

## 1.1 INTRODUCTION

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This Boating Needs Assessment was undertaken on behalf of the California Department of Boating and Waterways (DBW) in cooperation with the Delta Protection Commission's Recreation Citizen's Advisory Committee. The study was carried out during the period of 2000 to 2002 and was conducted to review and evaluate the status and needs associated with recreational boating in the Sacramento – San Joaquin Delta. Several outreach components were involved in this effort including information gathering through workshops and surveys, and the subsequent analysis of the various data obtained. Existing and future levels of boating-related recreational use in the Delta were projected. In addition to these estimates, the study also projected the cost expected to meet both existing and future facility needs to accommodate those levels.

The basic purpose of these efforts was to provide both the Department of Boating and Waterways and the Delta Protection Commission with information that would be usable for future planning and budgetary purposes. In addition, this study is intended to provide the two state entities with an overview of the actions identified in the CALFED Preferred Alternatives (as described in the *Programmatic Record of Decision, 2000*) from the perspective of recreational impacts and opportunities with respect to the Delta.

## 1.2 EXECUTIVE SUMMARY

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### PRIMARY OBJECTIVES

The primary objectives of the study are listed below in sequence to convey both the process involved and the purpose of the various study components. This Executive Summary lists and briefly explains the methodology used and then describes the basic findings for each objective.

#### 1. Obtain an Understanding of Boater Needs

The first objective of the study was to obtain an understanding of boating needs, attitudes, and activities through a variety of survey and outreach efforts.

There were three primary audiences specifically targeted:

- Owners and operators of boats 26 feet or greater in length (large boats)
- Owners and operators of boats less than 26 feet in length (small boats)
- Delta boating facility operators and owners

Data gathering was accomplished through a review of recent literature and studies about the Delta and through the implementation of four separate surveys of boat owners and facility owners/operators. Additionally, multiple stakeholder and special interest group workshops were held in the Delta region to obtain supplementary input pertaining to Delta boating recreational needs. A complete breakdown of this information is contained within the body of the report and its appendices. Significant findings related to the outreach effort include:

- A majority of respondents consider existing facilities in their present condition *fine as is*. However, numerous specific suggestions and concerns were flagged in the *add/expand* category – more prevalent than the *repair/replace* category of responses.
- Specific facility issues identified included restrooms, beaches, day-use areas, launch ramps, buoy fields, and fuel docks.
- Among those who indicated specific facility needs, the perception of needs varied considerably by boat size. Owners of large boats are primarily interested in bilge water pump-outs, long-term tie-ups, and oil disposal. Small-boat owners want more or improved restrooms and showers, campgrounds, day-use and picnic areas, parking, carry-down walkways, and launch ramps. Boat owners from both groups are most in agreement about the need for more, or improved, short-term tie-ups.
- Small-boat owners primarily focused their site references on the central area of the Delta – generally in the West Zone. Owners of larger boats also mentioned the West Zone more than other Delta zones and typically referenced sites in the Central and East Zones as well. Compared to large-boat owners, owners of small boats responded to questions regarding specific site-related needs with *more and better* facilities as their preference.

- Numerous operations and maintenance concerns were also raised – primarily focusing on inadequate public facilities and law enforcement and on the need for aquatic vegetation control and localized dredging.
- Respondents ranked the natural values in the Delta rather high, but the survey and other outreach efforts revealed a commonly shared perception of poor water quality in the Delta. These perceptions are, in part, attributable to the basic conditions and natural processes occurring in the Delta (i.e., peat soils and estuarine conditions).

### ***2. Develop an Updated Inventory of Delta Boating-Related Facilities as a Baseline***

The second study objective was to develop an updated inventory of Delta boating-related facilities. This updated inventory was developed as a baseline in order to measure future projected facility needs against an existing inventory. Quantified boating facility components include: boat slips, boat launch lanes, parking spaces, transient dock tie-ups, restrooms, showers, day-use facilities, campsites, fuel stations, bilge pump stations, and dry storage facilities. This database was developed through the focused surveys and field visits of 65 Delta marinas, plus 30 marinas listed in other inventories. **Table 1-1** lists the 2001 inventory of significant boating-related facilities in the Delta.

### ***3. Determine Repair/Replacement Needs for Boating Facilities and Order of Magnitude Cost Estimates***

The third study objective was to determine a cost estimate for the replacement, upgrade, and repair of the existing inventory of Delta boat-serving facilities. When the facility inventory described above was conducted, an assessment was also made of the existing facilities, including the condition and capacities of the various boat-serving facilities in the Delta. The determination of the cost basis was developed with the support of a marine-specialized engineering firm. Cost models were developed that fit the profile of typical marinas in the Delta. Using these data, a range of costs from year 2001 to year 2020 was developed in five-year intervals. The following are significant findings pertaining to boating facility replacement needs and estimates of costs.

**Table 1-1  
Inventory of Existing Facilities**

<b>Facility</b>	<b>2001 Inventory</b>
Boat Slips, Covered	8,170
Boat Slips, Uncovered	3,504
Boat Launch Lanes	78
Vehicle with Boat Trailer Parking Spaces	2,115
Transient Dock Tie-Ups	309
Restroom Stalls	677
Day-Use Picnic Sites	324
Fuel Stations	56
Dry Boat Storage Facilities	5,542

- In general, survey data indicate that Delta marina facilities have had a long-term presence in the region, with 54 out of 61 of the respondents indicating their marinas have been in operation for 21 years or more. Of this number, 44 marinas are older than 40 years and 10 are between 20 and 40 years old.
- Due to the age of most of the marinas in the Delta, a large backlog of deferred maintenance was identified during the site survey process.
- Marina owners identified their facility replacement, upgrade, and repair needs in the following order of priority: dredging, docks/slips, dry boat storage, launch ramp lanes, parking, and transient docks.
- Twenty-two marina owners reported that their marinas currently need dredging.
- In general, an upgrading trend for Delta boat slips involves the conversion of smaller slips to slips that can accommodate large boats over 26 feet in length and for boats that can be berthed in the Delta year around.
- The cost of meeting facility replacement, upgrade, and repair needs at 95 marinas through the year 2020 was estimated to range from \$107 million to \$159 million.

**4. Develop a Boating Recreation Demand Model and Estimate Existing and Future Recreation Use**

The fourth study objective was to establish a current (baseline year 2000) estimate of boating and visitor activity in the Delta and then develop a demand model based on boat ownership trends, population growth projections, and other key indicators. This objective was accomplished by deriving data from the implemented owner surveys and then supplementing this database with extrapolations from previous Delta recreation studies (principally those carried out by the California Department of Parks and Recreation and the Delta Protection Commission).

This information was used to determine frequency patterns for the various targeted boater categories that have used the Delta waters within the past two years. The range of data acquired and developed included the length of boater trips and the number of people in attendance during those trips. The data provided the foundation for the “demand model” that was then tabulated and analyzed to generate peak-day use and annual boating-related visitor days for the baseline of year 2000. Primary Market Area and Primary Boating Population determinations were made and applied against the estimated projected growth rate in order to determine use projections for the selected milestone years of 2005, 2010, 2015, and 2020. This model produced an estimate of annual boater visitor days.

An Econometric or Supply Model was also used for forecasting use-levels within the Delta – further broken out to six geographic sub zones. This methodology produced a year 2020 estimated annual boater visitor days within one percent of the results of the Demand Side Model. Visitation estimates developed by the Demand Model are as follows:

- Total year 2000 annual boating-related visitor days of use are estimated at 6.4 million with 2.13 million boating trips.
- Peak-day use for the year 2000 is calculated at 25,158 with 8,386 boats.
- 93 percent of the boating trips are in the small boat category and 7 percent are large boats.
- Annual peak-day visitation is expected to climb over the next 20 years due to multiple

factors which include an increasing population within the Primary Market Area, an increasing population within the boat ownership age group, increasing boat ownership, and an assumed improvement of the Delta resource as a result of implemented CALFED actions.

- 8 million annual boating visitor days of use in the Delta are projected for the year 2020.

**5. Ascertain Existing and Future Facility Demand Based on Boating Recreation Demand Projections**

The fifth study objective was to ascertain current and future Delta facility demand levels responsive to boating recreation demand modeling. This model was developed by applying professional standards and ratios vis-à-vis peak-day forecasts in order to determine estimates for facilities required for the target milestone years. **Table 1-2** lists the anticipated facility deficiencies for select facility categories for the 2001–2020 time period.

**Table 1-2  
2001-2020 Estimated Facility Deficit**

Facility	2001-2020 Deficit
Boat Slips, Covered	2,051
Boat Slips, Uncovered	880
Boat Launch Lanes	92
Vehicle with Boat Trailer Parking Spaces	1,968
Transient Dock Tie-Ups	273
Restroom Stalls	187
Day-Use/Picnic Sites	173
Fuel/Pumping Stations	14
Dry Boat Storage Facilities	466

**6. Develop Order of Magnitude Cost Estimates for Current and Future Facility Needs**

The sixth study objective was to develop order of magnitude cost estimates to cover current and future boating facility needs. The determination of the basis of costs was developed utilizing the expertise of a marine facility-specialized engineering firm. Costs were expressed in year-2000 dollars. Summary cost estimates are as follows:

- The cost to eliminate year 2000 facility deficiencies is estimated to be approximately \$10 million.
- The estimated cost of keeping up with increasing facility demands from 2005 through 2020 will be an additional \$74 million.

**7. Review the Boating Needs Assessment from the Perspective of the Array of CALFED Bay-Delta Preferred Program Actions**

The seventh objective was to review and evaluate the twelve identified CALFED Bay-Delta alternative projects in terms of their potential impacts and/or opportunities with respect to recreation activities and facilities in the Delta. From this analysis, new recreation facilities can be identified that might result from CALFED-related activities. These recreation facilities would serve either as mitigation to the identified potential impacts or as new opportunities for recreation related to the CALFED Bay-Delta actions. Significant findings relative to the CALFED program include:

- Most of the CALFED Bay-Delta Program proposed actions have both potential impacts and benefits with respect to recreation in the Delta. (Eight of the twelve have potential impacts and nine of the twelve have potential benefits.)
- Close collaboration between the recreational boating program and the CALFED Bay-Delta Program could result in minimizing impacts, determining viable mitigation projects, and optimizing opportunities.
- The major resource concern identified by boaters is the quality of the water. Improving water quality is also one of the four major program areas outlined in the CALFED *Record of Decision*.

- A complete analysis of each proposed CALFED action along with a companion analysis of the impacts and benefits with respect to recreation is found in **Chapter 7**. A final summary of this information can be found in **Chapter 8**.

**8. Evaluate Study Findings through a Comparative Review of the Different Surveys and Anecdotal Information**

The final objective of this study was to review and compare the various findings to determine patterns of correlations and anomalies between them. The facility manager/operator data were tabulated, summarized, and compared to the survey responses of the boat owners and finally to the comments of the workshop participants. The existing facility needs derived from the visitation data and the application of accepted standards were compared against survey respondent desires. The CALFED program actions were compared against existing and future needs. The significant findings are as follows:

- The boat owner survey results and the marina owner/manager survey results demonstrated a high level of correlation in the categories of facility replacement, upgrade, and repair.
- These responses were further corroborated by the workshop participant comments that generally reinforced and added nuance to the boater survey findings.
- The inventory of existing facilities and the companion replacement, upgrade, and repair analysis both verified the need for upgrade as identified in the surveys of the boat owner and marina operator survey groups.
- The shortage of key facilities, such as restrooms, as identified in the boat owner survey process, was also verified through the demand numbers developed by analyzing existing visitation with the accepted facility standards.
- The marina owner/operator's pattern of converting existing small-boat slips to larger slips was validated through findings of existing and projected growth of large-boat usage.
- Potential recreation additions to the CALFED Bay-Delta Program actions can be justified by the demonstrated existing and projected facility needs.