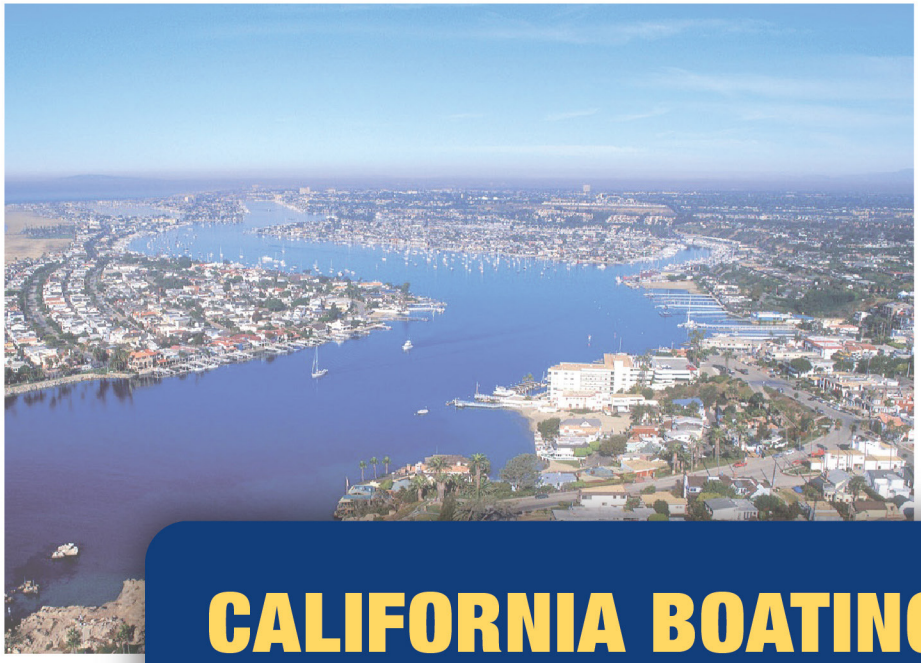
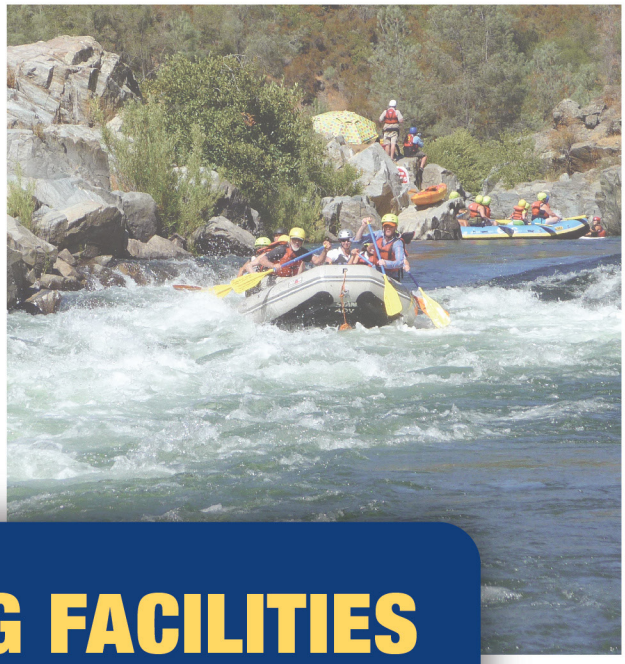
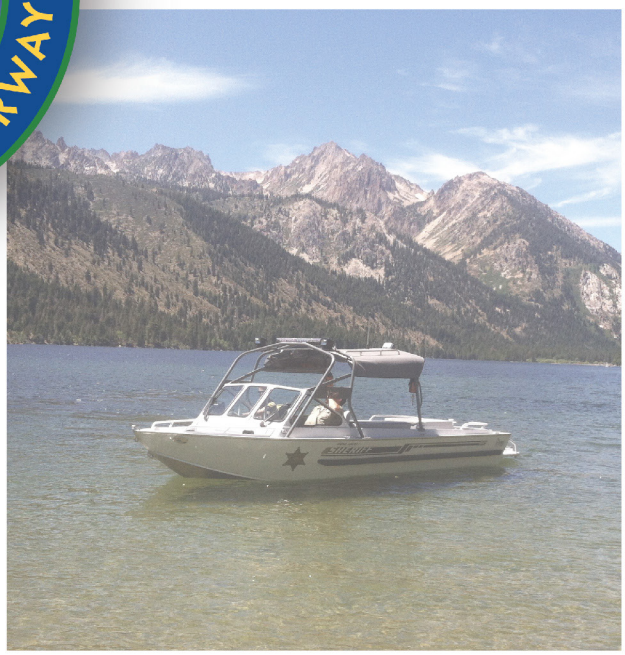




CALIFORNIA BOATING FACILITIES NEEDS ASSESSMENT

2019

CALIFORNIA STATE PARKS
BOATING AND WATERWAYS



PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

CALIFORNIA BOATING FACILITIES NEEDS ASSESSMENT

State of California

Gavin Newsom, Governor

California Natural Resources Agency

Wade Crowfoot, Secretary

California Department of Parks and Recreation

Armando Quintero, Parks Director

Division of Boating and Waterways

Ramona Fernandez, Acting Deputy Director

December 2019

The California Boating Facility Needs Assessment was prepared under contract by:

California State University, Sacramento

SACRAMENTO STATE

Principal Investigators

Dr. Amy Mickel, *College of Business Administration*

Dr. David Rolloff, *Department of Recreation*, *Parks and Tourism Administration* Dr.

Stanley Taylor, *College of Business Administration*

Contractors would like to acknowledge and thank the following individuals from the Division of Boating and Waterways.

Deputy Directors: Ramona Fernandez, *Acting Deputy Director;* Lynn Sadler, *Former Deputy Director;* Christopher Conlin, *Former Deputy Director, Gloria Sandoval, Deputy Director of Public Affairs*

California Boating and Waterways Commission: Randy Short, *Former-Chair;* Katherine Pettibone, *Vice Chair;* Brian Cooley, *Member;* David Livingston, *Member;* Virginia Madueño, *Member;* Douglas W. Metz, *Member;* Frank Peralta, *Member*

CBFNA Project Managers: Jeffrey Caudill, Charley Hesse, and Jared Zucker

DBW Employees: Keren Dill, Brian Carroll, Joleane King, and Amy Rigby.

Contractors would like to acknowledge and thank the following individuals for their work on this project. Without their dedication, this project would not have been possible.

Senior Research Assistants: Heather Everett, Laura Gray, and Casey White

Junior Research Assistants: Elizabeth Armas, Laurel Pyle, Cinthia Spitaleri, and Kyle Weisenthal

Graphic Designer: Nathan Rinehart

CSUS, Department Chair of RPTA: Dr. Greg Shaw

CSUS, IT Support: Carl Kelley

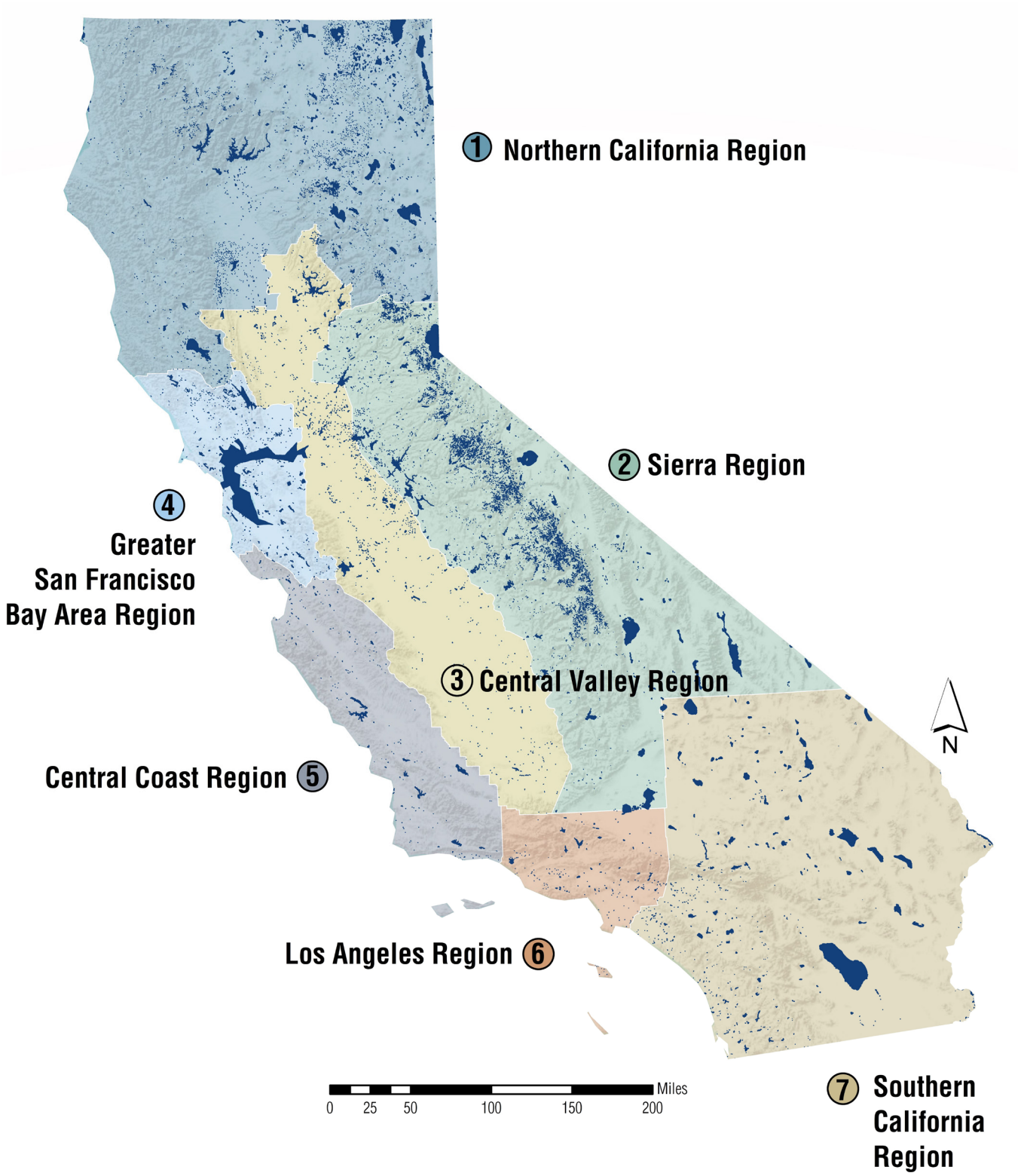
Thank you to everyone who participated in this study by completing a survey or attending a focus group interview.

CBFNA TABLE OF CONTENTS

Introduction

The 2018 *California Boating Facilities Needs Assessment* (CBFNA) is comprised of ten volumes. *Volume I: Introduction* provides an overview and background of this study. *Volume II: Methods* details the methodology used in this assessment. *Volume III: Statewide* summarizes the main findings across the state. *Volumes IV – X: Regions* presents findings affiliated with each one of the seven specific regions and their respective waterways. This *Executive Summary* provides an overview of the report and key findings.

For this project, the State of California is divided into seven different regions similar to those outlined in the *Outdoor Recreation Planning Program* (DPR, 2013).[1] Recognizing regional difference and county governance, DPR has utilized similar sub-regions of the state since the 1970s in an effort to provide more detailed, local perspectives when necessary for resource planning efforts. Slight changes were made for this study's regional boundaries when the characteristics of lakes and rivers were more similar to adjacent regions; for example, where geology or elevation made some of the lakes in the Central Valley Region a better fit with those in the Sierra Region, slight alterations were made.



[1] *California State Parks . (2013). Outdoor Recreation in California's Regions 2013. Planning Division. Sacramento, California: California Dept. of Parks and Recreation. Retrieved from https://www.parks.ca.gov/pages/795/files/2013%20regions.pdf*

Highlights of this *California Boating Facilities Needs Assessment* [2] are outlined below.

- Findings related to facilities and the boating population of California are comprehensive and integrative.
- Motorized and non-motorized boater recreation information and perspectives are included.
- Multiple Unit Day Values (UDV) identifying the economic significance of boating in California are generated based on waterway classifications and regions, in contrast to previous facilities needs efforts which only generated one UDV for the entire state.
- Boating facility needs and issues are identified for each distinct waterway within the seven regions.
- Recreational boating trends for motorized and non-motorized boating are discussed.
- Recommendations for future Boating Facilities Needs Assessments and other boating-related studies are provided.

Data collection efforts to update and generate information about boating facility needs and boating-related issues were extensive, including surveys, focus groups, phone interviews, and other data sources. Surveys were created and disseminated to four target populations: motorized recreational boaters, non-motorized recreational boaters, facility owner or managers, and law enforcement.

Recreational Boater Surveys: Summary of Findings

Recreational Boater Participants' Characteristics

Characteristics of motorized and non-motorized recreational boaters are summarized in Table ES-1. Findings suggest the motorized boating population is more homogenous than the non-motorized boating population in California.

Table ES-1. Comparison of Motorized and Non-motorized Study Participants

Characteristic	Motorized Boaters	Non-motorized Boaters
Sex / Gender	90% Male 9% Female 1% Prefer not to say	53% Male 46% Female 1% Prefer not to say
Age Range (in years)	0% 18 - 29 5% 30 - 49 33% 50 - 69 62% 70 +	7% 18 - 29 27% 30 - 49 57% 50 - 69 9% 70 +
Ethnicity / Race	88% White 12% Other	73% White 11% Asian 14% Other
Education (2-year college or more)	72% Higher Education	90% Higher Education
Income	16% Under $50K 33% $50K -99K 51% $100K or more	13% Under $50K 32% $50K -99K 55% $100K or more

[2] Highlights are the significant ways in which this California Boating Facilities Needs Assessment differs from the last California Boating Facilities Needs Assessment conducted in 2002.

Study Participants' Boat Ownership

The top five most common motorized and non-motorized watercraft are summarized in Table ES-2. Over half of the motorized boater participants own a powerboat (53.2%). There is more variation in types of non-motorized watercraft owned by participants, with stand up paddleboards, outrigger canoes, and kayaks as the main boat types.

Table ES-2. Study Participants' Boat Ownership

Motorized Boaters		Non-motorized Boaters	
53.2%	Powerboat	16.2 %	Stand up paddleboard (SUP)
12.5%	Bass boat / jon boat	14.9%	Outrigger canoe
8.5%	Sailboat (> 8 ft) w/ aux	11.4%	River kayak
6.6%	Rowboat w/ motor	11.1%	Ocean kayak (touring)
6.1%	Cabin cruiser	10.3%	Ocean kayak (sit on top)

Facility Needs Identified by Boater Study Participants

Facility needs reported by motorized (Table ES-3) and non-motorized boaters (ES-4) are highlighted below. The need for additional **restrooms** is the number one shared need identified by study participants. **Parking, launch facilities** (ramps for motorized and spots for non-motorized), and **boating access** are additional high-priority needs identified by both boater subpopulations.

Table ES-3. Motorized Boater Facility Needs for State

Motorized Facility Need	Count of Needs Identified	Percent of All Needs
Restrooms	1236	10.8%
Launch Ramps	1221	10.7%
Day Docks	1043	9.1%
Boating Access	912	8.0%
Parking Vehicles / Trailers	881	7.7%
Fish Cleaning Stations	767	6.7%
Floating Docks/Piers	605	5.3%
Slips (Marinas)	553	4.8%
Supply Stores	551	4.8%
Landings/Boat-in Sites	548	4.8%
Showers	527	4.6%
Transient facilities / tie-ups	387	3.4%
Navigational Aids	371	3.2%
Marine Service and Repairs	358	3.1%
Pump-out Stations	309	2.7%
Mooring Fields	294	2.6%
Boarding Floats	269	2.4%
Utilities	226	2.0%
Dry Storage	225	2.0%
Emergency Services	161	1.4%

Total Count = 11,444

Table ES-4. Non-motorized Boater Facility Needs for State

Non-motorized Facility Need	Count of Needs Identified	Percent of All Needs
Restrooms	790	13.9%
Parking	772	13.5%
Launch Spots -by Hand	682	12.0%
Boating Access	498	8.7%
Showers	475	8.3%
Landings	403	7.1%
Access to Fresh Water	376	6.6%
Take-out Spots	327	5.7%
Boat-in Campsites	267	4.7%
Security	224	3.9%
Boat-in Day-use Areas	209	3.7%
Launch Spots -by Other Means	195	3.4%
Navigational Aids	151	2.7%
Emergency Services	133	2.3%
Supply Stores	111	1.9%
Boat Storage	69	1.2%
Rinse Station-Boats/Gear	7	0.1%
Garbage Cans	4	0.1%
Personal Storage	3	0.1%
Campgrounds	2	0.0%

Total Count = 5,698

Boating Issues Identified by Boater Study Participants

Boating issues identified by motorized (Table ES-5) and non-motorized boaters (ES-6) are outlined below. **Overcrowding** is one of the main issues shared by study participants. **Lack of parking, poor water conditions** (insufficient depth for motorized and poor water quality for non-motorized paddlers), and **reckless Personal Watercraft (PWC) operators** are also identified as issues by both boater subpopulations.

Table ES-5. Motorized Boater Issues for State

Motorized Boater Issue	Count of Issues Reported	Percent of All Issues
Insufficient Water Depth	994	15.3%
Overcrowded	888	13.7%
Reckless PWC Operators	807	12.4%
Lack of Parking	650	10.0%
High Use Fee	585	9.0%
Poor Ramp Conditions	526	8.1%
Floating Debris	419	6.4%
Issues with Motorized Boaters	332	5.1%
Poor Water Conditions	323	5.0%
Invasive Species	188	2.9%
Rude/Excessive Law Enforcement	187	2.9%
Lack of Law Enforcement	185	2.8%
Issues with Non-motorized Boaters	142	2.2%
Poor Road Access	129	2.0%
Reservations Required	108	1.7%
Issues with Shipping Vessels	42	0.6%

Total Count = 6,505

Table ES-6. Non-motorized Boater Issues for State

Non-motorized Boater Issue	Count of Issues Reported	Percent of All Issues
Lack of Parking	590	26.2%
Overcrowded	295	13.1%
Poor Water Conditions	214	9.5%
Boating Access	203	9.0%
Issues with Motorized Boaters	192	8.5%
Reckless PWC Operators	167	7.4%
Floating Debris	164	7.3%
Poor Ramp Conditions	118	5.2%
Lack of Law Enforcement	92	4.1%
Invasive Species	60	2.7%
Poor Road Access	57	2.5%
Issues with Non-motorized Boaters	32	1.4%
Rude/Excessive Law Enforcement	31	1.4%
Issues with Shipping Vessels	27	1.2%
Reservations Required	14	0.6%

Total Count = 2,256

Reasons for Visiting Particular Waterways Identified by Boater Study Participants

In response to survey questions asking why they visit a particular waterway, both motorized (ES-7) and non-motorized (ES-8) boaters cited waterways **close to home** with **scenery/natural beauty** as the top two reasons.

Table ES-7. Reasons Motorized Boaters Visit a Waterway

Reasons for Motorized Boaters	Count of Reasons Reported	Percent of All Reasons
Close to Home	2601	23.0%
Scenery / Natural Beauty	1641	14.5%
Good Fishing	1614	14.3%
Large Water Area	1441	12.7%
Clean Water	1095	9.7%
Not Crowded	634	5.6%
No Fees	597	5.3%
Good Facilities	507	4.5%
Good Camping	393	3.5%
Close to Vacation Home/ Camp	365	3.2%
Warm Water	262	2.3%
No Restrictions	166	1.5%

Total Count = 11,316

Table ES-8. Reasons Non-motorized Boaters Visit a Waterway

Reasons for Non-motorized Boaters	Count of Reasons Reported	Percent of All Reasons
Close to Home	1091	28.4%
Scenery / Natural Beauty	919	23.9%
No Fees	480	12.5%
Clean Water	332	8.7%
Not Crowded	247	6.4%
Good Facilities	242	6.3%
Few Motorized Boats	192	5.0%
No Restrictions	84	2.2%
Good Camping	79	2.1%
Close to Vacation Home or Camp	70	1.8%
Good Fishing	51	1.3%
Warm Water	51	1.3%

Total Count = 3,838

Most Frequented Waterways by Recreational Boaters

Survey participants were asked the question: *Which two waterways have you visited most frequently within the past 2 years?* The 20 California waterways most frequently visited by motorized and non-motorized study participants are identified in the map below. This subset of 20 waterways represents approximately 45% of all of the waterway counts, and the remaining 55% vary across a wide range of waterways.[3] Information about all frequented waterways can be found by regions in *Volumes IV – X: Regions.*

[3] 5,349 boater surveys were collected and produced 8,500 data points (waterways counts) as a result of survey respondents identifying two waterways when applicable (see Table 2 in Volume II: Methods). The 20 waterways represent 45% (3,865) of the total waterway count. 2,349 waterway counts represent motorized boaters' perspective with the remaining 1,516 representing non-motorized boaters' perspective.

To illustrate the frequency of use reported by study respondents, a system of symbols is used to show the volume of responses for each body of water listed in Table ES-9. The one "propeller" icon represents approximately 5% of motorized-boater waterway counts. For example, San Francisco Bay represents 10% (2 propellers) of the most frequently visited waterways by motorized boaters. Similarly, the "paddle" icon represents approximately 5% of non-motorized-boater waterway counts. San Francisco Bay represents 25% (5 paddles) of the most frequently visited waterways by non-motorized boaters.

More icons equate to being identified by study participants as their preferred waterway for recreational boating.

Table ES-9. Reported as Primary Waterway by Respondents

Primary Waterway	Motorized and Non-motorized Boaters
San Francisco Bay	
Mission Bay	
San Diego Bay	
Colorado River	
Pacific Ocean (Southern California)	
Sacramento River	
Folsom Lake	
Monterey Bay	
American River-South Fork	
Shasta Lake	
Lake Tahoe	
Sacramento-San Joaquin Delta	
Dana Point Harbor	
Newport Harbor	
Lake Nacimiento	
Lake Havasu (note: lake borders CA & AZ)	
Oceanside Harbor (Marina Del Mar)	
Lake Oroville	
Long Beach Harbor	
Ventura Harbor	

Total Count for Motorized = 2,349

Total Count for Non-motorized = 1,516

[4] *For San Francisco Bay, this represents the entire bay. In Volume VII: Greater San Francisco Bay Area, different areas on the bay are analyzed.*

Unit Day Values

A unit day value is an established way to measure recreational benefits boaters gain from the experience of boating on a particular body of water. How unit day values are calculated for this *Boating Facilities Needs Assessment* is discussed in detail in *Volume II: Methods*. Because California is comprised of many different types of waterways and geographic regions, and the recreational value differs across types of waterways and regions. Multiple unit day values for the range of waterways were generated within each region (instead of a universal unit day value). Within each region waterways were classified based upon two factors.The first was water type (i.e., salt water, lakes/reservoirs, and rivers), and the second focused on the various boat types primarily used on the waterway. Ten waterway categories emerged (see classification descriptions *Volume II: Methods – Tables 3-5)*, and 408 California waterways used for recreational boating were classified into the 10 different waterway categories (see *Volume II: Methods – Appendix M*).

The unit day values generated for each of the waterway categories within the seven different regions are presented in Tables ES-10, ES-11, and ES-12. [5]

Table ES-10. Unit Day Values for Salt Water Classifications

REGION	Small Bay/Harbor	Large Bay/Harbor	Ocean
Northern California	$35.08	$39.60	$46.19
Sierra	-------	-------	-------
Central Valley	-------	-------	-------
San Francisco Bay Area	$33.51	$32.08	$38.77
Central Coast	$50.74	$39.60	$47.18
Los Angeles	-------	$45.51	$44.29
Southern California	-------	$29.50	$40.37

Total Count = 3,231

Table ES-11. Unit Day Values for Lake/Reservoir Classifications

REGION	Restricted Lake	Motorized Lake	Overnight Lake
Northern California	$38.43	$36.92	$43.78
Sierra	$48.81	$40.38	$45.04
Central Valley	$34.42	$42.07	$38.35
San Francisco Bay Area	$21.03	$33.77	$47.80
Central Coast	$38.43	$47.71	-------
Los Angeles	$45.19	$60.69	-------
Southern California	$45.19	$49.03	$68.19

Total Count = 3,153

[5] Cells with missing values reflect those waterway types that do not exist in certain regions. For example, salt water classifications do not exist in the Central Valley or Sierra regions. In some instances, there were not enough data points for a particular waterway type in a region. In these scenarios, the waterway data points were merged across regions and are reflected as cells with the same UDV. For example, restricted river data points from all regions were consolidated to generate the UDV for this category.

Table ES-12. Unit Day Values for River Classifications

REGION	Whitewater River	Restricted River	Motorized River
Northern California	$49.20	$40.02	-------
Sierra	$45.77	$40.02	$41.57
Central Valley	-------	$40.02	$41.57
San Francisco Bay Area	-------	$40.02	-------
Central Coast	-------	$40.02	-------
Los Angeles	-------	$40.02	-------
Southern California	-------	$40.02	$57.21

Total Count = 1,117

Boating Trends

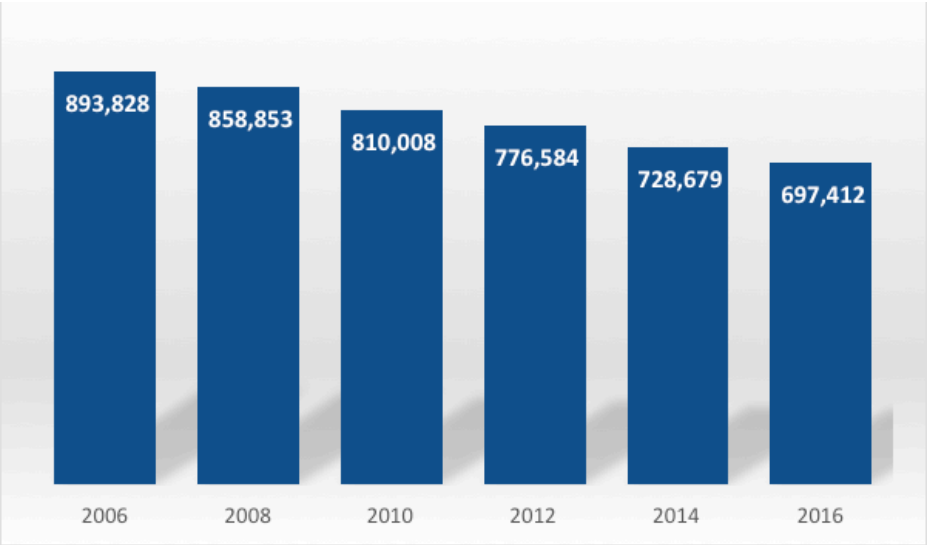
Described in *Volume II: Methods*, numerous sources were consulted to assess and characterize boating trends in California. In brief, motorized boating is declining, while non-motorized boating is increasing. This is reflected in representative quotes from facility owners and managers.

> *"We have seen a decrease in recreational motorized boating and an increase of kayaks and stand up paddleboards." — Facility Survey Participant*
>
> *"Motorized boating has declined, as fishing has declined. We see more kayaking, paddleboards, and kite surfing." — Facility Survey Participant*
>
> *"Non-motorized activity has exploded. There is an increase in demand for water access for these boaters (SUP and kayakers)." — Facility Survey Participant*

Motorized Boat Ownership Trends

Data show that there has been a steady decline in the total number of registered motorized recreational boats in California, regardless of propulsion type and length. Figure ES-1 illustrates this ongoing decline since 2006 (numbers reported by NMMA, 2016).[6]

Figure ES-1. Reported by NMMA: Number of Registered Motorized Recreational Boats in California



[5] *National Marine Manufacturers Association. (2016). US Recreational Boating Statistical Abstract Full Report. Retrieved from: www.nmma.org/statistics/publications/statistical-abstract.*

Based on data from the California's Department of Motor Vehicles (DMV), registered-boat forecasts[7] predict a steady decline through 2020. This decline is forecasted to continue across all regions for all propulsion types and lengths as depicted in Figure ES-2.[8]

Figure ES-2. Total Number of DMV-Registered Motorized Boats

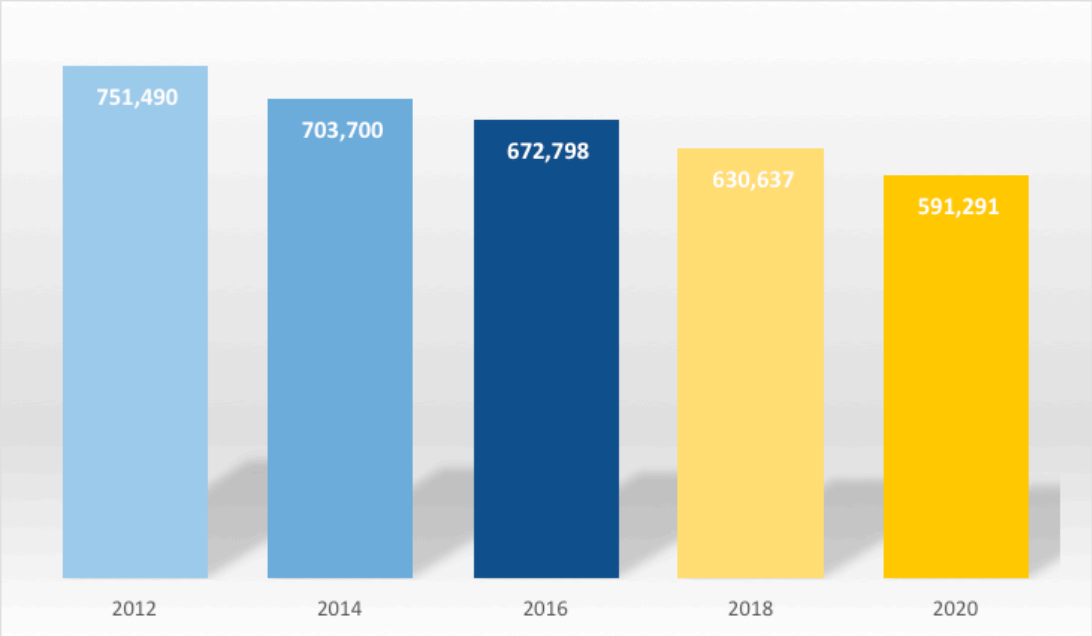


Table ES-13 includes both DMV and United States Coast Guard (USCG) forecasts for 2018 and 2020, which is based on 2018 data downloaded from the USCG website in April 2018.[9]

Table ES-13. Forecasts for Boats Registered with DMV and USCG

Region	2018	2020
Northern California	47,410	45,145
Sierra	47,703	45,801
Central Valley	141,663	133,931
San Francisco Bay Area	120,250	113,847
Central Coast	30,214	27,868
Los Angeles	95,142	87,156
Southern California	171,481	161,196
Out-of-State	4,295	3,874
ENTIRE STATE	**658,158**	**618,818**

[7] Figure ES-2 includes numbers only from DMV where approximately 96.5% of recreational motorized watercrafts are registered. The remaining 3.5% of boats are registered with the USCG and are not included in the figure because the research team was denied access to its longitudinal data. Table ES-13 includes USCG forecasts based on the figures downloaded from the USCG website.

[8] Regional forecasts are included in Volumes IV-X: Regions. The data used in generating these forecasts are from the DMV for 2012, 2014, and 2016. In the figures, the actual data used to generate the forecasts from the DMV are in blue, while the forecasts are in yellow.

[9] www.dco.uscg.mil

Non-Motorized Boating Trends with a Focus on California

A review of trends related to non-motorized boating was based on a number of sources (see *Volume III: Statewide* for more detail). The best available, current information on boating participation comes from the *Outdoor Industry Association's* annual reports on outdoor recreation activities among Americans (Outdoor Industry Association, 2015, 2017, 2018).[10] Findings from these reports suggest participation in non-motorized boating activities in general is increasing for all Americans and that California is no exception. All reports reviewed for this project point to a strong, continued increase in non-motorized activities in the future. Indeed, about 40,402,000 Americans participated in non-motorized boating activities in 2017, with a 51% increase over a 10-year period (2007-2017) and 17% increase over a 5-year period (2012-2017).[11]

Table ES-14 summarizes non-motorized activity participation rates in 2017 and the percent change of activities over a 5-year period (2012-2017) for all Americans and two youth subpopulations. These findings suggest that recreational kayaking and canoeing have the highest participation rates overall. Moreover, stand up paddleboarding (SUP) and sea kayaking are the two activities which have seen the highest participation percent increase over the past five years, along with boardsailing and wind surfing for the younger populations. Figure ES-3 graphically depicts these trends.

Table ES-14. Summary of Participation Rates in Non-motorized Boating Activities

Populations	Highest Participation Rates 2017	5-year % Change 2012-2017
All Americans	Recreational Kayaking (10,533) Canoeing (9,220)	SUP (+ 116%) Sea Kayaking (+ 99%)
Young Adults (18-24)	Recreational Kayaking (1,710) Canoeing (1,322)	SUP (+ 107%) Boardsailing/Wind surfing (+ 99%) Boardsailing/Wind
Youth (6-17)	Canoeing (2,029) Recreational Kayaking (1,864)	surfing (+ 202%) Sea Kayaking (+ 116%) SUP (+ 114%)

Source: Outdoor Industry Association (2018)
Participation numbers in this table are in the thousands (000)

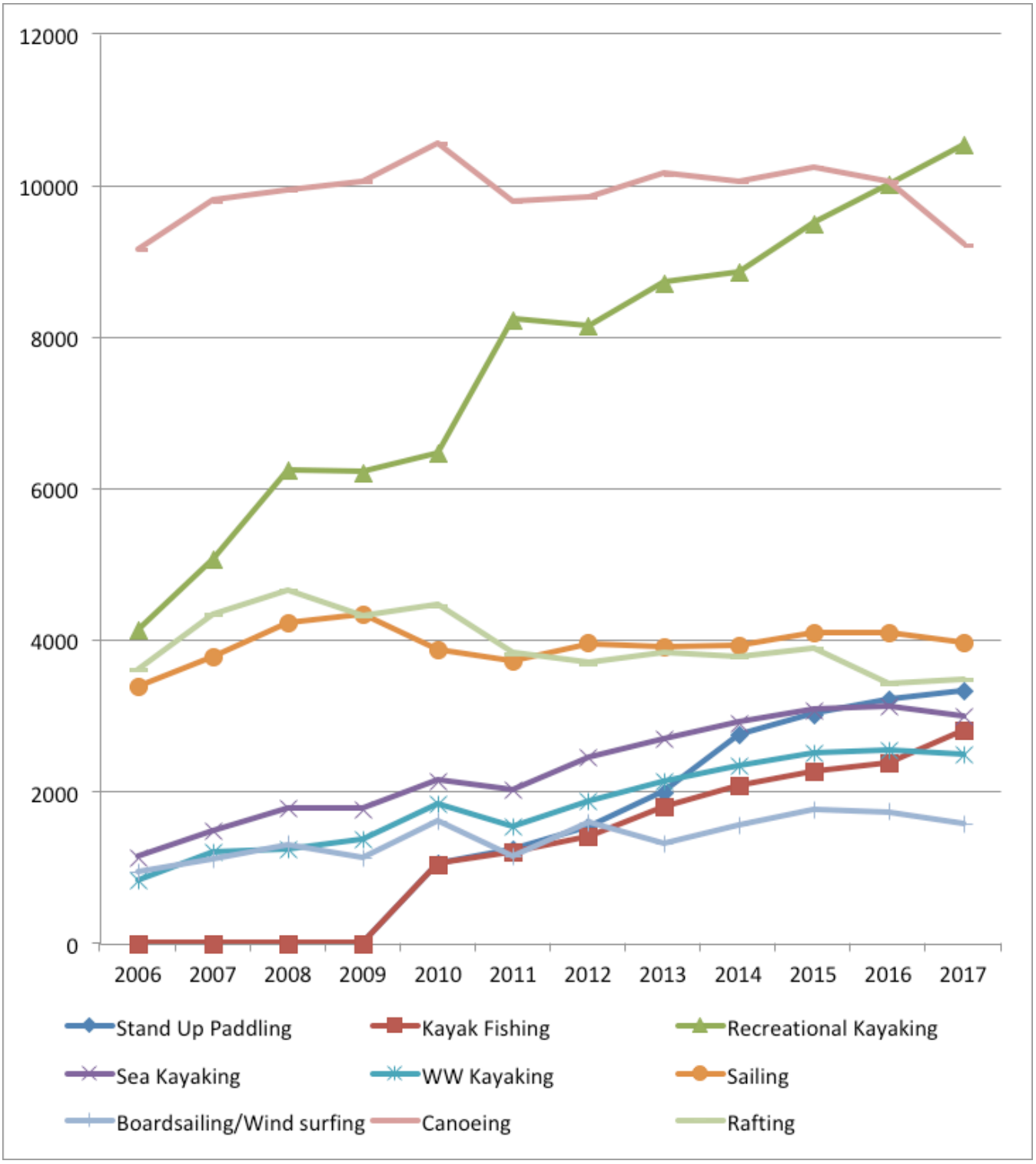
[10] *Outdoor Industry Association. (2015). Special Report on Paddlesports: Kayaking, Canoeing, Rafting, SUP. Boulder, Coloardo: Outdoor Industry Industry Association.*

Outdoor Industry Association. (2017). Outdoor Recreation Participation Topline Report 2017. Boulder, Colorado: Outdoor Foundation.

Outdoor Industry Association. (2018). 2018 Outdoor Recreation Participation Report. Boulder, CO. Retrieved from https://outdoorindustry.org/resource/2018-outdoor-participation-report/.

[11] *Figures are calculated using Outdoor Industry Association (2018) data, pg. 37.*

Figure ES-3. Non-motorized Boating Trends



Source: Outdoor Industry Association (2018) p. 37