are unsightly, having nearby sewage ponds and/or visible electrical wires. Moreover, many of the RV locations provide parking spaces only, have no picnic tables, grass, or comfortable separations between sites. Accordingly, the under-utilization of sites at Berryessa is not representative of what we believe to be reasonably expected for the new RV sites.

4. Tent Sites

For the tent camping analysis, we assumed that 250 individual tent sites and 3 large group sites would be constructed under Phase I, distributed between the Pleasure Cove, Rancho Monticello, and Putah Creek locations. As described in Alternative B, we assumed that the proposed group campsites would be situated at the Putah Creek location (as they are currently), and would use the existing bathroom facilities at that site (without upgrade). We conservatively assumed that the concessionaire would charge an average rate of $14 before occupancy taxes for individual tent sites. This rate is at the higher end of the range of rates recently observed at many comparable lakeside tent sites, and is consistent with the rates charged at Lake Don Pedro, New Melones, and Lakes McClure and McSwain. We believe $14 is a conservative rate for Lake Berryessa, because the tent sites that will be constructed will be new, have good spacing and desirable facilities, such as new restrooms, picnic tables, grills, water spigots, and landscaping.

We assumed that the group tent sites, which could accommodate up to 50 people per site, would rent for an average of $150 per night before occupancy taxes. This rate is based on group sites at comparable lakes, and is an average based on a sliding scale rate structure corresponding to the number of cars brought to the site.

We collected operating cost statistics for tent camping from a number of sources, including the National Foundation for RVing and Camping, and determined that it is reasonable to assume that operating costs for the proposed tent sites would run about 25% of gross receipts (and less in the case of group sites). Again, in this analysis, we assumed total operating costs to be annual operating expenditures including a reserve for capital replacement but represent EBITDA (excluding interest payments, taxes, and depreciation). Additionally, the estimation of operating costs as a percentage of revenues is lower than if the tent campground were a stand-alone

operation. We assumed that the various components of the concessions would be able to share certain facilities (such as restrooms) as well as certain operating overhead, such as office space and labor for reservations and fee collections.

Based on the above, we determined that to achieve financial feasibility the proposed 250 tent sites would need to rent about 13,600 site-nights per year, generating approximately $189,000 per year in gross revenues. This translates to an approximately 15% average annual rate of occupancy. Stated differently, the proposed tent campgrounds would in effect need to be fully occupied less than two months of the year to be financially feasible. Similarly, the three group tent sites would together need to rent just 140 nights per year (about 47 site-nights each) generating about $21,000 per year in receipts to achieve financial feasibility. This translates to less than 15% occupancy per year.

Demonstrating the probable conservative level of our rate assumption, it should be noted that the Lake Berryessa concessions currently charge rates higher than $14 (average among concessions is $20 per night in 2003) for poorly spaced, poor condition tent sites, and still maintain that the sites experience good occupancy rates throughout the summer months.[18] Moreover, it is reasonable to expect that the individual tent-sites proposed will achieve the estimated threshold occupancy rate, given the occupancy rates at similar lakeside tent campgrounds (with similar or larger numbers of tent sites per campground, and with multiple campgrounds at a single lake). Interviews with personnel at Folsom Lake, Clear Lake, and the current Berryessa concessions (see footnote above) suggest that comparable tent campgrounds are full all summer weekends, many summer weekdays, and have some occupancy on shoulder season weekends. Also, according to Reserve America, a national campground reservation company, and personnel at various lakeside group campgrounds, group campsites are very popular all throughout the summer, as well as weekends during the fall and spring months.

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[18] Conversations with managers of the current Lake Berryessa resort concessions indicated that lakeside camping accommodations are fully occupied on summer weekends and often occupied all summer long. For example, the manager of Rancho Monticello reported that the 57 tent sites at that resort were fully occupied during the 2001 summer season, despite their unusually long, three-night minimum stay. Similarly, the Spanish Flat concession operator asserted that campsites are usually reserved for all summer weekends by April. However, these operators

Overall, while tent camping is not generally a major source of revenue for lakeside resorts, tent sites require relatively little capital investment and operational expenditures, are generally profitable on their own, and help to enhance demand for other concession goods and services.

5. Marina

In our marina-specific analysis, we assumed that some level of marina development would be provided at each of the lake's seven developed sites. However, at four of those sites, Phase I stipulates only limited, day-use lake access (launch ramps). The other three marinas are to provide lake access, but also offer a combined 600 wet boat slips and a range of other marina services, including fuel. In addition to the seven launch ramps at each of the proposed resort sites, the launch ramp at Capell Cove will also be under concession operation (whereas currently, Reclamation operates this public launch ramp free-of-charge). However, we believe the details of operation of the ramp at Capell Cove should be left up to the incoming concessionaire to decide, and thus it was not included in the financial model.[19] Dry storage and boat rental operation were not included in the marina analysis, although those and other ancillary facilities could be proposed initially or implemented later, if and when demand warrants. Dry storage and boat rental operations were thus analyzed separately in this report, below. Assumptions as to the number of slips at each proposed marina site (as well as all of the associated development costs) were provided by Reclamation. We then estimated the additional costs of fuel stations, fish cleaning stations, and bathrooms, included under Phase I.

For the marina-specific analysis, we assumed that the marina slips would realize an average daily rental fee of $10. (Covered slips would yield a higher rent, but would also cost more to construct. We did not evaluate the potential financial implications of covering some of the slips.) This rate falls into the upper range of uncovered slip rental rates charged at marinas on

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also acknowledged that there is little demand for tent camping in non-summer months. Finally, due to the lack of revenue breakdown in the concessions' financial reporting, it is difficult to validate these claims of high occupancy.

[19] Depending on the necessary capital costs to upgrade the launch ramp, parking, and road at Capell Cove, as well as the cost of labor and any improvements necessary to collect fees, the incoming concessionaire may wish to [a] close the launch ramp to funnel demand through the other seven launching locations, or [b] keep the launch ramp at Capell Cove free-of-charge if Reclamation requires that it remains open. The launch ramp at Capell Cove may well

comparable lakes within the region, and assumes that 50% of demand will be short-term storage, and the rest will be a mix of weekly and monthly rentals. The relatively high storage fees are reflective of the shift to short-term visitation that is expected to occur with the removal of the long-term exclusive use trailers. We also assumed a daily launch fee of $10, which is consistent with rates at comparable lakes and slightly less than what is currently charged at the LBRA concessions. (The rate assumption based on comparable facilities is probably conservative, considering that the average launch [and park] fee at the seven concessions is just over $11.)[20] The marina rates assumed in this model also reflect interviews with lake resort operators regarding the popularity and profitability of marinas and the need for wet slips in the Berryessa region.

We based our operating cost assumptions for marinas on statistics published by the International Marina Institute and the Independent Petroleum Marketers Association (fuel service cost assumptions), and determined that it is reasonable to assume that operating costs for the proposed slips and launching services would run about 38% of receipts. Again, in this analysis, we assumed total operating costs to be annual operating expenditures including a reserve for capital replacement but excluding interest payments, taxes, and depreciation. The resulting profit margin is consistent with the consensus of managers from marinas at comparable lakes who reported that marina operating costs generally run at about 35% of gross receipts.[21] The potential contribution to profit from gasoline sales was not considered. Although necessary to sustain marina operations, gasoline sales margins are generally very small, and for the analysis the fuel component of the marina operations were assumed to break even.

Our cash flow analysis indicates that the marina development would need to generate approximately $1.3 million a year in gross receipts to achieve a 15% rate-of-return. We assumed that 75% of the revenues would come from slip rentals and 25% from launch fees, a ratio that reflects the operations of marinas for which we have financial information, adjusted for the

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be a source of additional revenue for the incoming concessionaire, but without improvement cost estimations, we chose to conservatively omit it from the financial projections.

[20] We say "probably" because it is not clear that the current rates charged at Berryessa are appropriate, given the current level of demand.

[21] Phone interviews with marina operators at Folsom Lake, Lake Shasta, Clear Lake, New Hogan Lake, Lake Don Pedro, Lake McClure, Lake Mead. Additionally validation came from marina financial statements, when available.

proposed mix of eight launch ramps (at seven locations) and 600 slips (at three sites). Based on these findings, to achieve feasibility, the proposed marinas would need to maintain an average annual slip occupancy rate of 45% and launch an average of about 90 boats per day among the seven marinas.

In terms of boat launching, the required number of boats launched per year from the concession launch ramps to achieve financial feasibility would be 32,850, generating revenue of about $329,000. This translates to about 13 launches per day per site, which seems optimistically high when compared to current concession revenues derived from day launches and the decline in boating activity on the lake during the late fall, winter and early spring months. (According to current LBRA concession operators, boaters do use the lake year round. However, operators reported that winter boating activity tends to occur mostly on the weekends.) If we estimate that 67% of all boating occurs during the three summer months,[22] the number of necessary boat launches translates to an average of nearly 35 launches per site per day in the summer and under six per day during the remainder of the year. Therefore, we believe that the number of boat launches necessary to achieve financial feasibility is in the upper range of what we might expect to occur, but still realistic. For example, Folsom Lake, which is similar in size to Berryessa but is much less developed than Berryessa (and charges $9.00 per launch), recorded nearly 70,000 launches in 2002 and over 100,000 in 2001.[23] Additionally, estimations drawn from a 1997 boat count on Berryessa suggest that there were about 90,000 boats per year on Lake Berryessa that year.[24] Because no records of ramp-specific launch counts at Lake Berryessa were available, we are unclear of the historical breakdown of launches from the public ramp at Capell Cove versus launches from the concession ramps. With the shift of the Capell Cove launch ramp from public to concession operation, the likelihood of achieving higher launching revenues than in the past increases dramatically. Regardless, Reclamation has made it very clear that providing lake

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[22] In telephone interviews with operators from the current Steele Park, Pleasure Cove, Rancho Monticello, and Markley Cove concessions, resort operators guessed that about two-thirds of all Berryessa revenues occur in the summer. Note, however, that this estimate is an average of the responses to the general question of all Berryessa activity/revenues.

[23] Folsom Lake 2002 boat launch data reflects July 2001 to June 2002.

[24] A Study of Boater Recreation on Lake Berryessa, California, William Jackson, Dr. George Wallace, James Vogel, and John Titre, Colorado State University, 1998. Total boat count per year was estimated from actual aerial boat counts, using assumptions of boat turnover and peak month usage provided by the Army Corps of Engineers.

access at all seven resort sites at Lake Berryessa is a priority, regardless of the stand-alone financial feasibility of the proposed marina operations.

Regarding slip occupancy rates, the threshold demand necessary (45% slip occupancy) for the proposed marinas at Lake Berryessa to achieve financial feasibility seems realistic. According to the California Department of Boating and Waterways, in 1995, California inland (lake) marinas experienced an average occupancy rate of 80%, close to double the occupancy needed for financial feasibility at the proposed Lake Berryessa development.[25] Since 1995, total pleasure boat registrations with the California Department of Motor Vehicles (DMV) have increased steadily at about 1.1% per year.[26] Substantial unmet demand for boat slips is evidenced by long waiting lists at the Folsom Lake, Clear Lake, and Lake Berryessa marinas.[27] Further, marina operators that we contacted all expressed the opinion that slip rentals are good for marina resort concessions, because they provide revenue not only during the summer but also the off-season, when demand for other concession services is relatively low.

Thus, the occupancy necessary for the marina berth component of Phase I to achieve financial feasibility is substantially lower than what would be expected. However, we recommend that the potential concessionaire(s) initially implement only the Phase I level of marina development, as slip revenues may have to help cover the cost of providing lake access (launch ramps) at all seven sites. More importantly, there is one aspect of the uncertainty of demand that is particularly relevant to marinas. According to the Lake Berryessa concession operators with whom we spoke, between 50% and 95% of current marina slips at the LBRA are occupied by long-term trailer tenants.[28] Thus, as the focus of Lake Berryessa concessions shifts to short-term camping, lodging and recreation services, there is obviously some uncertainty about the demand

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[25] 1995 California Boating Facilities Inventory and Demand Study, California Department of Boating and Waterways.

[26] Department of Motor Vehicles, Pleasure Boat Registrations 1991-2001.

[27] Conversations with managers at marinas on Folsom Lake, Clear Lake, and Lake Berryessa. According to Ken Christensen of Folsom Lake Marina, they have slip waiting lists that range from 2-3 years for 16 foot slips to 10 years for 24 foot slips. According to Tom Wayman, operator of Markley Cove Marina at Lake Berryessa, his marina leased each of his marina's new boat slips prior to installation of the slips.

[28] Conversations with John Givens from Rancho Monticello, Tom Wayman from Markley Cove, Steve Nelson from Pleasure Cove, and Mr. Hanson from Steele Park.

for boat slips. Most likely, Lake Berryessa marinas will face a transition period following the elimination of long-term trailers as many slips change tenants.

6. Houseboats

It is very difficult to project the costs and revenues of a houseboat rental operation. A new houseboats can cost anywhere from $50,000 to $200,000 depending on the size and amenities of the particular vessel. They are very expensive to maintain, and they depreciate quickly. However, it is our belief that a houseboat rental operation on Lake Berryessa could be very profitable, given the success of such operations at many lakes throughout California. No meaningful houseboat rentals are currently available at the lake.

Managers of lakeside resorts at comparable lakes such as Shasta, Mead, Mojave, Isabella, and Don Pedro with whom we spoke unanimously claimed not only that houseboats are the most profitable component of marina operations but that the most luxurious houseboats with the greatest number of amenities are the most popular and most profitable.

We developed a houseboat cash flow model for Markley Cove. However, the model can be used to represent similar operations elsewhere within the LBRA. For the analysis, we assumed that the concession at Markley Cove would run a houseboat operation consisting of twenty, top-of-the-line houseboats costing $200,000 each. This model does not account for the cost of associated parking, as parking costs are included in the general infrastructure costs for the Markley cove and all other proposed concession sites. However, it should be noted that houseboat operations require significant parking to accommodate the large groups that typically use each houseboat at one time, and thus the issue of parking should be revisited at Markley Cove (or any site accommodating houseboats) prior to implementation of Phase I. The houseboat operation will not need a separate marina from the one already proposed at Markley Cove. The houseboats can be anchored in open water during the season and stored off-site during the off-season. They can be repaired, cleaned, loaded, and fueled at the proposed Markley Cove docks. We estimated that these houseboats would rent for an average of $1,000 per night, a rate consistent with average spring/summer rates for high-end houseboats at

comparable lakes. According to operators of houseboat operations at lakes with similar climates to Lake Berryessa, the incoming concessionaire could most likely expect to rent houseboats from May through the end of September.

We collected operating cost statistics for houseboats from a number of sources including Water Resorts, Inc. (Houseboats.com) and houseboat resort managers at Lakes Shasta, Mead, Mojave, and Don Pedro. From this research, we determined that it is reasonable to assume that operating costs for the proposed houseboat operations would be about 60% of receipts. In this case, total operating costs are comprised of all annual operating expenditures including the cost to store the houseboats off-site during the off-season, but excluding replacement, interest, tax, and depreciation expenses, and in this case the operating costs also account for the expense. In this model, we assumed that the houseboats have a useful life of 16 years.[29]

Based on the above, we determined that the proposed houseboat operation would need to generate just over $1.7 million in annual revenues, or about $82,000 per year per boat to achieve financial feasibility (excluding inflationary growth and assuming nineteen of the twenty houseboats would be operational at any one time). Therefore, at an average fee of $1,000 per night, the 19 boats would need to be rented about 90 days per year, or about 60% of the time during an assumed May to September season. Achieving this level of demand appears reasonable, as most houseboat operation managers with whom we spoke reported nearly 100% occupancy throughout the summer and about 40% average occupancy during the shoulder months of May and September, or about 68% overall in an assumed May to September season.[30]

Validating our conclusions, houseboat operations expert Dave Smith of Water Resorts, Inc. (Houseboats.com), told us that houseboats should be expected to realize 45% of their capital costs (excluding capital costs) per year in a seasonal operation, or in the case of our analysis,

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[29] It was difficult to estimate the useful life of a houseboat due to the lack of consensus on this issue. According to Dave Smith at Water Resorts, Inc. (Houseboats.com), houseboats have a life of 20 years, and a resort operator should be able to sell each houseboat after ten years and recoup half of his/her money. In our model, we assumed a more conservative useful life of 16 years. This estimate is more consistent with conversations with houseboat operation managers.

[30] We spoke to houseboat operators at Lakes Shasta, Mead, Mojave, Don Pedro, and New Melones. We found that houseboat fleets ranged in size from 20 to 50 houseboats, and that all houseboat operators endorsed high-end, brand-new houseboats regardless of the mean household income of the visitor base.

$90,000 per houseboat in annual sales. The lake's beauty, sinuosity of its shoreline, the mild spring and fall weather, and the lack of competition all suggest that a houseboat operation at Berryessa could be very successful. In fact, we suspect that demand will warrant additional expansion of the houseboat operation beyond that proposed. However, because of the high capital costs associated with houseboats and, in truth, the unknown demand for this service at Berryessa, we recommend initially opening only the single houseboat operation as described in evaluated.

7. Other Boat Rentals

In analyzing the feasibility of other boat rental services at the LBRA, we assumed that under Phase I such boat rental services would be provided at the Markley Cove and Steele Park locations, which together would make available 20 ski boats and 16 personal watercrafts (PWC). (We assumed that the water ski operation will have its own fleet of boats that they use for water ski camps only. The proposed water ski operation is discussed separately, below.) The boats can be anchored in open water during the season and stored off-site during the off-season, and they can be repaired, and fueled at the proposed marina docks. This model does not include the cost of office space, presuming that the marina operation will have adequate office space to support the boat rental operations. We assumed that the boats would rent for an average of $275 per 8-hour day, a rate consistent with average rates for ski boats and PWC at comparable lakes.

We were unable to obtain published estimates of the operating costs of a boat rental operation or segregate non-houseboat boat rentals from the overall marina financial statements we did obtain. Therefore, we estimated the operating expenses of the proposed boat rental service based on a combination of interviews with marina operators and professional judgment, concluding that the costs for the proposed boat and PWC rental services would run at about 30% of receipts. In this case, we assumed total operating costs to be annual operating expenditures before replacement, interest, tax, and depreciation expenses. We separately accounted for the annual average anticipated expense to replace the boats and PWCs as necessary. This expense is substantial because of the generally short useful lives of these vessels. According to marina operators, ski boats used for rental operations have useful lives of five years and PWCs used for rental

operations have useful lives of one year only. Therefore, instead of including a reserve for capital replacement of 4% of gross revenues in our assessment of operating expenses (as we did for many other concession service categories), we assumed that the potential concessionaire(s) would replace all of its rental PWCs and 20% of its other rental vessels each year, conservatively assuming no salvage value at the end of the projected lives.

Our cash flow model indicates that the boat rental operations would need to generate approximately $543,000 a year in receipts to achieve an appropriate rate-of-return on investment. Assuming 90%, or 33 of the boats and PWCs would be available at any one time, this level of sales translates into 55 8-hour days per year of use per boat, or 17% annual rental occupancy.

The level of demand necessary to achieve feasibility appears to be realistic. Operators of concession operations at Lakes Shasta, Don Pedro, and New Melones have found that utilization is between 80% and 90% in the summer and remains substantial on shoulder-season weekends as well. Further, financial information from comparable boat rental concessions demonstrate that boat rental operations of a similar scale to that proposed at Berryessa generate revenues comparable to the revenues necessary for the proposed Berryessa boat rental operations to achieve feasibility.

Note that the scale of a boat rental operation is highly scalable. Specifically, it will not be necessary for the next concessionaire(s) to invest in a large fleet of boats or PWCs the first year following contract inception. Instead, the concessionaire(s) could initially invest in a smaller number of boats than we analyzed here and quickly expand the fleet as demand warrants. This strategy would also allow the concessionaire(s) to remain flexible to any changing policies concerning PWCs, engine types, or fuel additives such as MTBE's that might constrain such a rental service in the future.

8. Dry Boat Storage

Alternative B stipulates the construction of dry boat storage at the Rancho Monticello location, but provides few specific associated details. Dry boat storage appeals to boat owners, primarily

because it protects boats against bottom fouling and (if sheltered) deterioration from ultraviolet radiation, rain, and wind. If combined with an efficient service for transferring the boats between storage and the water, the storage service can provide the additional convenience of avoiding ramp traffic. A concessionaire can even provide "valet" service, where boat owners can arrange for the concessionaire to have their boats placed in the water at a courtesy dock, full of gasoline, and even supplied with ice, bait, food and beverages, all simply by making a phone call to the storage operator. For this reason, we initially expected that dry storage, and particularly dry stack storage, would have a positive financial impact on the proposed concessions, particularly since Lake Berryessa is near relatively high-income regions of Northern California such as Napa and the Bay Area. (Studies have shown that preference for dry stack storage versus wet boat slips increases as per capita income of the boat owners increases.[31])

We analyzed the projected cash flows for dry stack storage and concluded that in fact, dry stack storage at Berryessa is not as promising a business opportunity as anticipated. Based largely on discussions with a marina engineer and review of a previous dry stack storage feasibility study,[32] we concluded that the fixed capital and operating costs, such as those for the necessary storage shed and forklift, are such that dry stack storage is generally unprofitable for operations with less than 120 racks, and provides a reasonable rate-of-return only at a size of 200 racks or more, assuming near-capacity occupancy. Demand notwithstanding, space will most likely be an issue in the planning of the proposed concessions, and thus such a large dry stack storage facility may not be physically feasible. Further, our research indicated that the demand for dry-stack storage is highest by owners of second-homes on or near lakes. With the proposed removal of the long-term trailers, this demand base will be greatly reduced and thus the future demand for such storage highly uncertain. Accordingly, we recommend excluding dry stack storage as a minimum requirement for the Lake Berryessa concession contractor(s).

Note, however, that it is easy, relatively inexpensive, and potentially lucrative to include dry stand storage (non-stack) in the proposed concession operation(s). There are various ways to provide dry stand storage, ranging simply from providing unfenced, open space to supplying

[31] International Marina Institute, 1992.

trailers, valet service, and intricate security systems. For our analysis, we assumed a barebones dry storage facility for 100 boats would be provided at the Rancho Monticello site – in the form of a simple lot surrounded by a locked, 10-foot fence. Thus the associated capital investment costs would be simply the cost of the fence, some minor landscaping/grading, as well as a small share of distributed infrastructure. Our model assumed that dry storage customers would have their own trailers, and would simply need to ask a concession employee at Rancho Monticello to open the gate for boat retrieval. We assumed that such a dry boat storage facility would rent spaces for an average of $80 per month, reflecting a $4 per foot per month fee and store boats with an average length of 20 feet. This fee is consistent with the low end of similar dry storage operations at lakes throughout California and seems appropriate for the minimal service dry storage services assumed in our analysis. Operating expenses are conservatively estimated to be about $11,000 per year, based on two hours per day of labor and 10% of the estimated capital cost of the fencing for annual maintenance.

Because of the small capital cost involved with creating a dry storage lot, our cash flow model indicates that the operation would require only $29,000 per year in rental revenues to achieve financial feasibility. This translates to about 30% occupancy, which is lower than what we would expect a potential concessionaire to achieve, suggesting that such a storage facility would be financially feasible. Additionally, simple dry storage of this kind is easily scalable and is really only limited by the availability of space. While the developable space at the Rancho Monticello site may prove to be a limiting factor in the proposed Phase II expansion, there will be ample space under Phase I at the proposed Rancho Monticello concession for dry-stack storage. Therefore, a potential concessionaire may want to include more simple dry storage space than is proposed in this analysis, as the availability of dry storage will likely channel visitors to the other concession services.

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[32] Conversation with Tim Bazley, of Blue Water Design Group, and Dornbusch Associates financial feasibility analysis of Spud Point Marina, May 2000.

9. Restaurant

Phase I of Alternative B recommends that full-service food and beverage service (restaurants) be provided at two of the proposed development sites. A standard, 2,500 square foot size for each restaurant was recommended for Lake Berryessa by a restaurant industry expert and thus adopted for the analysis.[33] In actuality, however, a potential concessionaire would likely scale the restaurant to be consistent with both the relative size and theme of the rest of the nearby concession facilities. Based on a review of restaurant operating statistics available from the National Restaurant Association, we assumed that the per-person check at the proposed restaurants would average about $12 (average between lunch and dinner). We also assumed that while some alcoholic beverages would be made available at the restaurants, they would primarily be configured to provide sit-down, family style service. Again, these generalizations will need to be fine-tuned by a potential concessionaire to be consistent with the specific restaurant theme and scale.

Restaurants are often not very profitable due to the high costs of equipment, food and supplies, food spoilage, and labor. Of the nearly 1,500 restaurants surveyed for the National Restaurant Association's Restaurant Industry Operations Report,[34] 30% reported being unprofitable based on operating expenses alone (i.e., before accounting for capital costs). According to the Restaurant Industry Association, average operating costs for full-service single-unit restaurants are 85% of gross receipts. Again, we assumed total operating costs to be annual operating expenditures including a capital replacement reserve but excluding interest, tax, and depreciation expenses.

Based on estimated construction costs, substantial FF&E expenses, and operating expense ratios, we concluded that each of the two proposed restaurants would need to generate on average about $363,000 per year in sales (excluding inflationary growth) to return 15% on the concessionaire's

[33] Conversation with Adam Block, of Block and Associates 4/23/02.
[34] 1998 Restaurant Industry Operations Report, National Restaurant Association.

investment.[35] This revenue translates to about $1,000 in sales per day per restaurant year-round, or about 83 people per day per restaurant assuming an average check per cover of $12. 83 people per day at two restaurants translates into over 60,000 diners annually, or over 5% of the estimated total number of visitors to Lake Berryessa in 2001.

Our research revealed that restaurants in marina resort concessions are generally break-even or not profitable. 2000 to 2001 restaurant revenues at eight comparable concessions for which we obtained financial information ranged from $120,000 to nearly $400,000, depending in large part on the length of season and hours of daily operation. However, on average, these eight restaurants experienced a loss of 17% on total receipts, even before accounting for overhead or capital replacement.

On the other hand, relatively simple restaurant menus and operations, and restaurants that do a large bar business can prove viable. To illustrate, the current Steele Park concession, generated about $250,000 in food and alcohol revenue in 2000, realizing a departmental net income of about 10% (before the any expenditures on facility capital replacement).

Interviews with resort operators at Lakes Shasta, Mead, Mojave, and Don Pedro suggest that while restaurants are usually the least profitable component of their operations, they are a critical and complimentary service in the context of the overall concession enterprise particularly if there are no alternative eating places nearby. Additionally, the demand for food and beverage services will most likely increase with the removal of the long-term trailers, as trailer tenants are much more likely to bring their own food to Lake Berryessa than other day-use and overnight visitors. Furthermore, the proposed Phase I development will force all restaurant demand (from marina activities at seven resorts) through just two full-service restaurants. Because of the lack of alternative nearby food and beverage options, the likelihood of financial success at the two proposed restaurants is better than at many of the other lakeside resorts we analyzed, where there

[35] Stand-alone restaurant operations are often evaluated applying higher rate-of-return assumptions due to their inherent risk and limited profitability. In this model, we evaluated the restaurant component at an assumed 15% IRR, because the restaurant is one part of a larger operation, which includes many relatively lower-risk enterprises and helps to diversify the risk of individual components. Additionally, all marina resort managers with whom we spoke asserted that food and beverage service is an integral part of a marina resort, and cannot be eliminated despite its limited profitability.

is significant competition. For this reason, we recommend that food and beverage services remain a part of the Phase I, but that potential concessionaires be offered the opportunity to propose cost-cutting measures such as seasonal food operations, limited table service, and/or limited menus.

10. Limited-Service Restaurant (Snack Bar)

Alternative B recommends that there be fast-food snack bars at two of the development sites in Phase I of the contract, at the Pleasure Cove and Steele Park locations. The standard, 1,500 square foot size of each snack bar was the size recommended for Lake Berryessa by a restaurant industry expert and thus assumed for the analysis.[36] In actuality, however, a potential concessionaire should scale the snack bar to fit both the size and theme of the concession, and consider how to best complement any full-service restaurant at the site. Based on a review of restaurant operating statistics available from the National Restaurant Association, we assumed that the per-person check of the proposed limited-service restaurants would average about $6. We also assumed that alcoholic beverages would not be made available at these snack bars.

Like full-service restaurants, snack bars also incur high costs of equipment, food and supplies, food spoilage, and labor costs. Of the 175 limited-service fast food restaurants surveyed in the National Restaurant Association's Restaurant Industry Operations Report,[37] 27% reported being unprofitable based on operating expenses alone, and not including capital costs. According to the Restaurant Industry Association, average operating costs for limited-service single-unit restaurants are 81%. Consistent with the rest of our analysis, we assumed total operating costs to be annual operating expenditures including a reserve for capital replacement but excluding interest, tax, and depreciation expenses.

Based on the above, we estimated that each of the proposed snack bars would need to generate on average about $112,000 per year in sales (excluding inflationary growth) to return 15% on the concessionaire's investment. This revenue translates to nearly $310 in sales per day per snack

[36] Conversation with Adam Block, 4/23/02.
[37] 1998 Restaurant Industry Operations Report, National Restaurant Association.