such as boat races, car clubs, triathlons, fishing tournaments	71%
defined areas for jet skiing and wave running	71%
amphitheater with outdoor concerts and "name entertainment"	70%
horseback riding trails	65%
central clubhouse with swimming pool, fitness center and other amenities/facilities	65%
zipline	64%
wine tasting on the shores of the Lake	64%
shuttle services to wineries and other attractions in nearby Napa Valley	60%

off-roading/motorcycling/ATV riding	58%
shooting range with clay facilities	58%
water park	57%
wildlife safari park	52%
wedding venues	50%
organized bird watching	49%
health and wellness facilities and seminars	48%
conference, meetings and lifestyle retreat facilities	46%
classes on culinary arts, wellness, crafts, etc.	45%
year-round sports/athletic academy with professional training facilities and name instructors	42%
golf	42%

Comments on the preceding list:

- Three items were checked by more than 90 percent of respondents as being "important" in encouraging them to visit Lake Berryessa, including convenience grocery stores, restaurants and other food services, and hiking, biking and walking trails.

- All 27 items were checked by more than 40 percent of respondents.

- More respondents said "defined areas for kayaking, canoeing, sailboarding, paddleboarding, etc." and "defined areas for jet skiing and wave running" was important, than said such definition was not important. In other words, mixing all types of boating together throughout the Lake seems questionable.

- Interestingly, even items to which respondents probably have no direct connection received significant proportions of "important" answers, e.g., wedding venues, conference and meeting facilities, bird watching, golf, etc. It appears respondents feel the more services and facilities present at Lake Berryessa, the more attractive it will be as a destination for everyone.

- While some items received fewer "important" responses, it does not imply they should be neglected in thinking about the future of

Lake Berryessa. Many are inexpensive to implement, and could attract a wide variety of recreationists in the PMA. On the other hand, it does not mean that every imaginable amenity/service should be pursued. The challenge is to attract ones which are cost-effective to implement, and will attract the most visitors without harming the environment.

- Significant differences exist among the various respondent-groups regarding answers to this question. Some observations:

    - Great disparity between the age groups: younger respondents are more interested in having more amenities and services, especially those involving more strenuous activity; older respondents are less interested in almost all of the amenities/services, and perhaps, see their vacation experience at Lake Berryessa as being one more of rest and relaxation than physical activity. Middle-age respondents are somewhere in between for almost all amenities and services.

    - Less disparity exists among the income groups, although: lower income respondents are more akin in their answers to younger respondents, and vice versa. As with age, middle-income respondents always seem to be between lower and higher income respondents.

3. Questions also addressed the importance of several items relating directly to boating and camping. Results again suggest the opportunity and need to offer more services and facilities in the future than at Lake Berryessa in the past, especially ones relating to convenience, variety, comfort, perhaps more upscale, and in a properly controlled and regulated environment. Some observations:

- Shown below are “important” answers in regard to nine items relating to **boating and water-oriented activities**.

item	% “important”
full service marina	90%
improved boat-launching activities	90%
Lake patrolling and regulation of boats	90%
boating density on the Lake	82%
fishing	81%
availability of rental boats	75%
separate areas for motor boats, non-motor boats and jet skis	68%
limits on boat speed and horsepower	68%

- It is apparent respondents view Lake Berryessa as a boating destination, but more than just for motor boats and jet skis. For example, there is significant interest in houseboats for rent, as well as kayaking, windsurfing, rowing and canoeing. “Important” responses include:

item	% “important”
motor boats	91%
houseboats for overnight rentals	85%
water skiing	83%
kayaking, windsurfing, rowing, canoeing	80%
jetboats/wave runners	75%
sailboats	57%

- In regard to **camping**, there seems to be significant demand for rental facilities as well as those for personally owned campers. Some 53 percent would prefer to use their own RV, camper or tent, but 47 percent would prefer to rent some type of accommodation.

- Campers also want conveniences:

item	% “important”
public restrooms	98%
strict enforcement of rules and regulations,	93%

e.g., noise and cleanliness	
hot showers	92%
fuel, water and electrical hookups	89%
waste dump facilities	85%
improved pad for parking your own camper	79%

4. Finally, it appears significant demand exists for a variety of **overnight accommodations** and not just tent and RV camping. Such findings are significant, and support a much wider user-profile than in the past. Shown below are the proportions of "interested" responses in regard to nine possible types of accommodations. Tent camping only ranks sixth and RV camping ninth. Significant interest was stated for both higher-end and rustic cabins/ cottages, houseboats and glamping.

item	% "interested"
higher-end, larger cabin/cottage with kitchen, restroom with shower, all utilities and separate bedroom(s)	87%
houseboat	87%
small rustic cabin/cottage without utilities, but near to hot showers and toilets	84%
"glamping," i.e., a unique, high-quality canvas tent on a platform with kitchen, restroom with shower, all utilities, and separate bedroom(s)	83%
hotel/motel	75%
tent camping on the ground	72%
park model RV	65%
mobile home	63%
smaller RV	62%

Part Five: Potential Attractions and Amenities

Heretofore, Lake Berryessa has been positioned as an attractive destination for outdoor recreation activities, especially motor boating and camping. Even during peak years when all concession areas were open, seasonality of use was high, with the vast majority of visitors coming in June through September, and especially July and August. Variety and quality of services and facilities were limited. Few convenience stores, restaurants, evening entertainment venues and unique accommodations beyond RV and tent camping existed. Proper controls and regulations were not enforced. Despite such conditions, the area regularly attracted over 1.5 million visitors annually.

The challenge and opportunity are to redevelop the five concession areas into resorts that more appropriately reflect the lifestyle of today's participants in outdoor recreation – higher quality, more variety, greater convenience, more nature-based (but not forgetting the ever-popularity of motor boats and RVs), more family-oriented, etc. If more care is given to these important trends, Lake Berryessa has the opportunity to: (1) become a significant **year-round** destination for the almost 10 million people in the PMA; (2) significantly impact the economy of Napa County; (3) be profitable to appropriately selected concessionaires; and (4) do so while maintaining and enhancing the natural environment.

Listed below are a variety of uses that could be considered in the redevelopment of the five concession areas. Some historically have existed, while others are new. Perhaps not all will be possible, but many will. It is not the intent to make Lake Berryessa into a highly-commercialized, over-dense environment. Care must be taken to always balance the criteria of consumer demand, economic gain and protection of Lake Berryessa's beautiful natural setting.

motor-based	nature-based	accommodations	commercial
motor boating	trails for hiking, biking, walking, nature walks	RV camping	wine tasting/tour center
jet skiing	swimming	tent camping	Napa Valley shuttle
water skiing	bird watching	glamping	9-hole golf course
full service marinas	flora and fauna viewing	houseboats	conference, meetings, retreats
dry storage	fishing	rustic cabins, cottages and park models	schools, lessons, lectures
boat and equipment rentals	kayaking, canoeing, sailing, paddleboarding	higher-end cabins, cottages and park models	spa, wellness facility
off-road vehicles	picnicking	hotel/motel	wedding venues

horseback riding	nightly, extended stay and snowbird markets	amphitheater
interpretive center		indoor water park
eco-appreciation		restaurants, taverns
water trail		shopping
day care		night entertainment
quiet areas in coves and inlets		sports academy
photography		service station
		clubhouse with pool, fitness center, activities
		zipline
		special events, races, tournaments wildlife safari park
		Lake cruise boat
		water taxi
		fly-in

Found in the full report are sections describing several potential uses not currently present or under-utilized at Lake Berryessa. It is anticipated others will evolve during the search for appropriate concessionaires. The uses detailed in the full report include: (1) bird watching; (2) an indoor water park; (3) an outdoor concert venue; (4) wedding venues; (5) a cruise boat; (6) golf; (7) expanded sport fishing; and (8) conference facilities.

Part Six: Summary and Conclusions

Introduction

The purpose of this final section of the report is to offer a variety of recommendations concerning the future of Lake Berryessa and the five concession areas.

The recommendations are open to further conversation between Napa County, the consulting team and others concerned with caring for this scarce resource. The 30 following recommendations are grouped under three general topics: (1) public policies; (2) actual redevelopment of the five concession areas; and (3) where to start.

Recommendations for Napa County Policies

1. Fully balance a sometimes conflicting set of criteria: economic benefits to Napa County, outdoor recreational opportunities for residents of Napa County, the PMA and beyond, preservation and enhancement of the physical environment, and financial profit for the concessionaires. None of the four criteria should dominate the others.

2. Assume as much influence as possible in selecting the new concessionaires and reviewing and approving their plans, i.e., be more influential in managing the process than BOR.

3. Maximize the term of the leases with BOR for as many years as possible – hopefully, 65 years or more. The term could be shorter in concession areas requiring less capital investment.

4. Fully understand that today's consumers are increasingly motivated by quality, variety, convenience, family, value, learning, experiences, etc. Boating and camping satisfy some of these trends, but certainly not all.

5. Create and enforce both land **and** water rules and regulations that properly control:
   - safety and security
   - noise pollution and other nuisances
   - cleanliness of the environment
   - boat density on the Lake
   - defined areas for motor-based water activities, e.g., motor boats, water skiing and jet skiing versus non-motor-based water activities, e.g.,

kayaking, canoeing, rowing, sailing, windsurfing, paddleboarding, and swimming, i.e., loud versus quiet

- density of the campgrounds
- encroachment of inappropriate structures in the two elevations
- term of occupancy in the accommodations in order to prevent year-round living

6. Constantly monitor enforcement of rules and regulations in order to prevent misuse and inappropriate uses, as in the past.

7. Be prepared to subsidize concessionaires for initial expenses relating to: (1) required clean-up remaining from the previous operations; and (2) infrastructure for new development. Such subsidy could be in the form of waived franchise fees or lease payments for several years. Infrastructure costs will be expensive, especially when considering the land is conveyed only via a lease rather than deeded ownership in-perpetuity.

8. Remaining environmental impact statement costs should be paid for by the new concessionaires.

9. Simplify and clarify the RFP process, e.g., do not include the sometimes overwhelming list of BOR rules and regulations. Provide them in a complementary document.

10. Promote more widespread recognition of Lake Berryessa via:
    - nationally recognized brands – e.g., for some of the accommodations, a health/wellness spa, a wine tasting facility, retail merchants, restaurateurs, etc.
    - popular events or tournaments, e.g., entertainment in an amphitheater, fishing tournaments, boat racing, name-sponsors, etc.
    - unique attention-getting attractions, e.g., indoor water park, cruise boat, conference/retreat center, wedding venues, etc.

- endorsement from a well-known celebrity/spokesperson in the nature-based outdoor recreation, boating and/or camping industries
- utilize an entity like Visit Napa Valley to publicize and market the Lake

11. Engage in conversations with adjacent private property owners around Lake Berryessa to discuss compatible uses, e.g., dude ranch, golf, estate home lots, vineyards, commercial, restaurants, etc. Extended development beyond the Lake itself, if properly controlled, should benefit all, and lead to greater recognition and use of the overall area.

12. Explore creating a Local Improvement District, or comparable funding mechanism, to help finance the infrastructure, utilities, roadways, trails and bank improvements.

13. Napa County, rather than BOR, should be the responsible agency for further environmental assessment and review in accordance with requirements of SQUA. The County should facilitate the process as much as possible, so that it does not require years of effort and irrational costs (but still being properly protective of the environment).

Recommendations for Redevelopment of the Five Concession Areas

14. Encourage services, facilities, attractions and accommodation-types that will lead to year-round visitation patterns beyond the summer months, i.e., ones that will not require being in the water. For example:

    - ease length-of-occupancy regulations to allow for two to three month tenures in appropriate accommodations for snowbirds from Canada and other northern climates
    - conference, meetings and retreat facilities
    - winterized and properly finished accommodation-types
    - more year-round convenience stores, food services and evening entertainment venues

- nature-based activities in and around the Lake, e.g., trails, bird and wildlife watching, interpretive centers, photography, etc.
- shuttles to Napa Valley, on-site wine tasting, classes, central clubhouse with covered swimming pool, fitness center, etc.
- spa wellness center
- wedding venues in spring through fall months

15. Encourage variety at the five areas in terms of:
    - pricing and fees
    - quality and type of accommodations
    - experiences and major attractions
    - families versus couples/empty nesters/singles
    - entertainment venues
    - motor versus non-motor water activities
    - In other words, each area should have its own identity and image rather than blending all into one commonality.

16. Explore exceptions to BOR's policy that "everything-must-always-be-open-and-available-to-the-public," e.g., consider memberships, short-term vacation ownership, undivided interests, etc., but only in limited situations.

17. Encourage use and enjoyment by both motor-based and nature-based participants. The Lake is large enough for all to enjoy without having disruptive conflicts. Neither group should dominate at the expense of the other.

18. Pursue trails of all kinds, e.g., hiking, biking, walking, jogging, nature interpretive, etc. Require concessionaires to implement a proper trail system through their own area, to hopefully attach to the proposed around-the-Lake trail. Pursue grants and other sources of money for the trails, rather than depending on public funds. Consider horseback riding trails in selected areas.

19. Encourage variety of accommodations that offer more than just tent and RV camping, e.g., both high-end and rustic cabins/cottages, glamping, a hotel/motel, houseboat rentals, etc.

20. Encourage full-service marinas that offer fuel service, convenience store, food service, rental boats and equipment, and both open and sheltered slips.

21. Encourage boat-launching facilities that are improved, easy to maneuver at all water levels and attractive.

22. Enhance the visual environment via sign control, a bank improvement program during times of low water levels, landscaping, and so forth.

23. Emphasize services, facilities, accommodations and prices that are at the 3 and 4 star level rather than the 1, 2 or 5 star level. This seems to be the primary market target for Lake Berryessa. Do not attempt to try and offer something for everyone.

24. Discourage skeet/clay shooting, shooting ranges and off-road vehicles, at least within the five concession areas themselves. Direct users of these activities to nearby Knoxville Recreation Area.

Recommendations About Where To Start

25. Priority should be given to two concession areas at the outset of the RFP process, rather than bringing all five to market at once. We think it best to lead with the best and most attractive areas and thereafter work downwards, rather than leading with the least attractive and thereafter working upwards. It will be important to reestablish the reputation of Lake Berryessa with criteria of success, quality, and an “in” destination to visit (for the right reasons). If the first efforts meet these criteria, it will be easier for others to follow. In other words, the first two areas must have the greatest probability of success.

    In an effort to rank the five concession areas in terms of attractiveness and potential for redevelopment, we use six criteria. The approach is subjective, and subject to refinement in Phase II of the assignment. The six criteria are:

- proximity/accessibility to the PMA
- scenic attractiveness
- existing infrastructure
- miles of shoreline
- acres in the 440 to 455 foot elevation, which typically have a flatter topography and direct water access
- total developable acres

The matrix below contains ratings for each of the five areas for each of the six criteria. A “1” is the top rating, and a “5” is the lowest rating.

	criteria/rating						
					acres:		
concession area	proximity/ accessibility	scenic attractiveness	existing infrastructure	miles of shoreline	440 to 455 ft.	total	integrated score
Steele Canyon	1	2	1	2	1	4	11
Monticello Shores	4	1	2	3	2	3	15
Spanish Flat	2	4	2	4	4	1	17
Putah Canyon	5	5	2	1	3	2	18
Berryessa Point	3	3	2	5	5	5	23

Based on the preceding rating system, the most attractive area is Steele Canyon. It is the most accessible, is the only one with existing infrastructure, and contains the most acres in the desirable 440 to 455 foot elevation. It also ranks high in general scenery. Its only low ranking is total number of developable acres.

Monticello Shores is ranked second. It is ranked as the most scenic, and second in acres in the 440 to 455 foot elevation, and third in miles of shoreline and total developable acres. Third and fourth are Spanish Flat and Putah Canyon. The latter is rated as the least scenic and least accessible, but has the most shoreline and is second in developable acres. Spanish Flat has the most developable acres, but has low ratings in regard to scenic attractiveness, miles of shoreline and acres in the 440 to 455 foot elevation.

Lowest ranking is Berryessa Point – primarily because of its small size. It has other attractive features, however, and should probably be ranked higher.

Potential concessionaires may weight the six criteria differently, and/or have different criteria. For example, a concessionaire wanting to develop a more upscale glamping or cabin/cottage resort may immediately decide on Monticello Shores. On the other hand, a concessionaire seeking to maximize the number of units, rooms or campsites may immediately decide on Putah Canyon.

26. Based on the preceding ranking system and general content of this overall report, it is recommended that the first two concession areas pursued in the RFP process should be Steele Canyon and Monticello Shores.

    Steele Canyon should be a mixed-use resort, with one or more major attractions. It should establish a positive image and wide recognition for overall Lake Berryessa. Besides a variety of accommodations, full-service marina and boat launching facilities, one or more unique uses should be included, e.g., indoor water park, conference and retreat facility, 9-hole golf course, outdoor concert venue, etc. The concessionaire should be permitted, even encouraged, to build and operate a large passenger boat for weddings, wine tasting, dinner sails, and general Lake touring. In summary, Steele Canyon should be the “action” area.

27. Monticello Shores should complement Steele Canyon, and be the “quiet,” more upscale resort. Views, vegetation and general setting of this area are outstanding. Accommodations should emphasize glamping and/or fully serviced cabins/cottages. Activities should be more nature-based, educational, and with less emphasis on motors. Development should be lower density and less commercial. It should be the more exclusive area.

28. In looking at the other three areas, perhaps: Berryessa Point could emphasize a full-service commercial marina, a sea plane base, a small motel and limited (due to its size) camping facilities; Putah Canyon could emphasize a larger development, with modest quality and priced tent and RV camping, motor-oriented activities, etc.; Spanish Flat could be the central commercial area with stores, food services, boat launching facilities, etc. – all just preliminary thoughts.

29. Some specific uses and themes were suggested in the preceding paragraphs for the five areas. BOR has suggested much more detailed uses in their “Lake Berryessa Concession Infrastructure Design” (described in Part Two of this document). It is recommended, however, that the County not adhere too strictly to either set of suggestions, but simply use them as guidelines. In other words, the County should welcome, and be open to, other plans submitted by potential concessionaires, since they will be the actual investors and operators. It is not the purpose of this document at-hand to create a detailed master-plan for the five areas – nor should it be the responsibility of the County nor BOR.

30. Although tempting to seek a single “master developer” for multiple (or all five) concession areas at once, we believe each has its own unique character and “highest and best” use. An experienced conference resort operator, for example, is unlikely to have expertise both in campground and marina development and operation. We also believe that more creative and market-responsive concepts will flow from the efforts of several operators rather than one. In addition, some time should lapse between proposal calls for the various areas.